

SINUMERIK

SINUMERIK 840D sl, SINAMICS S120 Machine data and parameters

List Manual

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Valid for:
Control system
SINUMERIK 840D sl / 840DE sl
Software
CNC software, Version 4.8 SP1
SINAMICS S120, Version 4.9

Legal information

Warning notice system

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

DANGER

indicates that death or severe personal injury will result if proper precautions are not taken.

WARNING

indicates that death or severe personal injury may result if proper precautions are not taken.

CAUTION

indicates that minor personal injury can result if proper precautions are not taken.

NOTICE

indicates that property damage can result if proper precautions are not taken.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

Qualified Personnel

The product/system described in this documentation may be operated only by **personnel qualified** for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

Proper use of Siemens products

Note the following:

WARNING

Siemens products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be complied with. The information in the relevant documentation must be observed.

Trademarks

All names identified by ® are registered trademarks of Siemens AG. The remaining trademarks in this publication may be trademarks whose use by third parties for their own purposes could violate the rights of the owner.

Disclaimer of Liability

We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

Preface

SINUMERIK documentation

The SINUMERIK documentation is organized into the following categories:

- General documentation/catalogs
- User documentation
- Manufacturer/service documentation

Additional information

You can find information on the following topics at the following address (<https://support.industry.siemens.com/cs/de/en/view/108464614>):

- Ordering documentation/overview of documentation
- Additional links to download documents
- Using documentation online (find and search in manuals/information)

If you have any questions regarding the technical documentation (e.g. suggestions, corrections), please send an e-mail to the following address (<mailto:docu.motioncontrol@siemens.com>).

mySupport/Documentation

At the following address (<https://support.industry.siemens.com/My/ww/en/documentation>), you can find information on how to create your own individual documentation based on Siemens' content, and adapt it for your own machine documentation.

Training

At the following address (<http://www.siemens.com/sitrain>), you can find information about SITRAIN (Siemens training on products, systems and solutions for automation and drives).

FAQs

You can find Frequently Asked Questions in the Service&Support pages under Product Support (<https://support.industry.siemens.com/cs/de/en/ps/faq>).

SINUMERIK

You can find information about SINUMERIK at the following address (<http://www.siemens.com/sinumerik>).

Target group

This publication is intended for project engineers, commissioning engineers, machine operators and service and maintenance personnel.

Benefits

The intended target group can use the Parameter Manual to test and commission the system or the plant correctly and safely.

Utilization phase: Setup and commissioning phase

Standard scope

This documentation describes the functionality of the standard scope. Extensions or changes made by the machine manufacturer are documented by the machine manufacturer.

Other functions not described in this documentation might be executable in the control. This does not, however, represent an obligation to supply such functions with a new control or when servicing.

Furthermore, for the sake of clarity, this documentation does not contain all detailed information about all types of the product and cannot cover every conceivable case of installation, operation or maintenance.

Technical Support

Country-specific telephone numbers for technical support are provided in the Internet at the following address (<https://support.industry.siemens.com/sc/ww/en/sc/2090>) in the "Contact" area.

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Fundamental safety instructions

1.1 General safety instructions



WARNING

Danger to life if the safety instructions and residual risks are not observed

If the safety instructions and residual risks in the associated hardware documentation are not observed, accidents involving severe injuries or death can occur.

- Observe the safety instructions given in the hardware documentation.
- Consider the residual risks for the risk evaluation.



WARNING

Danger to life or malfunctions of the machine as a result of incorrect or changed parameterization

As a result of incorrect or changed parameterization, machines can malfunction, which in turn can lead to injuries or death.

- Protect the parameterization (parameter assignments) against unauthorized access.
- Respond to possible malfunctions by applying suitable measures (e.g. EMERGENCY STOP or EMERGENCY OFF).

1.2 Industrial security

Note

Industrial security

Siemens provides products and solutions with industrial security functions that support the secure operation of plants, systems, machines and networks.

In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial security concept. Siemens products and solutions only represent one component of such a concept.

The customer is responsible for preventing unauthorized access to its plants, systems, machines and networks. Systems, machines and components should only be connected to the enterprise network or the internet if and to the extent necessary and with appropriate security measures (e.g. use of firewalls and network segmentation) in place.

Additionally, Siemens' guidance on appropriate security measures should be taken into account. For more information about industrial security, please visit:

Industrial security (<http://www.siemens.com/industrialsecurity>).

Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends to apply product updates as soon as available and to always use the latest product versions. Use of product versions that are no longer supported, and failure to apply latest updates may increase customer's exposure to cyber threats.

To stay informed about product updates, subscribe to the Siemens Industrial Security RSS Feed at:

Industrial security (<http://www.siemens.com/industrialsecurity>).



WARNING

Danger to life as a result of unsafe operating states resulting from software manipulation

Software manipulations (e.g. viruses, trojans, malware or worms) can cause unsafe operating states in your system that may lead to death, serious injury, and property damage.

- Keep the software up to date.
- Incorporate the automation and drive components into a holistic, state-of-the-art industrial security concept for the installation or machine.
- Make sure that you include all installed products into the holistic industrial security concept.
- Protect files stored on exchangeable storage media from malicious software by with suitable protection measures, e.g. virus scanners.

SINUMERIK machine and setting data

2.1 Explanation of the machine/setting data

2.1.1 Information about the data tables

This List Manual provides information on all the machine and setting data.

A functional description of the data is provided in the Function Manual indicated in the cross reference.

For additional descriptions

Further detailed information is available directly through the online help of the control system.

2.1.2 Structure of the data tables

Standard table

The standard table contains all the important information about a SINUMERIK machine data.

MD number	Identifier			Display filter	Reference	
Unit	Name			Data type	Activation	
Attributes						
System	Dimension	Default value (LIN/RED)	Minimum value (LIN/RED)	Maximum value (LIN/RED)	Protection	Class

Expanded table

The expanded table includes data from the standard table plus additional rows with system-specific values.

MD number	Identifier			Display filter	Reference	
Unit	Name			Data type	Activation	
Attributes						
-	Dimension	Default value (LIN/RED)	Minimum value (LIN/RED)	Maximum value (LIN/RED)	Protection	Class
<System 1>	-	-	-	-	-/-	
<System 2>	-	-	-	-	-1/-	

A minus sign "-" in a field means that the same value as for <System 1> applies for the specified system.

2.1 Explanation of the machine/setting data

The entry "-/-" in the "Protection" field means that the machine data is not available for the specified system.

Example:

19100	NUM_AXES_IN_SYSTEM			N01	-	
-	1 axis/spindle in addition			BYTE	POWER ON	
840dsl-71	-	3	0	8	3/3	M
840dsl-72	-	3	0	31	3/3	M
840dsl-73	-	3	0	31	3/3	M

2.1.3 Meaning of table fields

MD number

The "MD number" field contains the machine data number. This number is displayed in the data lists on the user interface of the control.

Identifier

The "Identifier" field contains the unique alphanumeric identifier of the machine data. The machine data is, for example, addressed by means of this identifier (with an additional label) for programming in the part program.

This identifier is displayed in the data lists on the user interface of the control.

Reference

As a cross reference to the functional description of the data, the "Reference" field contains the short designation of the corresponding submanual of a function manual.

Reference is made to the following submanuals:

- Function Manual Basic Functions, submanuals: A2, A3, B1, B2, F1, G2, H2, K1, K2, N2, P1, P3, P4, R1, S1, V1, W1, Z1
- Function Manual Extended Functions, submanuals: A4, B3, H1, K3, K5, M1, M5, N3, N4, P2, P5, R2, S3, S7, T1, W3, W4, Z2
- Function Manual Special Functions, submanuals: F2, G1, K6, K7, K8, K9, K10, M3, R3, S9, T3, T4, TE01, TE02, TE1, TE3, TE4, TE6, TE7, TE8, TE9, V2, W5, W6, Z3
- Function Manual Safety Integrated, FBSI
- Function Manual Tool Management, FBWsl
- Function Manual Synchronous Actions, FBSY
- Function description, ISO Dialects for SINUMERIK, FBFA

- Programming Manual, PG
- Programming Manual Job Planning, PGA

Unit / system of units

Depending on MD10240 \$MN_SCALING_SYSTEM_IS_METRIC, the physical units differ as follows:

MD10240=1	MD10240=0
mm	inch
mm/min	inch/min
m/sec ²	inch/sec ²
m/sec ³	inch/sec ³
mm/rev.	inch/revolution

If the machine data is not based on any physical unit, the field is marked with "-".

Note

The default setting is MD10240 \$MN_SCALING_SYSTEM_IS_METRIC = 1 (metric)

Name

The "Name" field contains the name of the data in plain text.

Activation

The "Activation" field contains the action that must be performed by the user in order for a change in the data to be activated.

Activation		User action
po	POWER ON	Alternatively: • "Reset(po)" softkey • Switch voltage off/on
cf	NEW_CONF	Alternatively: • Softkey: "Activate MD" Note: Axis-specific machine data A changed value will not be activated until all the channels of the mode group to which the axis belongs to are in the "Reset" state. • Command: NEWCONF Note: Axes/spindles On axes and position-controlled spindles, a changed value is not activated until the respective axis/spindle is stopped. On spindles that are not position-controlled a changed value is activated immediately.

2.1 Explanation of the machine/setting data

Activation		User action
re	RESET	Alternatively: • "Reset (po)" softkey • Channel reset • Mode group reset • Program end reset (M02/M30)
so	IMMEDIATELY	After entering the value

The activation levels are listed according to their priority.

- po = highest priority
- so = lowest priority

Protection

The "Protection" field contains the access levels for reading or writing a data item:

Reading/writing.

The first parameter specifies the access level for reading.

The second parameter specifies the access level for writing.

Example:

"ReadOnly" in the table field means:

Reading with access level "Manufacturer" possible/ **writing** with access level "manufacturer" not possible.

Access level	Type
ReadOnly	Read-only access
0	Siemens (System)
1	Manufacturer
2	Service
3	User
4	Key-operated switch position 3
5	Key-operated switch position 2
6	Key-operated switch position 1
7	Key-operated switch position 0

Class

The "Class" field contains the data class to which the control-relevant data is assigned.

The data class attributes of machine, setting and option data are normally derived from the write rights of the corresponding data.

The data is divided into the following four data classes:

Data class	Write rights	Access right
S (System)	System	Access level 0 (Password: System)
M (Manufacturer)	Manufacturer/ Service	Access levels 1 and 2 and Re- adOnly (Password: Service)
I (Individual) Note: Individual machine data is grouped in this data class, e.g. the leadscrew error compensation values. Depending on the contents, these are accessi- ble via different access levels.	Manufacturer/ Service or User	Access level 1 and 2 (Password: Service) or Access level 3 (Password: User)
U (User)	User	Access level 3 (Password: User) Access level 4 and 7 (Keyswitch)

Display filter

The "Display filter" field contains the identifier of the data filter setting that enables the data to be displayed. Using the filter setting, the exact data areas required at a given time can be selected for display.

ID	Data area
EXP	Expert mode
Drive-specific machine data	
D00	Display signals
D01	Controller data
D02	Monitoring/limiting functions
D03	Message data
D04	Status data
D05	Motor / power unit
D06	Measuring system
D07	Safety Integrated
D08	Standard machine
General machine data	
N01	Configuration/scaling
N02	Memory configuration
N03	PLC machine data
N04	Drive control
N05	Status data / diagnostics
N06	Monitoring/limiting functions
N07	Auxiliary functions

2.1 Explanation of the machine/setting data

ID	Data area
N08	Corrections/compensations
N09	Technological functions
N10	I/O configuration
N11	Standard machine
A12	NC language, ISO dialect
Channel-specific machine data	
C01	Configuration
C02	Memory configuration
C03	Initial states
C04	Auxiliary functions
C05	Velocities
C06	Monitoring/limiting functions
C07	Transformations
C08	Corrections/compensations
C09	Technological functions
C10	Standard machine
C11	NC language, ISO dialect
Axis-specific machine data	
A01	Configuration (including memory)
A02	Measuring system
A03	Machine geometry
A04	Velocities/accelerations
A05	Monitoring/limiting functions
A06	Spindle
A07	Controller data
A08	Status data
A09	Corrections/compensations
A10	Technological functions
A11	Standard machine
A12	NC language, ISO dialect
Display-specific machine data	
H01	ShopMill
H02	ShopTurn
H03	ManualTurn
H04	Access levels
H05	Standard machine

System

In the "System" field, the control system is specified for which the data with the correspondingly entered values applies.

The following entries are possible:

- If the system is not listed, the entered default values apply.
- If the system is listed, the deviations are entered in the following table cells.

840dsl-71	NCU710
840dsl-72	NCU720
840dsl-73	NCU730

Dimension

The "Dimension" field contains the number of elements of a data field.

Default value

The "Default value" field contains the value that is used to preset the machine data.

Some machine data is preset with different default values, depending on the NCU that is used.

Note

When input via the user interface, this is limited to ten digits plus comma and sign.

In the bracket "LIN/RED" the linear axis or rotary axis value is specified.

Range of values

The "Minimum value" and "Maximum value" fields contain the lower limit and upper limit, respectively, of the permissible data range.

If the "Minimum value" and "Maximum value" fields contain the string " *** ", an explicit range is not defined for this data. In this case, the range is determined by the specified data type.

SINUMERIK data types

The "Data type" field contains the following data types:

Data type	Range of values
BOOLEAN	Machine data bit (1 or 0)
BYTE	Integer values (-128 to 127)
DOUBLE	Real values ($\pm (2.2 \cdot 10^{-308}$ to $1.8 \cdot 10^{+308}$))
DWORD	Integer values (-2147483648 to +2147483647)
DWORD	Hex values (0 to FFFF FFFF)
STRING	Character string (max. 16 characters) consisting of upper-case letters with digits and underscore
UNSIGNED WORD	Integer values (0 to 65536)
SIGNED WORD	Integer values (-32768 to 32767)
UNSIGNED DWORD	Integer values (0 to 4294967300)

Data type	Range of values
SIGNED DWORD	Integer values (-2147483650 to 2147483649)
WORD	Hex values (0000 to FFFF)
FLOAT DWORD	Real values ($\pm (8.43 \times 10^{-37}$ to 3.37×10^{38})
UBYTE	Integer values (0 to 255)
LONG	Integer values (4294967296 to 4294967295)

Attributes

The "Attributes" field contains additional attributes of the data:

Attribute	Meaning
NBUP	No Back UP: The data is not backed up as part of the data backup.
ODLD	Only DownLoaD: The data can only be written to via an ini file, archive, or from the part program.
NDLD	No DownLoaD: The data can only be written to via the user interface.
SFCO	SaFeTy COnfiguration: Component of the "Safety Integrated" function.
SCAL	SCaling ALarm: Scaling data; when changed, alarm 4070 is displayed
LINK	LINK description: The data describes a link cluster, component of the "NCU Link" function
CTEQ	ConTainer EQual: The data must be the same for all axes of an axis container, component of the "Axis container" function
CTDE	ConTainer DEscription: The data describes an axis container, component of the "Axis container" function

2.1.4 Number ranges of the machine and setting data

Number ranges SINUMERIK

The machine and setting data are divided into number ranges.

The identifier specified in the data description is displayed on the user interface. However, if the data is addressed in the part program, for example, the identifier of the relevant data area must precede the data identifier.

Data area		Identifier	Description
From	to		
9000	9999	\$MM_	Display machine data
10000	18999	\$MN_	General NC machine data and general machine data for Safety Integrated
19000	19999	\$ON_	Option data
20000	28999	\$MC_	Channel-specific machine data
29000	29999	\$OC_	Channel-specific option data
30000	38999	\$MA_	Axis-specific machine data and axis-specific machine data for Safety Integrated

Data area		Identifier	Description
From	to		
39000	39999		Reserved
41000	41999	\$SN_	General setting data
42000	42999	\$SC_	Channel-specific setting data
43000	43999	\$SA_	Axis-specific setting data
51000	51299	\$MNS_	General configuration machine data
51300	51999		General cycle machine data
52000	52299	\$MCS_	Channel-specific configuration machine data
52300	52999		Channel-specific cycle machine data
53000	53299	\$MAS_	Axis-specific configuration machine data
53300	53999		Axis-specific cycle machine data
54000	54299	\$SNS_	General configuration setting data
54300	54999		General cycle setting data
55000	55299	\$SCS_	Channel-specific configuration setting data
55300	55999		Channel-specific cycle setting data
56000	56299	\$SAS_	Axis-specific configuration setting data
56300	56999		Axis-specific cycle setting data

Data Identifiers

Characters	Meanings
\$	System variables
M	Machine data (first letter)
S	Setting data (first letter)
O	Option data (first letter)
M, N, C, A	Subarea (second letter)
S	Siemens data (third letter)

Note

Axis-specific data can also be addressed with the axis name as an index. The internal axis identifier (AX1, AX2, AX3, etc.) or the identifier specified in MD10000 \$MN_AXCONF_MACHAX_NAME_TAB can be used as the axis name.

Example:

\$MC_JOG_VELO[Y1]=2000

The JOG velocity of axis Y1 is 2000 mm/min.

Example:

\$MA_FIX_POINT_POS[0,X1]=500.000

The value 500 is assigned to the first fixed point position on axis 1.

Examples:

\$MN_AUXFU_GROUP_SPEC[2]='H41'

If the content of a machine data is a STRING (e.g. Y1) or a hexadecimal value (e.g. H41) the contents must lie between "'" (e.g. 'H41').

Output instant in time of the auxiliary functions of the 3rd auxiliary function group.

\$MN_AXCONF_MACHAX_NAME_TAB[0]='X1'

String "X1" is assigned as name for the first machine axis.

\$MA_REFP_SET_POS[0,X1]=100.00000

A value of 100 mm is assigned to the first reference point of axis X1.

Examples:

Assignment to channel-specific machine data:

CHANDATA(1)	; Selection of the first channel
\$MC_CHAN_NAME='CHAN1'	; Name of the first channel
\$MC_AXCONF_GEOAX_NAME_TAB[1]='Y'	; Name of the 2nd geometry axis
	; of the first channel 'Y'
R10=33.75	; R10 of the first channel

2.2 Display machine data

9006	DISPLAY_SWITCH_OFF_INTERVAL			-	-	
-	Time for screen saver			DWORD	PowerOn	
-						
-	-	60	0	180	7/3	M

Description:

This machine data specifies the duration in minutes after which the screen automatically switches to dark if no key has been pressed on the keyboard in the meantime.

The value 0 disables automatic light/dark switching.

Note:

The screen is only switched light/dark automatically if the NC/PLC interface signal DB19, ... DBX0.1 (screen dark) = 0.

9009	KEYBOARD_STATE			-	-	
-	Keyboard shift behavior at booting			BYTE	PowerOn	
-						
-	-	0	0	2	7/3	M

Description:

This machine data defines the Shift behavior (SW-CAPSLOCK) of the keyboard.

Basic configuration of the Shift behavior of the keyboard

0: SW-CAPSLOCK OFF

2: SW-CAPSLOCK ON

9032	HMI_MONITOR			-	-	
-	Define PLC data for HMI screen info			STRING	PowerOn	
-						
-	-	-	-	-	7/1	M

Description:	Pointer, with offset, to a PLC data block. This is required to report HMI monitor information to the PLC, e.g active HMI task. Format: PLC-specific format for specifying a data block with byte offset, e.g. DB60.DBB10 for data block 60, byte 10. The monitor information reported by the HMI has a maximum length of 8 bytes.

9056	ALARM_ROTATION_CYCLE			-	-	
-	Rotation cycle time for alarm display			DWORD	PowerOn	
-						
-	-	0	0	10000	7/3	M

Description:	Rotation cycle time in the alarm display: <500: no rotation in the alarm line 500 - 10000: cycle duration of alarm rotation in milliseconds If a valid cycle time has been set, all alarms are displayed in the alarm line one after the other. Each alarm is displayed for the specified time until it is replaced by the next alarm. If no alarm is present, cycle alarms or program messages are displayed, if required. However, these do not rotate.

9057	ENABLE_CHANNEL_MSG_FILTER			-	-	
-	Filter program messages channel specifically			BOOLEAN	PowerOn	
-						
-	-	1	-	-	7/3	M

Description:	0: The program messages of all channels are displayed in the alarm/message line. With multiple NCUs, the alarms and messages of all NCUs are displayed by default. The display can be restricted to the current NCU by the setting <code>ServerModeEnabled=false</code> in <code>slaesvcconf.xml</code>. 1: Only the program messages of the current channel of the current NCU are displayed.

9100	CHANGE_LANGUAGE_MODE			-	-	
-	Language selection mode			BYTE	Immediately	
-						
-	-	1	1	2	7/3	1

Description:	Language selection mode is defined: 1 = directly via selection list 2 = via setting of the 1st and 2nd language

9102	SHOW_TOOLTIP			-	-	
-	Display tooltip			BYTE	Immediately	
-						
-	-	1	0	1	7/3	U

Description:	If the MD has been set to 1, tooltips will be displayed.

2.2 Display machine data

9103	TOOLTIP_TIME_DELAY	-	-
s	Time delay tooltip display	BYTE	Immediately
-			
-	-	1	0
		60	7/3
			U

Description: Time delay for display of the tooltips in seconds.

9104	ANIMATION_TIME_DELAY	-	-
s	Time delay before animation of help screens	BYTE	Immediately
-			
-	-	10	5
		60	7/3
			U

Description: Time delay until the start of animation of help screens in seconds.
The setting is not active for help screens that are exclusively animated.

9105	HMI_WIDE_SCREEN	-	-
-	Display of the HMI as wide screen with OEM area always visible	BYTE	PowerOn
-			
-	-	0	0
		1	7/2
			M

Description: Display of the HMI as wide screen. Above the HMI there is a separate application field that is designed by the machine manufacturer.

9106	SERVE_EXTCALL_PROGRAMS	-	-
-	Process EXTCALL calls	BYTE	PowerOn
-			
-	-	1	0
		3	7/3
			M

Description: 0-3: Type of processing of external programs
0: HMI ignores EXTCALL instructions and selection via PLC.
1: HMI processes EXTCALL instructions and selection via PLC.
2: HMI processes EXTCALL instructions and ignores selection via PLC.
3: HMI ignores EXTCALL instructions and processes selection via PLC.

9107	DRV_DIAG_DO_AND_COMP_NAMES	-	-
-	Expanded drive diagnostics: DO and components	BYTE	Immediately
-			
-	-	3	0
		3	7/3
			I

Description: 0: DO and component type names
1: Real DO names and component type names
2: DO type names and real component names
3: Real DO names and real component names

9108	SINUMERIK_INTEGRATE	-	-
-	Activating SINUMERIK Integrate products	BYTE	Immediately
-			
-	-	0	0
		1	7/3
			M

Description: If the machine data has been set to 1, the SINUMERIK Integrate softkey appears as the operating area.

9110	ACCESS_HMI_EXIT	-	-
-	Protection level of exit softkey	BYTE	PowerOn
-			
-	-	1	0
-	-	7	7/2
-	-	M	

Description: Protection level for the exit softkey (HMI restart) in the operating area menu

9111	HMI_MEM_LIMIT_USER	-	-
-	Size of the user storage space in GB	BYTE	PowerOn
-			
-	-	0	0
-	-	6	7/1
-	-	M	

Description: Size of the additional storage space for the user on the CF card if the option is set.
The rest of the available 6 GB are left for manufacturer data.

9112	HMI_SKIN	-	-
-	Design of the operator panel (skin)	DWORD	PowerOn
-			
-	-	1	0
-	-	10000	7/1
-	-	M	

Description: Design of the operator panel. The number of the skin is stated.
0 = Skin 0 (traditional)
1 = Skin 1 (new)

9113	EASY_XML_DIAGNOSE	-	-
-	EasyXML diagnostics mode	DWORD	Immediately
-			
-	-	0	0
-	-	-	7/2
-	-	M	

Description: Diagnostics and correction support for easyXML scripts
0 = No diagnostics active
1 = Syntax check active

9114	SIDESCREEN	-	-
-	SINUMERIK Operate Sidescreen	BYTE	PowerOn
-			
-	-	0	0
-	-	1	7/1
-	-	M	

Description: Activation of SINUMERIK Operate Sidescreen
0 = Sidescreen deactivated
1 = Sidescreen activated

9115	SAVE_CREDENTIALS	-	-
-	Back up access authorizations for network drives	BYTE	Immediately
-			
-	-	0	0
-	-	2	7/1
-	-	M	

Description: Back up access authorizations for network drives when archiving
0 = Dialog hidden
1 = No dialog, access authorizations are not backed up
2 = No dialog, access authorizations are always backed up

2.3 NC machine data

9900	MD_TEXT_SWITCH			-	-	
-	Plaintexts instead of MD identifier			BOOLEAN	Immediately	
-						
-	-	0	-	-	7/3	U

Description: If the MD has been set to 1, clear text is displayed on the operator panel instead of the machine data identifiers.

9990	SW_OPTIONS			-	-	
-	Enable HMI software options			DWORD	Immediately	
-						
-	-	0	-	-	1/1	I

Description: Here you can enable the HMI software options

2.3 NC machine data

2.3.1 General machine data

10000	AXCONF_MACHAX_NAME_TAB			N01, N11	K2, F1, G2, F2, K5, M1	
-	Machine axis name			STRING	PowerOn	
-						
-	31	X1, Y1, Z1, A1, B1, C1, U1, V1	-	-	7/2	M

Description: List of the machine axis identifiers

The name of the machine axis is entered in this MD.

In addition to the fixed, defined machine axis identifiers "AX1", "AX2" ..., user-defined identifiers for the machine axes can also be assigned in this data.

The identifiers defined here can be used parallel to the fixed, defined identifiers for addressing axial data (e.g. MD) and machine axis-related NC functions (reference point approach, axial measurement, travel to fixed stop).

Special cases:

- The input machine axis name must not conflict with the names and assignments of the geometry axes (MD20060 \$MC_AXCONF_GEOAX_NAME_TAB, MD20050 \$MC_AXCONF_GEOAX_ASSIGN_TAB) and channel axes (MD20080 \$MC_AXCONF_CHANAX_NAME_TAB, MD20070 \$MC_AXCONF_MACHAX_USED).

The input machine axis name must not conflict with

Names for Euler angles (MD10620 \$MN_EULER_ANGLE_NAME_TAB)

Names for path-relevant orientations (MD10624 \$MN_ORIPATH_LIFT_VECTOR_TAB)

Names for normal vectors (MD10630 \$MN_NORMAL_VECTOR_NAME_TAB)

Names for direction vectors (MD10640 \$MN_DIR_VECTOR_NAME_TAB)

Names for rotation vectors (MD10642 \$MN_ROT_VECTOR_NAME_TAB)

Names for intermediate vector components (MD10644 \$MN_INTER_VECTOR_NAME_TAB)

Names for intermediate circle point coordinates for CIP (MD10660 \$MN_INTERMEDIATE_POINT_NAME_TAB)

Names for interpolation parameters (MD10650 \$MN_IPO_PARAM_NAME_TAB).

- The input machine axis name must not include any of the following reserved address letters:

D Tool offset	(D function)	E Reserved
F V Feedrate	(F function)	G Path condition
H Auxiliary function	(H function)	L Subroutine call
M Miscellaneous function	(M function)	N Subblock
P Subroutine number of passes		R Arithmetic parameters
S Spindle speed	(S function)	T Tool (T function)

The name must not include any keywords (e.g. DEF, SPOS etc.) or pre-defined identifiers (e.g. ASPLINE, SOFT).

The use of an axis identifier consisting of a valid address letter (A, B, C, I, J, K, Q, U, V, W, X, Y, Z), followed by an optional numerical extension (1-99) gives slightly better block change times than a general identifier.

If no identifier is assigned to a machine axis, the predefined name ("AXn") applies to the nth machine axis).

Related to....

MD20060 \$MC_AXCONF_GEOAX_NAME_TAB (geometry axis name in the channel [GEOAxisno.]

MD20080 \$MC_AXCONF_CHANAX_NAME_TAB (channel axis name in the channel [Channelaxisno.]

10002	AXCONF_LOGIC_MACHAX_TAB			N01	B3, K2	
-	Logical NCK machine axis image			STRING	PowerOn	
-						
-	31	AX1, AX2, AX3, AX4, AX5, AX6, AX7, AX8...	-	-	3/2	M

Description:

List of machine axes available on an NCU. (Logical NCK machine axis image)

MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB creates another NCK global, logical layer between the channel axis layer and the machine axes in an NCU or NCU grouping. This layer is called the "Logic NckMachineAxImage", abbreviation: LAI).

Axes can only be assigned between different NCUs via this new intermediate layer!

The entry MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB[n] = NCj_AXi assigns the machine axis i on the NCU j to the axis index "n" in the LAI.

This makes the following assignments possible:

1. Local axes (default setting: AX1, AX2 ... AX31)

The entry MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB[n] = AX3 assigns the local axis AX3 to axis index n. (Default setting AX3 is present for n = 3 . Thus there is compatibility in software version 5 for MD blocks for software versions up to 4).

2. Link axes (axes that are physically connected to another NCU). The entry MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB[n] = NCj_AXi assigns axis AXi (link axis) on NCU j to axis index n.

Limits:

n	Machine axis address (of the local NCU)	1 ... 31
j	NCU number	1 ... 16
i	Machine axis address (of the local/remote NCU)	1 ... 31

3. Axis container in which there are once again either local or link axes. The entry MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB[n] = CTr_SLs assigns container r and slot s to axis index n.

Limits:

n	Machine axis address (of the local NCU)	1 ... 31
r	Container number	1 ... 16
s	Slot number (location) in the container	1 ... 32

The channel layer is formed via the related machine data \$MD20070

\$MC_AXCONF_MACHAX_USED and no longer points (small P5) directly to the machine axes but to the new LAI layer.

2.3 NC machine data

MD20070 \$MC_AXCONF_MACHAX_USED [k]=n assigns the LAI axis number "n" to the axis index "k" in the channel layer.

The machine axis and the corresponding NCK can then be determined from the LAI axis number.

If a number of NCUs point to the same machine axis in the cluster as a result of MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB, then the axial machine data MD30554

\$MA_AXCONF_ASSIGN_MASTER_NCU must define which NCU generates the master NCU and the setpoint values for the position controller after startup.

Related to:

MD12... \$MN_AXCT_AXCONF_ASSIGN_TABi (make entries in containers i)

10010	ASSIGN_CHAN_TO_MODE_GROUP			N01, N02, N11	K1, K5	
-	Channel valid in mode group			DWORD	PowerOn	
-						
-	10	1, 0, 0, 0, 0, 0, 0, 0...	0	10	7/2	M

Description:

This MD assigns the channel to a mode group

Entry value 1 => Assigned to 1st mode group

Entry value 2 => Assigned to 2nd mode group

etc.

From software version 4, it is permissible not to assign a mode group number to individual channels.

Channel gaps are allowed, in order to favor uniform configuration in similar types of machines. In this case, the number 0 is assigned to the channel instead of assigning a mode group number equal to or greater than 1. The channel is not activated, however it is handled like an active channel when counting the channels.

E.g.

ASSIGN_CHAN_TO_MODE_GROUP[0] = 1

ASSIGN_CHAN_TO_MODE_GROUP[1] = 1

ASSIGN_CHAN_TO_MODE_GROUP[2] = 0 ; gap

ASSIGN_CHAN_TO_MODE_GROUP[3] = 1

Application example:

Select desired channel via HMI and enter with MD10010 \$MN_ASSIGN_CHAN_TO_MODE_GROUP = 1.

Note:

This MD must still be entered even when only one mode group is present.

10050	SYSCLOCK_CYCLE_TIME			N01, N05, N11	G3, G2, R1	
s	System clock cycle			DOUBLE	PowerOn	
SFCO						
-	-	0.002	0.0005	0.008	7/2	M

Description:

Basic cycle time of the system software

The cycle time settings of cyclical tasks (position controller/IPO) are multiples of this basic cycle.

For PROFIBUS/PROFINET:

In the case of systems with a PROFIBUS DP connection, this MD corresponds to the PROFIBUS DP cycle time. This time is read from the configuration file (SDB-Type-2000) during startup and written to the MD.

This MD can only be changed via the configuration file.

Note:

Reducing this MD can result in an automatic correction of

MD10062 \$MN_POSCTRL_CYCLE_DELAY

MD10064 \$MN_POSCTRL_CYCLE_DESVAL_DELAY

that cannot be undone by a subsequent increase!

Details:

The basic cycle is incremented in multiples of units of the measured value sampling cycle. When the system powers up, the entered value is automatically rounded to a multiple of this incrementation.

Note:

Discrete timer division ratios can give rise to the entered value producing a value that is not an integer after a Power OFF/ON.

For example:

Input	=0.005s	
	after power OFF/ON	=0.00499840
	or	
Input	=0.006s	
	after power OFF/ON	=0.0060032

10061	POSCTRL_CYCLE_TIME			N01, N05	G3	
s	Position control cycle			DOUBLE	PowerOn	
-						
-	-	0.0	-	-	ReadOnly	S

Description: Position controller cycle time:
Display of the position controller cycle time

10062	POSCTRL_CYCLE_DELAY			N01, N05	G3	
s	Position control cycle offset			DOUBLE	PowerOn	
-						
-	-	0.0	0.000	0.008	7/2	M

Description: For PROFIdrive only:
Only relevant to operation with PROFIBUS drives.
Position controller cycle offset in relation to the PROFIBUS DP cycle.
Offsets that exceed the set DP cycle or are smaller than the maximum Tdx, are automatically corrected to a substitute value half the size of the DP cycle.
MD10062 \$MN_POSCTRL_CYCLE_DELAY > 0: Default for position controller offset
MD10062 \$MN_POSCTRL_CYCLE_DELAY = 0: Automatic determination of the position controller offset with max. Tdx from STEP7 project
Tdx_max is determined through all equidistant buses.
The actually active offset value is displayed in MD 10063[1]
\$MN_POSCTRL_CYCLE_DIAGNOSIS.
Note:
MD10062 \$MN_POSCTRL_CYCLE_DELAY > 0 can reduce MD10050 \$MN_SYSCLOCK_CYCLE_TIME to the automatic correction of this MD that cannot be undone by a subsequent increase.
Recommendation:
In this case set the original value or default value once again.

10063	POSCTRL_CYCLE_DIAGNOSIS			EXP, N01, N05	-	
s	Active timing			DOUBLE	PowerOn	
-						
-	6	0.0, 0.0, 0.0, 0.0, 0.0, 0.0	-	-	ReadOnly	M

Description: Diagnostic data related to the PROFIBUS/PROFINET cycle.
[0]: Latest time at which the actual values should be available (Tdx)
[1]: Actually active position controller cycle offset (Tm)

2.3 NC machine data

[2]: Latest time at which the setpoints were output by the position controller

[3]: Time at which the setpoint transfer to the drive via DMA was started for SOC-based modules

[4]: Time at which the setpoint transfer to the drive via DMA was finished for SOC-based modules.

[5]: 'Worst case' time since voltage on, at which the setpoint transfer to the drive via DMA was finished for SOC-based modules.

Diagnostic data are initialized with ZERO with each NCK power up

10064	POSCTRL_CYCLE_DESVAL_DELAY			N01, N05	G3	
s	Clock skew of the DMA for the setpoints			DOUBLE	PowerOn	
-						
-	-	0.0	0.000	0.008	7/2	M

Description:

For SINAMICS-Integrated only:

Only relevant to operation with SINAMICS-Integrated drives on SOC modules.

Offset of the output of the setpoints via DMA in relation to the PROFIBUS DP cycle.

Modification of MD10064 POSCTRL_CYCLE_DESVAL_DELAY requires a warm restart of the NCK and drive.

Offsets that exceed the set DP cycle are automatically corrected to a substitute value.

MD10062 \$MN_POSCTRL_CYCLE_DESVAL_DELAY > 0: Default setpoint offset

MD10062 \$MN_POSCTRL_CYCLE_DESVAL_DELAY = 0: Automatic determination of the setpoint offset on the basis of the hardware transfer rates

The actually active offset value is displayed in MD10063

\$MN_POSCTRL_CYCLE_DIAGNOSIS[4].

Note:

MD10064 \$MN_POSCTRL_CYCLE_DESVAL_DELAY > 0 can reduce MD10050 \$MN_SYSCLOCK_CYCLE_TIME to the automatic correction of this MD, which cannot be undone by a subsequent increase.

Recommendation:

In this case, set the original value or default value again.

10070	IPO_SYSCLOCK_TIME_RATIO			N01, N05, N11	G3, R1	
-	Factor for interpolation cycle			DWORD	PowerOn	
SFCO						
-	-	4	1	100	7/2	M

Description:

The interpolator cycle is stated as a multiple of the time units of the system basic cycle MD10050 \$MN_SYSCLOCK_CYCLE_TIME.

Only integer multiples of the position control cycle can be set. Values that are not an integer multiple of the position control cycle are automatically increased to the next integer multiple of the position control cycle before they become active (on next power up).

This is accompanied by alarm 4110 "IPO cycle changed to [] ms".

10071	IPO_CYCLE_TIME			N01, N05, N11	G3	
s	Interpolator cycle			DOUBLE	PowerOn	
-						
-	-	0.0	-	-	ReadOnly	S

Description:

Interpolation time

Display of the interpolator cycle time

10072	COM_IPO_TIME_RATIO	N01, N05	-
-	Division ratio between IPO and communication task	DOUBLE	PowerOn
-			
-	-	1.0	0.0
		100.0	7/2
			M

Description: Division ratio between IPO and communication tasks. A value of 2 means, e.g., that the communication task is only processed in every second IPO cycle. This makes more time available for the other tasks. Overlarge values slow down the communication between the HMI and NCK.

Numerical values less than 1 downscale the IPO cycle. This value is adjusted so that only runtimes that are a multiple of the position controller time are possible for the communication task. A call period of about 10 ms is practical for the communication task.

10088	REBOOT_DELAY_TIME	EXP	K3
s	Reboot delay	DOUBLE	Immediately
-			
-	-	0.2	0.0
		1.0	2/2
			M

Description: The reboot following PI "_N_IBN_SS" is delayed by the time MD10088 \$MN_REBOOT_DELAY_TIME.

The suppressable NOREADY alarm 2900 is triggered immediately by PI "_N_IBN_SS".

If MD10088 \$MN_REBOOT_DELAY_TIME falls below the MD36620 \$MA_SERVO_DISABLE_DELAY_TIME value of an axis, the axis is decelerated during MD10088 \$MN_REBOOT_DELAY_TIME. The servo enable is then disabled. That is, the full MD36620 \$MA_SERVO_DISABLE_DELAY_TIME is NOT waited.

Alarm 2900 does not become active if MD10088 \$MN_REBOOT_DELAY_TIME = 0.0, and there is no reboot delay.

The NCK waits beyond the stated delay time until the PI has been able to be acknowledged to the HMI. The total delay time may be as much as 2 s.

10089	SAFE_PULSE_DIS_TIME_BUSFAIL	N01, N06	FBSI
s	Delay time pulse suppr. for bus failure	DOUBLE	PowerOn
-			
-	-	0.0	0
		0.8	7/2
			M

Description: Time after a communication failure with the drive at which safe pulse disable takes place. The drive can still respond autonomously to the bus failure during this time (see extended stop and retract)

In the following cases, this time is not allowed to elapse before disabling pulses:

- On selection of an external Stop A or a test stop
- If SBH is active or on selection of SBH
- If an SG level is active or on selection of an SG level for which an immediate pulse disable is parameterized in MD36961 \$MA_SAFE_VELO_STOP_MODE or MD36963 \$MA_SAFE_VELO_STOP_REACTION.

Note:

This value is transferred to the drive parameter p9580 with the copy function of the SI-MD and compared in the data cross-check. This general machine data is contained in the axis-specific checksum calculation of the safety-related machine data (MD36998 \$MA_SAFE_ACT_CHECKSUM, MD36999 \$MA_SAFE_DES_CHECKSUM).

10090	SAFETY_SYSCLOCK_TIME_RATIO	N01, N06	FBSI
-	Factor for monitoring cycle	DWORD	PowerOn
SFCO			
-	-	3	1
		50	7/1
			M

Description:

Ratio between the monitoring cycle and the system clock cycle. The monitoring cycle is the product of this data and MD10050 \$MN SYSCLOCK CYCLE TIME.

The monitoring cycle is checked during power on:

- It must be an integer multiple of the position-control cycle
- It must be < 25 ms

The factor is rounded down to the next possible value if the conditions are not fulfilled. The actual set monitoring cycle is displayed by MD10091 \$MN INFO SAFETY CYCLE TIME.

A new value is also generated for the cross-check cycle, which is displayed by data MD10092 \$MN INFO CROSSCHECK CYCLE TIME.

Note:

The monitoring cycle defines the monitoring response time. It must be noted that the CPU load increases as the monitoring cycle becomes shorter.

Related to:

MD10050: \$MN SYSCLOCK CYCLE TIME

MD10091: \$MN INFO SAFETY CYCLE TIME

MD10092: \$MN INFO CROSSCHECK CYCLE TIME

10091	INFO_SAFETY_CYCLE_TIME			N01, N06, N05	FBSI	
s	Display of monitoring cycle time			DOUBLE	PowerOn	
-						
-	-	0.0	-	-	ReadOnly	S

Description:

Display data:

Set monitoring cycle time in seconds.

Derived from MD10050 \$MN_SYSCLOCK_CYCLE_TIME and MD10090 \$MN SAFETY SYSCLOCK TIME RATIO.

The data value is recalculated as soon as one of the following data are changed:

```
MD10090 $MN_SAFETY_SYSCLOCK_TIME_RATIO,
MD10060 $MN_POSCTRL_SYSCLOCK_TIME_RATIO,
MD10050 $MN_SYSCLOCK_CYCLE_TIME
```

The new value does not become active until after the next power-on.

Related to:

MD10090: \$MN SAFETY SYSCLOCK TIME RATIO

10092	INFO_CROSSCHECK_CYCLE_TIME			N01, N06, N05	FBSI	
s	Display of cycle time for cross-checking			DOUBLE	PowerOn	
-						
-	-	0.0	-	-	ReadOnly	S

Description:

Display data:

Maximum cross-check cycle in seconds.

Derived from MD10091 \$MN_INFO_SAFETY_CYCLE_TIME and the number of data to be cross-checked. (This may vary depending on the enabled functionality of the individual axes.)

The data value is recalculated as soon as one of the following data are changed:

```
MD10090 $MN_SAFETY_SYSCLOCK_TIME_RATIO,
MD10060 $MN_POSCTRL_SYSCLOCK_TIME_RATIO,
MD10050 $MN_SYSCLOCK_CYCLE_TIME
```

The new value does not become active until after the next power-on.

Related to:

MD10090: \$MN SAFETY SYSCLOCK TIME RATIO

MD36992: \$MA SAFE CROSSCHECK CYCLE

10094	SAFE_ALARM_SUPPRESS_LEVEL			EXP, N06, N05	FBSI	
-	Alarm suppress level			BYTE	PowerOn	
-						
-	-	2	0	113	7/2	M

Description:

Affects the display of safety alarms. The monitoring channels NCK and drive or NCK and PLC display alarms with the same meaning in several situations.

To reduce the volume of the alarm display, this MD is set to define whether safety alarms with the same meaning are to be hidden or not. This does not affect the dual-channel stop response.

0 = Dual-channel triggered alarms are displayed in full

- Dual-channel display of all axis-specific safety alarms
- Alarm 27001, error code 0 is displayed
- Alarms 27090, 27091, 27092, 27093, and 27095 are dual-channel and are displayed several times.

1 = Alarms with the same meaning are only displayed once.

The following alarms can be affected by this:

27010 = C01707

27011 = C01714

27012 = C01715

27013 = C01706

27020 = C01710

27021 = C01709

27022 = C01708

27023 = C01701

27024 = C01700

In the case of these alarms, only one of the alarms listed (270xx or C01xxx) is triggered.

The alarm of the monitoring channel that triggers the alarm with the same meaning at a later time is no longer displayed.

Furthermore, alarm 27001 with error code 0 is suppressed. This alarm is triggered as a result of drive alarm C01711. In this case, drive parameters r9710[0,1], r9711[0,1], r9735[0,1], r9736[0,1], r9737[0,1], r9738[0,1], r9739[0,1] provide further information about the cause of the error.

2 = Default setting

In addition to the functionality with MD value = 1, the alarms from SPL processing (27090, 27091, 27092, 27093, and 27095) are displayed in one channel and only once. This also applies to the alarms for PROFIsafe communication (27250 and following).

3 = Axis-specific alarms 27000 and A01797 are replaced by alarm message 27100 for all axes / drives. Alarm 27040 is replaced by alarm 27140 for all axes/ drives.

12 = The alarms are prioritized beyond the functionality with MD value = 2. Obvious subsequent alarms are no longer displayed or are automatically cleared from the display.

The following alarms can be affected by this:

27001, 27004, 27020, 27021, 27022, 27023, 27024, 27091,

27101, 27102, 27103, 27104, 27105, 27106, 27107

13 = The alarms are prioritized beyond the functionality with MD value = 3 (as with MD value 12).

1xx (100 digit set) = Axis-specific checksum alarms of the NCK (27032, 27035, and 27060) are displayed in SPL setup mode (MD11500 \$MN_PREVENT_SYNACT_LOCK[0,1] = 0) by alarm 27135 for all axes.

This machine data must be set to 0 to create an acceptance log, so that the triggering of all alarms can be logged.

2.3 NC machine data

10095	SAFE_MODE_MASK			EXP, N06	FBSI	
-	'Safety Integrated' operating modes			UDWORD	PowerOn	
-						
-	-	0	0x00000000	0x0000001E	7/2	M

Description:

Bit 1 = 0: The "Modular PROFIsafe I/O connection" function is not active.
 Bit 1 = 1: The "Modular PROFIsafe I/O connection" function is active.
 Bit 2 = 0: The reduced language scope for SAFE.SPF is only activated during run-up in the case of automatic startup (MD20108 \$MC_PROG_EVENT_MASK bit 5)
 Bit 2 = 1: The reduced language scope for SAFE.SPF is also activated if the CALL command is used to call SAFE.SPF.
 Bit 3 = 0: All PROFIsafe drivers in one IPO cycle
 Bit 3 = 1: PROFIsafe drivers distributed over a number of IPO cycles
 Bit 4 = 0: In "SINUMERIK Safety Integrated (SPL)" safety mode, NC axes cannot be linked to the drive monitoring functions via SIC/SCC
 Bit 4 = 1: In "SINUMERIK Safety Integrated (SPL)" safety mode, NC axes can be linked to the drive monitoring functions via SIC/SCC
 Related to:
 Bit 1:
 MD13302: \$MN_PROFISAFE_IN_ENABLE_MASK
 MD13303: \$MN_PROFISAFE_OUT_ENABLE_MASK
 Bit 2:
 MD20108: \$MC_PROG_EVENT_MASK, Bit 5

10096	SAFE_DIAGNOSIS_MASK			EXP, N06, N05	FBSI	
-	'Safety Integrated' diagnostics functions			UDWORD	NEW CONF	
-						
-	-	1	0	0x000F	7/2	M

Description:

Bit 0 = 0:
 SGE differences between NCK and drive monitoring channels are not displayed
 Bit 0 = 1:
 Default setting: SGE differences between NCK and drive monitoring channels are displayed. Differences between the following SGEs are displayed (the bit numbers stated refer to the axis-specific map of the SGEs; they correspond to the assignment of the axis-specific VDI interface:
 Bit 0: DB31, ... DBX22.0 (SBH/SG deselection)
 Bit 1: DB31, ... DBX22.1 (SBH deselection)
 Bit 3: DB31, ... DBX22.3 (SG selection: Bit 0)
 Bit 4: DB31, ... DBX22.4 (SG selection: bit 1)
 Bit 12: DB31, ... DBX23.4 (activate SE 2)
 Bit 28: DB31, ... DBX33.4 (SG correction: bit 0)
 Bit 29: DB31, ... DBX33.5 (SG correction: bit 1)
 Bit 30: DB31, ... DBX33.6 (SG correction: bit 2)
 Bit 31: DB31, ... DBX33.7 (SG correction: bit 3)
 The differences are displayed by message alarm 27004.
 Bit 1 = 0: Default setting: Display of a non-executed SPL start after expiration of the time set in MD13310 \$MN_SAFE_SPL_START_TIMEOUT with alarm 27097
 Bit 1 = 1: Display of alarm 27097 is suppressed
 Alarm 27097 indicates that despite the SPL configuration an SPL start has not been executed after expiration of the time set in MD13310 \$MN_SAFE_SPL_START_TIMEOUT. Alarm description 27097 explains why.

Bit 2 = 0: Default setting: Communication errors are displayed with SFC error codes in alarm 27354

Bit 2 = 1: Display of alarm 27354 is suppressed

Bit 3 = 0: Default setting: alarm 27038 is displayed if an unknown bit is set in drive parameter r474.

Bit 3 = 1: Display of alarm 27038 is suppressed

10097	SAFE_SPL_STOP_MODE			N01, N06	FBSI	
-	Stop reaction for SPL errors			BYTE	PowerOn	
-						
-	-	3	3	4	7/2	M

Description: Selection of the stop response when errors are detected in the NCK / PLC SPL cross-check.

3: Stop D

4: Stop E

Entering the value 4 in this MD (Stop E), without external Stop E being enabled in all axes with SI function enable (MD36901 \$MA_SAFE_FUNCTION_ENABLE not equal to 0), results in alarm 27033 with a reference to this MD.

As a remedy, either Stop D must be parameterized again, or bits 4 and 6 must be set in MD36901 \$MA_SAFE_FUNCTION_ENABLE for all affected axes.

If this MD is set to 4, the PLC signal DB18 DBX36.1 (Stop E) must also be set to 1 to make this parameterization known to the PLC. Different parameterization results in alarm 27090.

10098	PROFISAFE_IPO_TIME_RATIO			N01, N10	FBSI	
-	Factor for PROFIsafe communication			DWORD	PowerOn	
SFCO						
-	-	1	1	25	7/1	M

Description: Ratio between PROFIsafe communication and interpolator cycle. The actual PROFIsafe communication cycle is the product of this data and MD10071 \$MN_IPO_CYCLE_TIME, and is displayed in MD10099 \$MN_INFO_PROFISAFE_CYCLE_TIME. The OB40 on the PLC side is triggered from the NCK side in this cycle to run the communication between F master and F slaves.

The PROFIsafe communication must not exceed 25 ms.

10099	INFO_PROFISAFE_CYCLE_TIME			N01, N10, N05	FBSI	
s	PROFIsafe communication cycle time			DOUBLE	PowerOn	
-						
-	-	0.0	-	-	ReadOnly	S

Description: Display data:

Displays the maximum time frame within which communication is performed between the F master and F slave. In this time frame, PROFIsafe communication is operated on the PLC via OB40.

The value is derived from the interpolator cycle and MD10098 \$MN_PROFISAFE_IPO_TIME_RATIO.

If the selected communication cycle is exceeded in cyclic operation, this is also displayed here.

In the case of a parameterization error (communication cycle exceeds the maximum value of 25.0 ms), the maximum value that can be set is displayed.

2.3 NC machine data

10100	PLC_CYCLIC_TIMEOUT	EXP, N01, N06	P3
s	Maximum PLC cycle time	DOUBLE	PowerOn
-			
-	-	0.1	0.0
-	-	-	7/2
-	-	-	M

Description: Cyclical PLC monitoring time.

This machine data specifies the maximum monitoring time after which the PLC must have incremented its sign of life. Incrementing takes place within the interpolation cycles.

10110	PLC_CYCLE_TIME_AVERAGE	N01, N07	B1
s	Average PLC acknowledgment time	DOUBLE	PowerOn
-			
-	-	0.05	0.0
-	-	-	7/2
-	-	-	M

Description: Time information for the CNC about the OBI cycle time. During this cycle time, it is guaranteed that the auxiliary functions will be acknowledged.

By means of the MD, the status transitions:

"channel operates/ channel in RESET/ channel failure --> channel interrupted" can be delayed for the PLC in case of a RESET. With the output "channel interrupted", the NCK waits at least the time indicated in the MD + 1 IPO cycle.

With the time indication, the path feedrate during path control operation in case of an auxiliary function output during motion is controlled in a way to ensure that the minimum travel time corresponds to the time information. This ensures a uniform velocity behavior which is not disturbed by waiting for the PLC acknowledgment. The internal incrementation is performed in the interpolation cycle.

For the auxiliary function output in the continuous-path mode, the MD is also relevant for the FM357 and 802/802s systems. With SW 5.1 and higher, the other systems are parameterized directly via the PLC.

10120	PLC_RUNNINGUP_TIMEOUT	EXP, N01, N06	H2
s	Monitoring time for PLC power up	DOUBLE	PowerOn
-			
-	-	50.0	0.0
-	-	-	7/2
-	-	-	M

Description: Power up PLC monitoring time

This machine data specifies the maximum monitoring time within which the PLC must report its first sign of life to the NCK. During the power up routine, the monitoring function has the task of verifying that the PLC has properly assumed cyclic operation. If the PLC does not issue a message within this time, the NC issues an alarm message when it powers up; NC-READY is not set. The incrementing takes place within the interpolation cycles.

10125	EES_NC_NAME	EXP	-
-	NCU name for the generation of unique NC program names in EES mode	STRING	PowerOn
-			
-	-	-	7/2
-	-	-	M

Description: The user can assign a unique NCU name to each NCU with MD10125 \$MN_EES_NC_NAME. Similarly to \$P_CHANNO, this can then be used to generate unique NCU program names in EES mode.

Example: \$MN_EES_NC_NAME="NC1"

```
DEF STRING[31] FILENAME
```

```
FILENAME = "MYFILE_" << $MN_EES_NC_NAME << "_" << $P_CHANNO << ".SPF"
```

The variable FILENAME is then given the value "MYFILE_NC1_1.SPF" in the first channel on the NCU "NC1".

Background:

In EES mode, the part program memory can be located on a network drive which is accessed by multiple NCUs. Conflicts could be generated with the part program commands WRITE and DELETE if unique file names are not used. The generation of unique NCU program names in the user program is supported by MD10125 \$MN_EES_NC_NAME.

10127	EES_MOUNT_FILE			EXP	-	
-	Path and name of the file with the mounted drives			STRING	PowerOn	
-						
-	-	/user/sinumerik/mnt/ devices.lst	-	-	ReadOnly	S

Description: File name with path name under which the list of mounted drives is stored.

10128	EES_MAX_MOUNT_TIME			N05	-	
s	Maximum time for mounting the drives			DOUBLE	PowerOn	
-						
-	-	0	0	3600	1/1	M

Description: MD10128 \$MN_EES_MAX_MOUNT_TIME is used to configure the maximum waiting time in seconds for mounting the drives.

\$MN_EES_MAX_MOUNT_TIME > 0:

If the time in seconds is insufficient, then the drives are not detected, and the control powers up with alarm 6694 "Drives could not be mounted".

\$MN_EES_MAX_MOUNT_TIME = 0:

If the drives could not be mounted during control power on, then the control powers up without an alarm. The mounted drives are then declared to the control at each part program start.

Condition: The function "Execution from External Storage" is active.

10131	SUPPRESS_SCREEN_REFRESH			EXP	A2	
-	Screen refresh response under overload			BYTE	PowerOn	
-						
-	-	0	0	2	7/2	M

Description: There are part programs in which the main run (HL) has to wait until the pre-processing (VL) makes new blocks available.

The pre-processing and display update compete for NC computing time. The MD defines how the NC is to respond when the pre-processing is too slow.

0: When the VL of a channel is too slow, the updating of the display is suppressed in all channels.

1: When the VL of a channel is too slow, the updating of the display is suppressed only in the time-critical channels in order to gain time for the pre-processing.

2: The updating of the display is never suppressed.

10132	MMC_CMD_TIMEOUT			EXP, N01, N06	PA, M4	
s	Monitoring time for HMI command in the part program			DOUBLE	PowerOn	
-						
-	-	3.0	0.0	100.0	7/2	M

Description: Monitoring time in seconds until the HMI acknowledges a command from the part program. The following times are monitored:

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- In the case of an HMI command without acknowledgment: time from triggering the transfer of the command string until successful transmission to the HMI
- In the case of an HMI command with synchronous and asynchronous acknowledgment: time from triggering the transfer of the command strings until receipt of the acceptance acknowledgment from the HMI
- For EXTCALL command and execution from external drives: time between the transmission triggering of the command string and the successful sending to the HMI.

10133	START_LOCK_TIMEOUT			EXP	-	
s	Monitoring time for channel-specific start disable and WRITE lock			DOUBLE	PowerOn	
-						
-	-	2.0	0.5	3.0	ReadOnly	S

Description: MD10133 \$MN_START_LOCK_TIMEOUT is evaluated in two situations:

1. If an NC channel is started in AUTO mode (NC Start key) with channel-specific start disable set (not program-specific start disable), then the start is executed if the start disable is reset within the waiting time configured in MD10133 \$MN_START_LOCK_TIMEOUT.
2. If an NC program, for which a Write lock has been set (e.g. by the HMI Editor), is to be processed in EES mode (Execution from External Storage), then the processing is stopped with alarm 14007 after expiry of the waiting time configured by MD10133 \$MN_START_LOCK_TIMEOUT.

10134	MM_NUM_MMC_UNITS			EXP, N01, N02	B3	
-	Possible number of simultaneous HMI communication partners			DWORD	PowerOn	
-						
-	-	6	1	10	2/2	M

Description: Possible number of simultaneous HMI communication partners with which the NCU can exchange data.

This value affects then number of communication orders that the NCK can manage. The higher the value, the more HMIs that can be simultaneously connected to the NCK without leading to communication problems.

DRAM is made available for this function in the NCU corresponding to the input in the machine data. The inputs for changing the memory areas have to be taken into account. The unit of MD10134 \$MN_MM_NUM_MMC_UNITS is a "resource unit".

A standard HMI needs 1 resource unit, an HMI100/103 needs 2. OEM variants may need more or less resources.

- If the value is set lower than would be needed for the number of connected HMIs, this is not inevitably problematical. Actions may not function sporadically during multiple, simultaneous, communication-intensive operations (e.g. loading a program): Alarm 5000 is displayed. The operation then has to be repeated.
- If the value is set higher, more dynamic memory is occupied than necessary. The value should be reduced appropriately if the memory is required for other purposes.

References: /FB/, S7, "Memory Configuration"

10136	DISPLAY_MODE_POSITION			N01	-	
-	Display mode for actual position in the Work			DWORD	Reset	
-						
-	-	0	0	1	7/1	M

Description: Defines how the position and the distance to go are displayed in the Work.

0: Display as in software version 5 and earlier

1: At end of block, the actual value display is in principle the same as the programmed end point, irrespective of where the machine actually is (e.g. as a result of the tool radius compensation). The distance to go is the same as the actual distance to be traversed. This means that the displayed actual position has to be the same as the displayed end position minus the distance to go, irrespective of the actual machine position. If the block end points are changed by chamfers, radii, contour definitions, splines or SAR in comparison to the NC program, then these changes are reflected in the display as if they had been programmed. This does not apply to changes resulting from tool radius compensation or smoothing.

10156	TASK_SLEEP_TIME			EXP	-	
-	Average time transfer per cycle			DWORD	Immediately	
NBUP						
-	-	0	0	10000	7/2	M

Description:

Only relevant to simulation systems

The unit of the machine data is the microsecond.

In the simulation environment, a machining run designates execution of the tasks Server, IPO, and PREP, which are not interrupted

This machine data now specifies the average time that is allocated to the operating system of the simulation host system per machining run.

As it is not usually possible to allocate times in the microsecond range in the operating system of the simulation host system, the times are calculated over multiple cycles, and then the default time set by the operating system (typically between 10 - 15 milliseconds) is allocated. A number of cycles are therefore run without delay, and there is a correspondingly longer wait later, so that the time set in the MD is allocated as an overall average. The value 0 deactivates the time allocation.

E.g.: If MD10156 \$MN_TASK_SLEEP_TIME is set to the value 50 (microseconds), and the minimum allocated time defined by the operating system is 10 milliseconds (= 10000 microseconds), there will be a delay of 10 milliseconds every 200 cycles (10000/50).

10160	PREP_COM_TASK_CYCLE_RATIO				EXP, N01	ECO	
-	Factor for communication with HMI				DWORD	PowerOn	
-							
-	-	3	1	50	7/1	M	

Description:

This machine data specifies the division ratio used for activating the communication task in the non-cyclic time level. This allows the time share of preparation in the non-cyclic time level to be increased, which reduces block change times. This slows down external communication (file transfer), especially during program execution (group-by-group reload).

10185	NCK_PCOS_TIME_RATIO			EXP, N01	-	
%	Processing time share NCK			DOUBLE	PowerOn	
-						
-	-	90.0	90.0	95.0	7/2	M

Description:

This machine data defines the maximum proportion of CPU time given to the NC kernel in the entire system. The division specified by the user is implemented as well as possible.

When implementing the specification, the system takes into account limiting values for the absolute proportion of CPU time that must not be exceeded or undershot.

Adaptations are made without generating an alarm.

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10190	TOOL_CHANGE_TIME			N01	BA	
s	Tool changing time for simulation			DOUBLE	PowerOn	
-						
-	-	0.	-	-	7/2	M

Description: This data defines how much time is estimated for a tool change (only relevant for a simulation).

10192	GEAR_CHANGE_WAIT_TIME			N01	S1	
s	Gear stage change waiting time			DOUBLE	PowerOn	
-						
-	-	10.0	0.0	1.0e5	7/2	M

Description: External events which trigger reorganization, wait for the end of a gear stage change. GEAR_CHANGE_WAIT_TIME now determines the waiting time for the gear stage change. Time unit in seconds.

When this time expires without the gear stage change having been terminated, the NCK reacts with an alarm.

Among others, the following events will cause reorganization:

User ASUB

Mode change

Delete distance-to-go

Axis replacement

Activate user data

10200	INT_INCR_PER_MM			N01	G2, K3	
-	Calculation resolution for linear positions			DOUBLE	PowerOn	
LINK						
-	-	1000.	1.0	1.0e9	7/2	M

Description: This MD defines the number of internal increments per millimeter.

The accuracy of the input of linear positions is limited to the calculation accuracy by rounding the product of the programmed value and the calculation accuracy to an integer.

In order to keep the executed rounding easily understandable it is useful to use powers of 10 for the calculation accuracy.

10210	INT_INCR_PER_DEG			N01	G2, K3, R2	
-	Calculation resolution for angular positions			DOUBLE	PowerOn	
LINK						
-	-	1000.0	1.0	1.0e9	7/2	M

Description: This MD defines the number of internal increments per degree.

The accuracy of the input of angular positions is limited to the calculation accuracy by rounding the product of the programmed value and the calculation accuracy to an integer.

In order to keep the executed rounding easily understandable it is useful to use powers of 10 for the calculation accuracy.

10220	SCALING_USER_DEF_MASK			EXP, N01	G2	
-	Activation of scaling factors			UDWORD	PowerOn	
SCAL						
-	-	0x200	0	0x7FFF	7/2	M

Description:

Bit mask for selecting the base values for the data (e.g. machine and setting data) that have a physical unit, they are interpreted in the default units shown below according to the basic system (metric/inch). If other input/output units are to be selected for individual physical units then these are activated with the scale factors associated with this machine data (entered in MD10230 \$MN_SCALING_FACTORS_USER_DEF[n]).

This does not affect the programming of geometry and feed values.

Bit set:

Data of the assigned physical variable (see list) are scaled to the unit defined by MD10230 \$MN_SCALING_FACTORS_USER_DEF[n].

Bit not set:

Data of the assigned physical variable are scaled to the default unit shown below.

Assigned physical variable Default units for:

Bit no. (Stated as hex value)	MD10240 \$MN_SCALING_SYSTEM_IS_METRIC	
	1 = METRIC	0 = INCH
0 Linear position	1 mm	1 inch
1 Angular position	1 degree	1 degree
2 Linear velocity	1 mm/min	1 inch/min
3 Angular speed	1 rpm	1 rpm
4 Linear acceleration	1 m/s ²	1 inch/s ²
5 Angular acceleration	1 rev/s ²	1 rev/s ²
6 Linear jerk	1 m/s ³	1 inch/s ³
7 Angular jerk	1 rev/s ³	1 rev/s ³
8 Time	1 s	1 s
9 Position-controller servo gain	1/s	1/s
10 Revolutional feedrate	1 mm/rev	1 mm/rev
11 Compensation value linear pos.	1 mm	1 mm
12 Compensation value angular pos.	1 degree	1 degree
13 Cutting speed	1 m/min	1 feet/min

Example:

SCALING_USER_DEF_MASK = ?H3?; (Bit nos. 0 and 1 as hex values)

The scale factor defined in the associated MD10230 \$MN_SCALING_FACTORS_USER_DEF[n] is activated for linear and angular positions.

If this machine data is changed, a power on is required as otherwise the associated machine data that have physical units would be incorrectly scaled.

Proceed as follows:

- MD changed manually
First start up and then enter the associated machine data with physical units.
- MD changed via machine data file
First start up and then reload the machine data file so that the new physical units are taken into account.

If the machine data are altered, alarm 4070 "Scaling machine data altered" is output.

Application example: Input/output of linear velocities is to be in cm/min:

SCALING_USER_DEF_MASK = 0x4 (bit no. 2 as hex value)

SCALING_FACTORS_USER_DEF[2] = 0.166666667 (10/60)

[Related to:

MD10230 \$MN_SCALING_FACTORS_USER_DEF[n] (scaling factors of the physical variables)

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10230	SCALING_FACTORS_USER_DEF			EXP, N01	G2		
-	Scaling factors of physical variables [0] Linear position 1 mm [1] Angular position 1 degree [2] Linear velocity 1 mm/s [3] Angular speed 1 degree/s [4] Linear acceleration 1 mm/s ² [5] Angular acceleration 1 degree/s ² [6] Linear jerk 1 mm/s ³ [7] Angular jerk 1 degree/s ³ [8] Time 1 s [9] Position controller loop gain 1/s [10] Revolutionary feedrate 1 mm/degree [11] Compensation value linear position 1 mm [12] Compensation value angular position 1 degree [13] Cutting speed 1 mm/s			DOUBLE		PowerOn	
SCAL							
-	15	1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0...	1e-9	-	7/2	M	

Description:

The scaling factor of a physical variable that has a unit other than the default unit setting (set bit in MD10220 \$MN_SCALING_USER_DEF_MASK) is entered in this MD. The factor must refer to the unit used internally for the physical variable in question.

The scaling factor is assigned to the physical variable using the index [0...12]. If this machine data is changed, a startup is required because otherwise the associated machine data that have physical units would be incorrectly scaled.

Proceed as follows:

- MD changed manually
First start up and then enter the associated machine data with physical units.
- MD changed via machine data file
First start up and then reload the machine data file so that the new physical units are taken into account.

If the machine data are altered, alarm 4070 "Scaling machine data altered" is output.

Application example(s):

Input/output of angular speeds is to be in new degree/min: MD10220
 \$MN_SCALING_USER_DEF_MASK = 'H8'; (bit no. 3 as hex value) MD10230
 \$MN_SCALING_FACTORS_USER_DEF[3] = 0.01851852; (400/360/60)
 [3]: Index for angular speed.

Related to:

MD10220 \$MN_SCALING_USER_DEF_MASK (activation of scaling factors).

10240	SCALING_SYSTEM_IS_METRIC			N01	G2, K3, A3, S1	
-	Basic system metric			BOOLEAN	PowerOn	
SCAL						
-	-	TRUE	FALSE	TRUE	7/2	M

Description:

The MD defines the basic system used by the control for scaling length-dependent physical variables for data input/output.

All corresponding data are stored internally in the basic units of 1 mm, 1 degree and 1 sec.

In the case of access from the interpreter (part program and download), from the operator panel (variable service) or through external communication, scaling takes place in the following units:

MD10240 \$MN_SCALING_SYSTEM_IS_METRIC = 1: scaled in:

mm, mm/min, m/s2 , m/s3, mm/rev.

MD10240 \$MN_SCALING_SYSTEM_IS_METRIC = 0: scaled in:

inch, inch/min, inch/s2, inch/s3, inch/rev.

The selection of the basic system also defines the interpretation of the programmed F value for linear axes:

	metric	inch
G94	mm/min	inch/min
G95	mm/rev.	inch/rev.

If this machine data is changed, a startup is required because otherwise the associated machine data that have physical units would be incorrectly scaled.

Proceed as follows:

- MD changed manually

First start up and then enter the associated machine data with physical units.

- MD changed via machine data file

First start up and then reload the machine data file so that the new physical units are taken into account.

If the machine data are altered, alarm 4070 "Scaling machine data altered" is output.

Application example(s):

Setup is in the metric system and then changed over to the inch system.

Special cases:

10260	CONVERT_SCALING_SYSTEM			EXP	-, G2, B3, K3, N3	
-	Enable basic system conversion			BOOLEAN	PowerOn	
LINK						
-	-	FALSE	FALSE	TRUE	1/1	M

Description: Determines the handling of MD10240 \$MN_SCALING_SYSTEM_IS_METRIC.

0: Inch/metric behavior conforms to SW1-SW4

1: Inch/metric behavior from SW5

Inch/metric functionality of SW5:

1. Switch over the systems of units with HMI softkey
2. New G codes G700/G710
3. Data backup with system of unit recognition INCH/METRIC
4. Automatic data conversion on change of system of units

- All zero point offsets
- Compensation data (EEC, QEC)
- Tool offsets
- etc.

The change from MD10260 \$MN_CONVERT_SCALING_SYSTEM leads to alarm 4070!

This alarm is designed to indicate that data which remain active after a POWERON are not subjected to automatic conversion from SW1-SW4 and SW5 formats.

10270	POS_TAB_SCALING_SYSTEM			N01, N09	T1, N3, G2	
-	System of units of position tables			BYTE	Reset	
-						
-	-	0	0	1	7/2	M

Description: Defines the measuring system for the positional data for the following machine data

MD10910 \$MN_INDEX_AX_POS_TAB_1

MD10930 \$MN_INDEX_AX_POS_TAB_2

SD41500 \$SN_SW_CAM_MINUS_POS_TAB_1

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```

SD41501 $SN_SW_CAM_PLUS_POS_TAB_1
SD41502 $SN_SW_CAM_MINUS_POS_TAB_2
SD41503 $SN_SW_CAM_PLUS_POS_TAB_2
SD41504 $SN_SW_CAM_MINUS_POS_TAB_3
SD41505 $SN_SW_CAM_PLUS_POS_TAB_3
SD41506 $SN_SW_CAM_MINUS_POS_TAB_4
SD41507 $SN_SW_CAM_PLUS_POS_TAB_4

```

0: metric

1: inch

This machine data is only evaluated for MD10260 \$MN_CONVERT_SCALING_SYSTEM = 1.

Related to:

```

MD10260 $MN_CONVERT_SCALING_SYSTEM
MD10910 $MN_INDEX_AX_POS_TAB_1
MD10930 $MN_INDEX_AX_POS_TAB_2
SD41500 $SN_SW_CAM_MINUS_POS_TAB_1
SD41501 $SN_SW_CAM_PLUS_POS_TAB_1
SD41502 $SN_SW_CAM_MINUS_POS_TAB_2
SD41503 $SN_SW_CAM_PLUS_POS_TAB_2
SD41504 $SN_SW_CAM_MINUS_POS_TAB_3
SD41505 $SN_SW_CAM_PLUS_POS_TAB_3
SD41506 $SN_SW_CAM_MINUS_POS_TAB_4
SD41507 $SN_SW_CAM_PLUS_POS_TAB_4

```

10280	PROG_FUNCTION_MASK			EXP, N01	K1	
-	Bit mask to parameterize various part program commands			UDWORD	PowerOn	
-						
-	-	0x0	0	0x1F	7/2	M

Description:

Bit mask to parameterize various part program commands

Bit Hexadec. Meaning with bit set

Value

0: 0x1 Comparison commands ">" and "<" are processed as with SINUMERIK 840D:

Part program data of the type REAL are mapped internally in the IEEE 64 bit format. This mode maps decimal numbers inaccurately if this format's 52-bit wide mantissa is inadequate to map the number in binary notation. To solve this problem, all comparison commands (==, <>, >=, <=, > and <) are checked for relative equality of 1E-12.

This procedure is deactivated for greater than (>) and less than (<) comparisons by setting bit 0. (Compatibility setting for SINUMERIK 840D)

1: 0x2 Programming the channel names from machine data MD20000 \$MC_CHAN_NAME

By setting bit 1, the channel name stored in machine data MD20000 \$MC_CHAN_NAME can be programmed in the part program. The channel name can thus also be programmed instead of a numerical value for the channel number in programming coordination commands such as (START(), INIT(), WAIT() etc.)

2: 0x4 Reserved

3: 0x8 Convert illegal ASCII characters into blanks

By setting bit3, the previous behavior is activated when interpreting a part program block. This means that all invalid ASCII characters in a part program block are handled internally as blank.

4: 0x10 The wait time G4 F<wait time> is rounded off as a multiple integer of an IPO cycle.

This means that a G4 F0.001 only takes one cycle, for an IPO cycle of 1 msec.

10284	DISPLAY_FUNCTION_MASK	EXP, N01	-
-	Behavior of various display variables	UDWORD	PowerOn
-			
-	-	0x0	0
		0x7FFFFFFF	7/2
			M

Description: Bit mask for parameterizing various display variables:
 BitNo. Hexadec. Meaning with bit set
 value
 Bit0: 0x1
 Parameters are assigned to the OPI variable lastBlockNoStr in the SPARP and SPARPP blocks.
 Bit1: 0x2
 Concerns the OPI variable cmdSpeed in the SPARPP block. If the bit is set, the variable returns the programmed speed even if the spindle is at a standstill or in another mode (positioning mode, axis mode).
 Bit2 0x4
 Concerns the OPI variable cmdSpeed in the SPARPP block. (reserved for constant cutting speed)
 Bit8: 0x100
 Servotrace manages larger numerical values internally. Overruns in data format are avoided. The accuracy may be reduced with large numerical values.

10285	TASK_TIME_AVERAGE_CONFIG	EXP, N01	-
-	Period for task runtime mean value generation	DOUBLE	PowerOn
-			
-	-	1.0	0
		86400	7/2
			M

Description: Period in seconds for which the respective mean value of the task runtimes is generated.
 For the value 0, the current actual value is provided as mean value.
 This mean value can be read via the OPI variable aveCycleTimeNet.

10290	CC_TDA_PARAM_UNIT	N09	G2
-	Physical units of tool data for compile cycles	DWORD	PowerOn
-			
-	64	0, 0, 0, 0, 0, 0, 0, 0...	0
		9	2/2
			M

Description: Physical units for the user-defined tool-specific data:
 0 ;No unit
 1 ;Linear position [mm ; inch]
 2 ;Angular position [degree ; degree]
 3 ;Linear velocity [mm/min ; inch/min]
 4 ;Angular speed [rpm ; rpm]
 5 ;Linear acceleration [m/s² ; inch/s²]
 6 ;Angular acceleration. [rev/s² ; rev/s²]
 7 ;Linear jerk [m/s³ ; inch/s³]
 8 ;Angular jerk [rev/s³ ; rev/s³]
 9 ;Revolutional feedrate [mm/rev ; inch/rev]
 Only available if bit 2 (0x4) is set in MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK

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10291	CCS_TDA_PARAM_UNIT			N09	-	
-	Physical units of SIEMENS-OEM tool data			DWORD	PowerOn	
-						
-	10	0, 0, 0, 0, 0, 0, 0, 0...	0	9	2/2	M

Description: Physical units for application-specific tool-specific data:

- 0: No unit
- 1: Linear position [mm; inch]
- 2: Angular position [degree ; degree]
- 3: Linear velocity [mm/min ; inch/min]
- 4: Angular speed [rpm ; rpm]
- 5: Linear acceleration [m/s² ; inch/s²]
- 6: Angular acceleration [rev/s² ; rev/s²]
- 7: Linear jerk [m/s³ ; inch/s³]
- 8: Angular jerk [rev/s³ ; rev/s³]
- 9: Feedrate per revolution [mm/rev; inch/rev]

Only available if Bit 2 (0x4) is set in MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK.

Related to:

MD18204 \$MN_MM_NUM_CCS_TDA_PARAM

10292	CC_TOA_PARAM_UNIT			N09	G2	
-	Physical units of cutting edge data for compile cycles			DWORD	PowerOn	
-						
-	64	0, 0, 0, 0, 0, 0, 0, 0...	0	9	2/2	M

Description: Physical units for the user-defined cutting edge data:

- 0 ;No unit
- 1 ;Linear position [mm ; inch]
- 2 ;Angular position [degree ; degree]
- 3 ;Linear velocity [mm/min ; inch/min]
- 4 ;Angular speed [rpm ; rpm]
- 5 ;Linear acceleration [m/s² ; inch/s²]
- 6 ;Angular acceleration. [rev/s² ; rev/s²]
- 7 ;Linear jerk [m/s³ ; inch/s³]
- 8 ;Angular jerk [rev/s³ ; rev/s³]
- 9 ;Revolitional feedrate [mm/rev ; inch/rev]

Only available if bit 2 (0x4) is set in MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK

10293	CCS_TOA_PARAM_UNIT			N09	-	
-	Physical units of SIEMENS-OEM cutting edge data			DWORD	PowerOn	
-						
-	10	0, 0, 0, 0, 0, 0, 0, 0...	0	9	2/2	M

Description: Physical units for application-specific cutting data:

- 0 : No unit
- 1 : Linear position [mm ; inch]
- 2 : Angular position [degree ; degree]
- 3 : Linear velocity [mm/min ; inch/min]
- 4 : Angular speed [rpm ; rpm]
- 5 : Linear acceleration [m/s² ; inch/s²]
- 6 : Angular acceleration [rev/s² ; rev/s²]

7 : Linear jerk [m/s³ ; inch/s³]
 8 : Angular jerk [rev/s³ ; rev/s³]
 9 : Feedrate per revolution [mm/rev; inch/rev]

Only available if Bit 2 (0x4) is set in MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK.

Related to:

MD18206 \$MN_MM_NUM_CCS_TOA_PARAM

10300	FASTIO_ANA_NUM_INPUTS			N10	A4, TE1	
-	Number of active analog NC inputs			BYTE	PowerOn	
-						
-	-	0	0	8	7/2	M

Description:

This machine data defines the number of usable analog NC inputs on the control.

Only these analog NC inputs can be addressed by the NC part program or assigned by NC functions.

If more analog NC inputs are defined with the machine data than are available in the hardware of the control, the binary analog actual value is set to zero in the control for the inputs that do not exist in the hardware. The NCK value can be altered by the PLC.

Note:

CPU computing time on the interpolation level is required for processing the digital and analog NC I/Os. The number of active NC I/Os should therefore be limited to the demands of the machine so that the interpolation cycle time is not unnecessarily loaded.

10310	FASTIO_ANA_NUM_OUTPUTS			N10	A4	
-	Number of active analog NC outputs			BYTE	PowerOn	
-						
-	-	0	0	8	7/2	M

Description:

This machine data defines the number of usable analog NC outputs on the control.

Only these analog NC outputs can be addressed by the NC part program or assigned by NC functions.

If more analog NC outputs are defined with the machine data than are available in the hardware of the control, no alarm is triggered. The analog values specified by the part program can be read by the PLC.

Note:

CPU computing time on the interpolation level is required for processing the digital and analog NC I/Os. The number of active NC I/Os should therefore be limited to the demands of the machine so that the interpolation cycle time is not unnecessarily loaded.

10320	FASTIO_ANA_INPUT_WEIGHT			N10	A4	
-	Weighting factor for analog NC inputs			DWORD	PowerOn	
-						
-	8	10000, 10000, 10000, 10000, 10000, 10000, 10000, 10000	1	10000000	7/2	M

Description:

A weighting factor can be defined with this MD for each analog NC input [n] to enable adaptation to the various analog-to-digital converters (depending on the I/O module).

The value to be entered in this machine data is the value that is to be read in the part program with the command x = \$A_INA[n] if the associated analog input [n] is set to the maximum value or the value +32767 is defined for this input via the PLC interface.

2.3 NC machine data

The value read from the analog-to-digital converter or the PLC interface is multiplied by the factor (FASTIO_ANA_INPUT_WEIGHT / 32767) before it can be read in the part program with the system variable \$A_INA[n].

Use of the weighting factor for "Analog NC inputs without hardware": with a weighting factor of 32767, the values defined by the part program and the PLC are numerically identical (1:1 communication between part program and PLC). This is advantageous when the analog NC inputs/outputs are used purely as PLC inputs/outputs without analog hardware.

Note:

The comparator threshold values SD41600 \$SN_COMPAR_THRESHOLD_1 and SD41601 \$SN_COMPAR_THRESHOLD_2 are also normalized to MD10320 \$MN_FASTIO_ANA_INPUT_WEIGHT corresponding to their assignment to an analog input.

The CC access to analog values is not affected by FASTIO_ANA_INPUT_WEIGHT.

Related to:

NC/PLC interface signal DB10, DBB148 - 163 (PLC setting value for analog NC inputs)

10330	FASTIO_ANA_OUTPUT_WEIGHT			N10	A4	
-	Weighting factor for analog NC outputs			DWORD	PowerOn	
-						
-	8	10000, 10000, 10000, 10000, 10000, 10000, 10000, 10000	1	10000000	7/2	M

Description:

A weighting factor can be defined with this MD for each analog NC output [n] to enable adaptation to the various digital-to-analog converters (depending on the I/O module used).

[hw] = Index (0 to 7) for addressing the external analog outputs

The value x to be entered in this machine data is the value that is to effect the maximum set value of the associated analog output [n] when programming \$A_OUTA[n] = x in the part program or is to generate the value +32767 in the PLC interface for this output.

Use of the weighting factor for "Analog NC outputs without hardware": With a weighting factor of 32767, the values defined by the part program and the PLC are numerically identical (1:1 communication between part program and PLC). This is advantageous when the analog NC outputs are used purely as PLC outputs without analog hardware.

Related to:

NC/PLC interface signal DB10, DBB170 - 185 (PLC setting value for analog NC outputs)

NC/PLC interface signal DB10, DBB210 - 225 (Setpoint for analog NC outputs)

10350	FASTIO_DIG_NUM_INPUTS			N10	A4, TE1	
-	Number of active digital NC input bytes			BYTE	PowerOn	
-						
-	-	1	0	5	7/2	M

Description:

The number of bytes of the digital NC inputs that can be used on the control are defined in this machine data.

These digital NC inputs can be read directly by the part program. Moreover, the signal state at the HW inputs can also be changed by the PLC.

If more digital NC inputs are defined in the machine data than are available in the control hardware, a signal status of 0 is set in the control for the inputs that do not exist in the hardware. The NCK value can be altered by the PLC.

Related to:

NC/PLC interface signal DB10 DBB0 (Disable the digital NC inputs 1-8);

NC/PLC interface signal DB10 DBB122,124,126,128 (Disable the external digital inputs 9-40)

NC/PLC interface signal DB10 DBB1 (PLC setting for digital NC inputs 1-9)

NC/PLC interface signal DB10 DBB123,125,127,129 (PLC values for external digital inputs 9-40)

NC/PLC interface signal DB10, DBB60, DBB186 (Actual value for digital NC inputs)

10360	FASTIO_DIG_NUM_OUTPUTS			N10	A4, TE8	
-	Number of active digital NC output bytes			BYTE	PowerOn	
-						
-	-	0	0	5	7/2	M

Description:

The number of bytes for digital NC outputs that can be used on the control are defined in this machine data.

These digital NC outputs can be set directly by the part program. The PLC is able to

- set the digital outputs to "0" in a defined way with NC/PLC interface signal DB10, DBB4, DBB130 (Disable the digital NC outputs).
- alter the NCK value with NC/PLC interface signal DB10, DBB5, DBB131 (Overwrite mask for digital NC outputs).
- specify a PLC value with NC/PLC interface signal DB10, DBB7, DBB133 (Setting mask for digital NC outputs).

If more digital NC outputs are defined in the machine data than are available in the control hardware, no alarm is triggered. The signal states specified by the part program can be read by the PLC.

Special cases:

Digital NC outputs 5 to 8 can be processed only by the PLC (no hardware outputs).

Related to:

NC/PLC interface signal DB10, DBB4, DBB130 (Disable the digital NC outputs)

NC/PLC interface signal DB10, DBB5, DBB131 (Overwrite mask for digital NC outputs)

NC/PLC interface signal DB10, DBB6, DBB132 (PLC setting value for digital NC outputs)

NC/PLC interface signal DB10, DBB7, DBB133 (Setting mask for digital NC outputs)

NC/PLC interface signal DB10, DBB64, DBB190 (Setpoint for digital NC outputs)

10361	FASTIO_DIG_SHORT_CIRCUIT			N10	A4	
-	Short circuit of digital inputs and outputs			UDWORD	PowerOn	
-						
-	10	0, 0, 0, 0, 0, 0, 0, 0...	0	0x7FFFFFFF	7/2	M

Description:

Defined short circuits between digital output and input signals of the high-speed NC I/Os are realized by linking the signals read in from the high-speed NC I/Os or the PLC interface to defined output signals.

The output signals always remain unchanged by the link, the inputs that have to be taken into account internally arise from the read inputs and the link. If a plurality of output bits are specified for one input bit in overwrite mode, the last defined assignment in the list determines the result.

The definition of non-existent or non-activated inputs/outputs is ignored without an alarm.

Bits 0-7: Number of the input byte to be written (1 - 5)

Bits 8-15: Bit number within the input byte (1 - 8)

Link:

The type of link is selected by adding a hexadecimal number to the input bit number:

00 Overwrite input identically to output

A0 Input is AND-gated to the read input with the status of the stated output

B0 Input is OR-gated to the read input with the status of the stated output

Bits 16-23: Number of the output byte to be used (1 - 5)

Bits 24-31: Bit number within the output byte (1 - 8)

Example:

2.3 NC machine data

MD10361 \$MN_FASTIO_DIG_SHORT_CIRCUIT[0] = 0x04010302
 Input: 3rd bit of the 2nd byte
 Output: 4th bit of the 1st byte (= 4th onboard NCU output)
 The input status is overwritten by the specified output
 MD10361 \$MN_FASTIO_DIG_SHORT_CIRCUIT[1] = 0x0705A201
 Input: 2nd bit of the 1st byte (= 2nd onboard NCU input)
 Output: 7th bit of the 5th byte
 The input status is AND-gated with the specified output
 MD10361 \$MN_FASTIO_DIG_SHORT_CIRCUIT[2] = 0x0103B502
 Input: 5th bit of the 2nd byte
 Output: 1st bit of the 3rd byte
 The input status is OR-gated with the specified output
 Related to:
 MD10350 \$MN_FASTIO_DIG_NUM_INPUTS,
 MD10360 \$MN_FASTIO_DIG_NUM_OUTPUTS.
 References: /FB/, A4, "Digital and Analog NC I/Os"

10362	HW_ASSIGN_ANA_FASTIN			N10	A4, TE1	
-	Hardware assignment of the fast analog NC inputs			UDWORD	PowerOn	
-						
-	8	0x01000000, 0x01000000, 0x01000000, 0x01000000, 0x01000000, 0x01...	0x01000000	0x060003FF	7/2	M

Description:

For PROFIBUS/PROFINET:

1st + 2nd byte indicate the logical start address of the I/O slot on the PROFIBUS/PROFINET:

Value 0000 means NO active slot

Values 0001..0100 are reserved for the PLC process image (the value of input slots can be read by the NCK without errors, but output slots are forbidden in this range, and cause an alarm on power up)

1st byte = LowByte of the logical start address

2nd byte = HighByte of the logical start address

3rd byte = 0 = without meaning

4th byte = 5 = segment no. for PROFIBUS/PROFINET

The individual bytes are explained in MD10366 \$MN_HW_ASSIGN_DIG_FASTIN.

[hw] = Index (0 to 7) for addressing the external analog inputs

Related to:

MD10366 \$MN_HW_ASSIGN_DIG_FASTIN

MD10368 \$MN_HW_ASSIGN_DIG_FASTOUT

MD10364 \$MN_HW_ASSIGN_ANA_FASTOUT

10364	HW_ASSIGN_ANA_FASTOUT			N10	A4, TE3	
-	Hardware assignment of external analog NC outputs			UDWORD	PowerOn	
-						
-	8	0x01000000, 0x01000000, 0x01000000, 0x01000000, 0x01000000, 0x01...	0x01000000	0x060003FF	7/2	M

Description:

For PROFIBUS/PROFINET:

1st + 2nd byte indicate the logical start address of the I/O slot on the PROFIBUS/PROFINET:

Value 0000 means NO active slot

Values 0001..0100 are reserved for the PLC process image (the value of input slots can be read by the NCK without errors; however, output slots are forbidden in this range, and cause an alarm on power up)

1st byte = LowByte of the logical start address

2nd byte = HighByte of the logical start address

3rd byte = 0 = without meaning

4th byte = 5 = segment no. for PROFIBUS/PROFINET

The individual bytes are explained in MD10366 \$MN_HW_ASSIGN_DIG_FASTIN.

Related to:

MD10366 \$MN_HW_ASSIGN_DIG_FASTIN

MD10368 \$MN_HW_ASSIGN_DIG_FASTOUT

MD10362 \$MN_HW_ASSIGN_ANA_FASTIN

10366	HW_ASSIGN_DIG_FASTIN			N10	A4, TE1	
-	Hardware assignment of external digital NC inputs			UDWORD	PowerOn	
-						
-	10	0x01000000, 0x01000000, 0x01000000, 0x01000000, 0x01000000, 0x01...	0x01000000	0x060003FF	7/2	M

Description:

For PROFIBUS/PROFINET:

1st + 2nd bytes indicate the logical basis address of the I/O slot on the PROFIBUS/PROFINET:

Value 0000 means NO active slot

Values 0001..0100 are reserved for the PLC process image (the value of input slots can be read by the NCK without errors; however, output slots are forbidden in this range, and cause an alarm when powering up)

1st byte = LowByte of the logical basis address

2nd byte = HighByte of the logical basis address

3rd byte = 0 = without meaning

4th byte = 5 = segment no. for PROFIBUS/PROFINET

Module no.: 1 ... MD_MAXNUM_SIMO611D_AXES:

Number of the logical slot in which the terminal block with the external I/Os is inserted.

1st + 2nd bytes give the logical basis address of the I/O slot on the PROFIBUS

1st byte = low byte

2nd byte = high byte

Value 0000 means NO active slots

Values 0001..007F are reserved for the PLC (NCK can also read the value for input slots without error, but output slots are forbidden in this range and lead to an alarm when powering up)

Values 0080..02FF are valid

Values > 02FF are invalid

Example:

HW_ASSIGN_DIGITAL_FASTIN[3] = '05000302'

1st + 2nd byte: 0302 (hex) = logical basis address 770 (decimal)

3rd byte: 00 = no significance

2.3 NC machine data

4th byte: 05 = ID for PROFIBUS/PROFINET

Corresponds with:

MD10368 \$MN_HW_ASSIGN_DIG_FASTOUT

MD10362 \$MN_HW_ASSIGN_ANA_FASTIN

MD10364 \$MN_HW_ASSIGN_ANA_FASTOUT

10368	HW_ASSIGN_DIG_FASTOUT			N10	A4	
-	Hardware assignment of external digital NC outputs			UDWORD	PowerOn	
-						
-	4	0x01000000, 0x01000000, 0x01000000, 0x01000000, 0x01000000, 0x01...	0x01000000	0x060003FF	7/2	M

Description:

For PROFIBUS/PROFINET:

1st + 2nd byte indicate the logical start address of the I/O slot on the PROFIBUS/PROFINET:

Value 0000 means NO active slot

Values 0001..0100 are reserved for the PLC process image (the value of input slots can be read by the NCK without errors; however, output slots are forbidden in this range, and cause an alarm on power up)

1st byte = LowByte of the logical start address

2nd byte = HighByte of the logical start address

3rd byte = 0 = without meaning

4th byte = 5 = segment no. for PROFIBUS/PROFINET

The individual bytes are explained under MD10366 \$MN_HW_ASSIGN_DIG_FASTIN.

[hw] = Index (0 to 3) for addressing the external digital output bytes

Related to:

MD10366 \$MN_HW_ASSIGN_DIG_FASTIN

MD10362 \$MN_HW_ASSIGN_ANA_FASTIN

MD10364 \$MN_HW_ASSIGN_ANA_FASTOUT

10385	PROFISAFE_MASTER_ADDRESS			N01, N10	FBSI	
-	PROFIsafe address master module			UDWORD	PowerOn	
-						
-	3	0, 0, 0	0	0x0500FA7D	7/2	M

Description:

Definition of the PROFIsafe address of the F master NCK/PLC. Used for unique assignment between F master and F slave. This parameter must be entered in accordance with the parameter "F_source_address" set in S7-ES for the F slaves. An attempt to establish communication is only made with F slaves for which this address has been entered.

Format: 0s 00 aaaa

s: Bus segment (5 = I/O connection on the PLC side)

aaaa: Hexadecimal PROFIsafe address of the F master

10386	PROFISAFE_IN_ADDRESS			N01, N10	FBSI	
-	PROFIsafe address input module			UDWORD	PowerOn	
-						
-	48	0, 0, 0, 0, 0, 0, 0, 0...	0	0x0502FFFF	7/2	M

Description:

PROFIsafe destination address of an input module

Format: 0s 0x aaaa

s: Bus segment (5 = I/O connection on the PLC side)

x: Sub-slot address

Value range: 0...2

x = 0 addresses the F user data signals 1...32

x = 1 addresses the F user data signals 33...64

x = 2 addresses the F user data signals 65...96

aaaa: Hexadecimal PROFIsafe address of the F module

10387	PROFISAFE_OUT_ADDRESS			N01, N10	FBSI	
-	PROFI-safe-address output module			UDWORD	PowerOn	
-						
-	48	0, 0, 0, 0, 0, 0, 0, 0...	0	0x0502FFFF	7/2	M

Description: PROFIsafe destination address of an output module
 Format: 0s 0x aaaa
 s: Bus segment (5 = I/O connection on the PLC side)
 x: Sub-slot address
 Value range: 0...2
 x = 0 addresses the F user data signals 1...32
 x = 1 addresses the F user data signals 33...64
 x = 2 addresses the F user data signals 65...96
 aaaa: Hexadecimal PROFIsafe address of the F module

10388	PROFISAFE_IN_ASSIGN			N01, N10	FBSI	
-	Input.assignment \$A_INSE to PROFIsafe module			DWORD	PowerOn	
-						
-	48	0, 0, 0, 0, 0, 0, 0, 0...	0	192192	7/2	M

Description: Assignment between external SPL interface \$A_INSE and PROFIsafe input module
 The PLC area is specified in decimals in aaa bbb format
 where aaa = area limit 1, SPL signal \$A_INSE[aaa]
 bbb = area limit 2. SPL signal \$A_INSE[bbb]
 Example:
 \$MN_PROFISAFE_IN_ASSIGN[0] = 001 004 or alternatively 004 001:
 The system variables \$A_INSE[1...4] are assigned the state of the input terminals of the PROFIsafe module that was parameterized in MD10386 \$MN_PROFISAFE_IN_ADDRESS[0] and selected in MD13300 \$MN_PROFISAFE_IN_FILTER[0].

10389	PROFISAFE_OUT_ASSIGN			N01, N10	FBSI	
-	Outp.assignment \$A_OUTSE to PROFIsafe module			DWORD	PowerOn	
-						
-	48	0, 0, 0, 0, 0, 0, 0, 0...	0	192192	7/2	M

Description: Assignment between external SPL interface \$A_OUTSE and PROFIsafe output module
 The SPL area is specified in decimals in aaa bbb format
 where aaa = area limit 1. SPL signal \$A_OUTSE[aaa]
 bbb = area limit 2. SPL signal \$A_OUTSE[bbb]
 Example:
 PROFISAFE_OUT_ASSIGN[0] = 064 061 or alternatively 061 064:
 The states of the system variables \$A_OUTSE[61...64] are assigned to the output terminals selected in MD13301 \$MN_PROFISAFE_OUT_FILTER[0] of the PROFIsafe module specified in MD10387 \$MN_PROFISAFE_OUT_ADDRESS[0].

2.3 NC machine data

10393	SAFE_DRIVE_LOGIC_ADDRESS			N01, N04	-	
-	Logical drive addresses SI			DWORD	PowerOn	
-						
-	31	6700, 6724, 6748, 6772, 6796, 6820, 6844, 6868...	258	16383	7/2	M

Description: Logical I/O addresses of the SI message frames of the drives on the PROFIBUS.
One address is assigned to one drive.

10394	PLCIO_NUM_BYTES_IN			N10	A4	
-	Number of directly readable input bytes of the PLC I/Os			BYTE	PowerOn	
-						
-	-	0	0	32	7/2	M

Description: The number of PLC I/O input bytes that can be read directly by the NC.
These bytes are not transmitted by the PLC user program but via an interrupt of the PLC operating system.
The access delay is less than 0.5 ms.
The bytes can be read by the part program and from synchronized actions with the system variables:
\$A_PBB_IN,
\$A_PBW_IN,
\$A_PBD_IN,
\$A_PBR_IN
.
Notice:
The machine data MD10394 \$MN_PLCIO_NUM_BYTES_IN and MD10395 \$MN_PLCIO_LOGIC_ADDRESS_IN must be consistent with the PLC-side configuration.
Related to:
MD10395 \$MN_PLCIO_LOGIC_ADDRESS_IN

10395	PLCIO_LOGIC_ADDRESS_IN			N10	A4	
-	Start addr. of the directly readable input bytes of the PLC I/Os			DWORD	PowerOn	
-						
-	-	0	0	16383	7/2	M

Description: Starting from this address, the PLC hardware must configure a number of bytes in MD10394 \$MN_PLCIO_NUM_BYTES_IN for direct use by the NC. These bytes are not transmitted by the PLC user program, but directly via an interrupt of the PLC operating system. The access delay is less than 0.5 ms. The bytes can be read by the part program and from synchronized actions with the system variables:
\$A_PBB_IN,
\$A_PBW_IN,
\$A_PBD_IN,
\$A_PBR_IN
.
Notice:
The machine data MD10394 \$MN_PLCIO_NUM_BYTES_IN and MD10395 \$MN_PLCIO_LOGIC_ADDRESS_IN must be consistent with the PLC-side configuration.
Related to:
MD10394 \$MN_PLCIO_NUM_BYTES_IN

10396	PLCIO_NUM_BYTES_OUT			N10	A4	
-	Number of directly writable output bytes of the PLC I/Os			BYTE	PowerOn	
-						
-	-	0	0	32	7/2	M

Description:

The number of PLC I/O output bytes that can be written directly by the NC.

These bytes are not transmitted by the PLC user program but via an interrupt of the PLC operating system.

The access delay is less than 0.5 ms.

The bytes can be written by the part program and from synchronized actions with the system variables:

\$A_PBB_OUT,

\$A_PBW_OUT,

\$A_PBD_OUT,

\$A_PBR_OUT

on the NC side.

Attention:

The machine data MD10396 \$MN_PLCIO_NUM_BYTES_OUT and MD10397

\$MN_PLCIO_LOGIC_ADDRESS_OUT must be consistent with the configuration by the PLC, otherwise other PLC output signals will be overwritten.

10397	PLCIO_LOGIC_ADDRESS_OUT			N10	A4	
-	Start addr. of the directly writable output bytes of PLC I/O			DWORD	PowerOn	
-						
-	-	0	0	16383	7/2	M

Description:

Starting from this address, the PLC hardware must configure a number of MD10396 \$MN_PLCIO_NUM_BYTES_OUT for direct use by the NC.

These bytes are not transmitted by the PLC user program, but directly via an interrupt of the PLC operating system.

The access delay is less than 0.5 ms.

The bytes can be written by the part program and from synchronized actions with the system variables:

\$A_PBB_OUT,

\$A_PBW_OUT,

\$A_PBD_OUT,

\$A_PBR_OUT

.

Notice:

The machine data MD10396 \$MN_PLCIO_NUM_BYTES_OUT and MD10397

\$MN_PLCIO_LOGIC_ADDRESS_OUT must be consistent with the PLC-side configuration.

Related to:

MD10396 \$MN_PLCIO_NUM_BYTES_OUT

10398	PLCIO_IN_UPDATE_TIME			N10	A4	
s	Update time for PLCIO input cycle			DOUBLE	PowerOn	
-						
-	-	0.0	0	10000	7/2	M

Description:

Specification of the time span during which the data of the PLC I/Os directly readable via \$A_PBx_IN system variables are updated.

This time span is rounded up internally to the next-higher multiple of the time predefined by the IPO cycle.

2.3 NC machine data

10399	PLCIO_TYPE_REPRESENTATION			N10	A4	
-	Little/Big Endian for PLCIO			BYTE	PowerOn	
-						
-	-	0	0	1	7/2	M

Description: Little/big-Endian format representation of the \$A_PBx_OUT, \$A_PBx_IN system variable for PLC I/Os directly controllable by NCK.

Value = 0 ; the system variable is represented in the little-Endian format

Value = 1 ; the system variable is represented in the big-Endian format

As a rule, the PLC I/Os must always be controlled in the big-Endian format (value = 1). For compatibility reasons, however, the default setting is the little-Endian format (value = 0).

10400	CC_VDI_IN_DATA			EXP, N02	OEM	
-	Number of input bytes for compile cycles			DWORD	PowerOn	
-						
-	-	0	0	1024	7/1	M

Description: The compile cycle user can freely define data within a data block on the PLC user interface. As the user, he determines the size of the interface from PLC to NCK. This machine data describes the length of the area on the VDI interface in bytes which defines the NCK input interface. The sum of this and MD10410 \$MN_CC_VDI_OUT_DATA must not exceed 400 for software version 1.

10410	CC_VDI_OUT_DATA			EXP, N02	OEM	
-	Number of output bytes for compile cycles			DWORD	PowerOn	
-						
-	-	0	0	1024	7/1	M

Description: The compile cycle user can freely define data within a data block on the PLC user interface. As the user, he determines the size of the interface from PLC to NCK. This machine data describes the length of the area on the VDI interface in bytes which defines the NCK output interface. The sum of this and MD10400 \$MN_CC_VDI_IN_DATA must not exceed 400.

10420	CC_ASSIGN_FASTOUT_MASK			EXP, N10	OEM	
-	Reservation of external outputs for compile cycles			UDWORD	PowerOn	
-						
-	-	0	0	0x7FFFFFFF	7/2	M

Description: Reservation of high-speed hardware outputs for CC applications

Bit 0(LSB)-14: Mask of the digital output bytes reserved for the CC application

Bits 16-30: Mask of the analog outputs reserved for the CC application

The hardware outputs reserved here are included in the multiple assignment monitoring routine when the system is powered up. We recommend that you register all the hardware outputs used by CC applications here.

Bit 15: Suppresses power-up alarm 4275 (multiple assignment of digital output)

Bit 31: Suppresses power-up alarm 4275 (multiple assignment of analog output)

10430	CC_HW_DEBUG_MASK			EXP	OEM	
-	Hardware debug mask for compile cycles			UDWORD	PowerOn	
NBUP, NDLD						
-	-	0	0	0x7FFFFFFF	7/1	M

Description: Setting of special responses to peripheral HW interfaces for NCK debug

For practical debugging of NCK software, among other things, the response of peripheral units to the loss of the NCK sign of life must be suppressed when the NCK software has run to a breakpoint.

Bit 0 (LSB)-3:

For practical debugging of NCK software, among other things, the response of peripheral units to the loss of the NCK sign of life must be suppressed when the NCK software has run to a breakpoint.

Meaning of set bits:

Bit 0:

Drive modules ignore the loss of the NCK sign of life

Bit 1:

Terminal blocks ignore the loss of the NCK sign of life

Bit 3:

PLC ignores the loss of the NCK sign of life

Bit 4:

Recording of internal and external control commands. Recording the control sequences and storing them in a file in the passive file system. One can trace the exact sequence between the incoming hardware signals of the PLC interface and the internal sequences with the aid of the recording file.

Bit 5:

Servotrace: Enable physical addresses without access control

Bit10:

Test for measuring function. If this bit is set, one can use the GUD variables CHAN INT MEA_TASK and CHAN INT MEA_COUNTER to transfer the inverse transformation of the measured values into cyclical and non-cyclical tasks.

Bit11:

No EMERGENCY STOP alarm on loss of PLC sign of life. If the PLC sign of life is not obtained within the time defined in MD10100 \$MN_PLC_CYCLIC_TIMEOUT, an alarm is not issued, merely the axis releases are withdrawn. (Application case: debugging the PLC user program)

Bit15:

Reserved for gantry setup help.

10450	SW_CAM_ASSIGN_TAB			N09	N3	
-	Assignment of software cams to machine axes			BYTE	PowerOn	
-						
-	32	0, 0, 0, 0, 0, 0, 0, 0...	0	31	7/2	M

Description:

This machine data allows one machine axis to be assigned to each of the 16 possible cam pairs (each is comprised of one minus and one plus cam).

If a "0" is entered, the corresponding cam is not processed.

The cam signal output is activated via the axial NC/PLC interface signal DB31, ... DBX2.0 (Cam activation)

Index [n] of the machine data addresses the cam pair: n = 0, 1, ... , 15 correspond to cam pairs 1, 2, ... , 16

Related to:

NC/PLC interface signal DB31, ... DBX2.0 (Cam activation)

Example:

Cam pair 1 is to be assigned to machine axis 3, and cam pair 3 to machine axis 4. Cam pair 2 is not to be assigned to an axis.

MD10450 \$MN_SW_CAM_ASSIGN_TAB[0]= 3

MD10450 \$MN_SW_CAM_ASSIGN_TAB[1]= 0

MD10450 \$MN_SW_CAM_ASSIGN_TAB[2]= 4

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10460	SW_CAM_MINUS_LEAD_TIME			N09	N3	
s	Lead or delay time at minus cams 1-16			DOUBLE	PowerOn	
-						
-	32	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	-	-	7/2	M

Description:

A lead or delay time can be assigned in this machine data to each minus cam 1-16 to compensate for delay times.

The switching edge of the associated cam signal is advanced or delayed by the time value entered.

Positive value: --> Lead time

Negative value: --> Delay time

Serves to compensate for the constant proportion of the internal delay time between actual value acquisition and signal output.

Index [n] of the machine data addresses the cam pair:

n = 0, 1, ... , 15 correspond to cam pairs 1, 2, ... , 16

This machine data is added to the setting data SD41520 \$SN_SW_CAM_MINUS_TIME_TAB_1[n] and SD41522 \$SN_SW_CAM_MINUS_TIME_TAB_2[n].

Related to:

SD41520 \$SN_SW_CAM_MINUS_TIME_TAB_1[n] (lead or delay time on minus cams 1 - 8)

SD41522 \$SN_SW_CAM_MINUS_TIME_TAB_2[n] (lead or delay time on minus cams 9 - 16)

10461	SW_CAM_PLUS_LEAD_TIME			N09	N3	
s	Lead or delay time at plus cams 1-16			DOUBLE	PowerOn	
-						
-	32	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	-	-	7/2	M

Description:

A lead or delay time can be assigned in this machine data to each plus cam 1-16 to compensate for delay times.

The switching edge of the associated cam signal is advanced or delayed by the time value entered.

Positive value: --> Lead time

Negative value: --> Delay time

Serves to compensate for the constant proportion of the internal delay time between actual value acquisition and signal output.

Index [n] of the machine data addresses the cam pair:

n = 0, 1, ... , 15 correspond to cam pairs 1, 2, ... , 16

This machine data is added to the setting data SD41521 \$SN_SW_CAM_PLUS_TIME_TAB_1[n] and SD41523 \$SN_SW_CAM_PLUS_TIME_TAB_2[n].

Related to:

SD41521 \$SN_SW_CAM_PLUS_TIME_TAB_1[n] (lead or delay time on plus cams 1 - 8)

SD41523 \$SN_SW_CAM_PLUS_TIME_TAB_2[n] (lead or delay time on plus cams 9 - 16)

10470	SW_CAM_ASSIGN_FASTOUT_1			N09	N3	
-	Hardware assignment for output of cams 1-8 to NC I/Os			UDWORD	PowerOn	
-						
-	-	0	0	0x7FFFFFFF	7/2	M

Description:

The cam signal status can be output to the NC I/Os as well as to the PLC.

The hardware assignment of the minus and plus cam signals to the digital output bytes used for the NC I/Os is made in this machine data for cam pairs 1 - 8.

The assigned output signals can also be inverted with this machine data.

The MD is coded as follows:

Bits 0-7: No. of 1st HW byte used with digital outputs
 Bits 8-15: No. of 2nd HW byte used with digital outputs
 Bits 16-23: Inversion mask for writing 1st HW byte used
 Bits 24-31: Inversion mask for writing 2nd HW byte used
 Bit=0: Do not invert
 Bit=1: Invert

If both HW bytes are specified, the 1st byte contains the minus cam signals and the 2nd byte the plus cam signals.

If the 2nd byte is not specified (= "0"), then the 8 cams are output as an AND operation of the minus and plus cam signals via the 1st HW byte using the 1st inversion mask.

The status of the non-inverted output signal for linear axes and for rotary axes with "plus cam - minus cam < 180 degrees" is:

"1" between minus and plus cams

"0" outside this range

The status of the non-inverted output signal for rotary axes with "plus cam - minus cam >= 180 degrees" is:

"0" between minus and plus cams

"1" outside this range

The following must be specified as the byte address for the digital outputs:

1: for on-board byte
 2 - 5: for external bytes

10471	SW_CAM_ASSIGN_FASTOUT_2			N09	N3	
-	Hardware assignment for output of cams 9-16 to NC I/Os			UDWORD	PowerOn	
-						
-	-	0	0	0x7FFFFFFF	7/2	M

Description:

The cam signal status can be output to the NC I/Os as well as to the PLC.

The hardware assignment of the minus and plus cam signals to the digital output bytes used for the NC I/Os can be made in this machine data for cam pairs 9 - 16.

The assigned output signals can also be inverted with this machine data.

The MD is coded as follows:

Bits 0-7: No. of 1st HW byte used with digital outputs
 Bits 8-15: No. of 2nd HW byte used with digital outputs
 Bits 16-23: Inversion mask for writing 1st HW byte used
 Bits 24-31: Inversion mask for writing 2nd HW byte used
 Bit=0: Do not invert
 Bit=1: Invert

If both HW bytes are specified, the 1st byte contains the minus cam signals and the 2nd byte the plus cam signals.

If the 2nd byte is not specified (= "0"), then the 8 cams are output as an AND operation of the minus and plus cam signals via the 1st HW byte using the 1st inversion mask.

The status of the non-inverted output signal for linear axes and for rotary axes with "plus cam - minus cam < 180 degrees" is:

"1" between minus and plus cams

"0" outside this range

The status of the non-inverted output signal for rotary axes with "plus cam - minus cam >= 180 degrees" is:

"0" between minus and plus cams

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"1" outside this range

The following must be specified as the byte address for the digital outputs:

- 1: for on-board byte
2 - 5: for external bytes

10472	SW_CAM_ASSIGN_FASTOUT_3			N09	N3	
-	Hardware assignment for output of cams 17-24 to NC I/Os			UDWORD	PowerOn	
-						
-	-	0	0	0x7FFFFFFF	7/2	M

Description:

The cam signal status can be output to the NC I/Os as well as to the PLC.

The hardware assignment of the minus and plus cam signals to the digital output bytes of the NC I/Os used can be made in this machine data for cam pairs 17 - 24.

The assigned output signals can also be inverted with this machine data.

The MD is coded as follows:

- Bits 0-7: Number of 1st HW byte used with digital outputs
Bits 8-15: Number of 2nd HW byte used with digital outputs
Bits 16-23: Inversion mask for writing 1st HW byte used
Bits 24-31: Inversion mask for writing 2nd HW byte used

Bit=0: Do not invert

Bit=1: Invert

If both HW bytes are specified, the 1st byte contains the minus cam signals and the 2nd byte the plus cam signals.

If the 2nd byte is not specified (= "0"), then the 8 cams are output as an AND operation of the minus and plus cam signals via the 1st HW byte using the 1st inversion mask.

The status of the non-inverted output signal for linear axes and for rotary axes with "plus cam - minus cam < 180 degrees" is:

"1" between minus and plus cams

"0" outside this range

The status of the non-inverted output signal for rotary axes with "plus cam - minus cam >= 180 degrees" is:

"0" between minus and plus cams

"1" outside this range

The following must be specified as the byte address for the digital outputs:

- 1: for on-board byte
2 - 5: for external bytes

10473	SW_CAM_ASSIGN_FASTOUT_4			N09	N3	
-	Hardware assignment for output of cams 25-32 to NC I/Os			UDWORD	PowerOn	
-						
-	-	0	0	0x7FFFFFFF	7/2	M

Description:

The cam signal status can be output to the NC I/Os as well as to the PLC

The hardware assignment of the minus and plus cam signals to the digital output bytes of the NC I/Os used can be made in this machine data for cam pairs 25 - 32.

The assigned output signals can also be inverted with this machine data.

The MD is coded as follows:

- Bits 0-7: Number of 1st HW byte used with digital outputs
Bits 8-15: Number of 2nd HW byte used with digital outputs
Bits 16-23: Inversion mask for writing 1st HW byte used
Bits 24-31: Inversion mask for writing 2nd HW byte used

Bit=0: Do not invert

Bit=1: Invert

If both HW bytes are specified, the 1st byte contains the minus cam signals and the 2nd byte the plus cam signals.

If the 2nd byte is not specified (= "0"), then the 8 cams are output as an AND operation of the minus and plus cam signals via the 1st HW byte using the 1st inversion mask.

The status of the non-inverted output signal for linear axes and for rotary axes with "plus cam - minus cam < 180 degrees" is:

"1" between minus and plus cams

"0" outside this range

The status of the non-inverted output signal for rotary axes with "plus cam - minus cam >= 180 degrees" is:

"0" between minus and plus cams

"1" outside this range

The following must be specified as the byte address for the digital outputs:

1: for on-board byte

2 - 5: for external bytes

10480	SW_CAM_TIMER_FASTOUT_MASK			N09	N3	
-	Mask for output of cam signals via timer interr. to NCU			UDWORD	PowerOn	
-						
-	-	0	0	0x7FFFFFFF	7/2	M

Description:

A timer-controlled output to the 4 on-board outputs of the NC I/Os can be selected in this machine data for 4 cam pairs.

In this case, the minus and plus signals of a cam pair are "EXCLUSIVE OR'd" for output as one signal.

Meaning for set bit:

Associated cam (minus and plus cam signals "EXCLUSIVE OR'd") is output via a timer interrupt at one of the 4 on-board outputs of the NCU.

The on-board outputs are assigned in order of increasing machine axis numbers (with assigned cam pairs).

Example:

Machine axis 3 = cam pair 1 --> on-board output 3

Machine axis 1 = cam pair 2 --> on-board output 1

Machine axis 7 = cam pair 3 --> on-board output 4

Machine axis 2 = cam pair 4 --> on-board output 2

If a plurality of cam pairs are set for one machine axis, then this axis is assigned in ascending order of the cam pairs.

Example:

Machine axis 3 = cam pair 1 --> on-board output 2

Machine axis 3 = cam pair 2 --> on-board output 3

Machine axis 7 = cam pair 3 --> on-board output 4

Machine axis 2 = cam pair 4 --> on-board output 1

This function works independently of the assignment set in MD10470

\$MN_SW_CAM_ASSIGN_FASTOUT_1 or MD10471 \$MN_SW_CAM_ASSIGN_FASTOUT_2.

Note:

The on-board byte must not be used more than once.

If there is more than one signal change in the IPO cycle for the cam pairs specified in the MD, then the cam pair with the lowest number determines the instant of output. The other signals change at the same time.

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10485	SW_CAM_MODE			N09	N3	
-	Behavior of SW cams			UDWORD	PowerOn	
-						
-	-	0	0	0x7FFFFFFF	7/2	M

Description:

Meaning of the individual bits:

Bit 0 (LSB) = 0:

If more than 1 signal change per interpolation cycle is due for the cams specified in MD10480 \$MN_SW_CAM_TIMER_FASTOUT_MASK, the cam having the lowest number will determine the output instant. The other signals change at the same instant. That is, a maximum of one interrupt-controlled output is effected per interpolation cycle.

Bit 0 (LSB) = 1:

Each cam specified in MD10480 \$MN_SW_CAM_TIMER_FASTOUT_MASK will be output precisely at the time of the interpolation cycle. There is no output priority of the cams. A maximum of 8 interrupt-controlled outputs can be performed per interpolation cycle.

Bit 1 = 0:

Inversion of signal behavior from plus cam, where plus cam - minus cam $\geq$ 180 degr.

Bit 1 = 1:

No inversion of signal behavior from plus cam, where plus cam - minus cam $\geq$ 180 degr.

Signal behavior on-board output:

Overtravelling:

Minus cam plus cam

Traversing direction:

positive 0->1 1->0

negative 1->0 0->1

Bit 2 = 0:

No path-time cam

Bit 2 = 1:

Path-time cam for cams where minus position = plus position. The lead/delay time applied is independent of:

- velocity of the axis
- position of the axis
- reversal of traversing direction

The cam is only activated on overtravelling of the cam position. A lead/delay time applied to the minus cam is active and leads to a shift of the whole cam.

Bit 3 = 0:

No alignment signal in case of measurement area selection.

Bit 3 = 1:

Output of an alignment signal for measurement area selection (FM only). On-board output 8 is used permanently.

On-board output 8 = 1: Measurement possible (active range enabled)

On-board output 8 = 0: Measurement not possible

Bit 4 = 0:

and following free

10490	SW_CAM_COMP_NCK_JITTER			N09	-	
s	Cam jitter compensation			DOUBLE	NEW CONF	
-						
-	-	0	0.0	0.0001	7/2	M

Description: The compensation value reduces system-related time inaccuracies during output of highly precise cam signals. The default time encumbers the cyclic time level of the control, and should therefore be selected as short as possible. We recommend that you return a cam signal to a measuring input of the control and increase the compensation value until the scatter of the measured positions cannot be reduced any further.

Currently only active when MD10485 \$MN_SW_CAM_MODE Bit0 = 0.

10500	DPIO_LOGIC_ADDRESS_IN			N10	A4	
-	Logical slot address of the PROFIBUS/PROFINET I/Os			DWORD	PowerOn	
-						
-	32	0, 0, 0, 0, 0, 0, 0, 0...	0	16383	7/2	M

Description: Logical slot address of the PROFIBUS/PROFINET I/Os usable by the NCK.

10501	DPIO_RANGE_LENGTH_IN			N10	A4	
-	Length of the PROFIBUS/PROFINET I/O range			DWORD	PowerOn	
-						
-	32	0, 0, 0, 0, 0, 0, 0, 0...	0	128	7/2	M

Description: Length of the PROFIBUS/PROFINET I/O range in bytes consistently usable for the NCK. This range must be defined in STEP 7, hardware configuration.

0: only the first data slot is used.

x: length of the consistent PROFIBUS/PROFINET I/O range in bytes

Note: in PROFINET, it is not possible to combine several slots in one area.

10502	DPIO_RANGE_ATTRIBUTE_IN			N10	A4	
-	Attributes of the PROFIBUS/PROFINET I/Os			UDWORD	PowerOn	
-						
-	32	0x01, 0x01, 0x01, 0x01, 0x01, 0x01, 0x01, 0x01...	0	0xFFFFFFFF	7/2	M

Description: Attributes of the PROFIBUS/PROFINET I/Os

Bit 0: Little/Big Endian format of the system variable \$A_DPx_IN[n,m]

0: Little Endian format

1: Big Endian format

Bit 1: (reserved)

Bit 2: Read input data

0: Read possible through system variable and CC binding (increased performance requirements)

1: Read only possible for CC binding (low performance requirements)

Bit 3: Slot sign-of-life alarms

0: Slot sign-of-life alarms are output

1: Slot sign-of-life alarms are suppressed

Bit 4...7: (Reserved for expansions)

Bit 8...31: Reserved for the assignment to compile cycle functions (see documentation of the CC function)

10510	DPIO_LOGIC_ADDRESS_OUT			N10	A4	
-	Logical slot address of the PROFIBUS/PROFINET I/Os			DWORD	PowerOn	
-						
-	32	0, 0, 0, 0, 0, 0, 0, 0...	0	16383	7/2	M

Description: Logical slot address of the PROFIBUS/PROFINET I/Os usable by the NCK.

Note: the logical slot address must lie outside the PLC process image.

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10511	DPIO_RANGE_LENGTH_OUT			N10	A4	
-	Length of the PROFIBUS I/O range			DWORD	PowerOn	
-						
-	32	0, 0, 0, 0, 0, 0, 0, 0...	0	128	7/2	M

Description: Length of the PROFIBUS I/O range consistently usable for the NCK in bytes. This range must be defined in STEP 7, hardware configuration.

0: only the first data slot is used.

x: length of the consistent PROFIBUS I/O range in bytes

Note: in PROFINET it is not possible to combine several slots to form one area.

10512	DPIO_RANGE_ATTRIBUTE_OUT			N10	A4	
-	Attributes of the PROFIBUS/PROFINET I/Os			UDWORD	PowerOn	
-						
-	32	0x01, 0x01, 0x01, 0x01, 0x01, 0x01, 0x01, 0x01...	0	0xFFFFFFFF	7/2	M

Description: Attributes of the PROFIBUS/PROFINET I/Os

Bit 0: Little/Big Endian format of system variable \$A_DPx_OUT[n,m]

0: Little Endian format

1: Big Endian format

Bit 1: Write output data

0: Write only through system variable

1: Write only through CC binding

Bit 2: (reserved)

Bit 3: Slot sign-of-life alarms

0: Slot sign-of-life alarms are output

1: Slot sign-of-life alarms are suppressed

Bit 4...7: (Reserved for expansions)

Bit 8...31: Reserved for the assignment to compile cycle functions (see documentation of the CC function)

10520	PLCINTERN_LOGIC_ADDRESS_IN			N10	-	
-	Logical basis address for HW-PLC access to input slots internal PROFIBUS			DWORD	PowerOn	
-						
-	64	0, 0, 0, 0, 0, 0, 0, 0...	0	16383	7/2	M

Description: Logical basis address of the PROFIBUS I/O available with the PLC hardware at the internal PROFIBUS. Only relevant for HW-PLC.

10525	PLCINTERN_LOGIC_ADDRESS_OUT			N10	-	
-	Logical basis address for HW-PLC access to output slots internal PROFIBUS			DWORD	PowerOn	
-						
-	64	0, 0, 0, 0, 0, 0, 0, 0...	0	16383	7/2	M

Description: Logical basis address of the PROFIBUS I/O available with the PLC hardware at the internal PROFIBUS. Only relevant for HW-PLC.

10530	COMPAR_ASSIGN_ANA_INPUT_1			N10	A4	
-	Hardware assignment of analog inputs for comparator byte 1			BYTE	PowerOn	
-						
-	8	0, 0, 0, 0, 0, 0, 0, 0	-	-	7/2	M

Description:

This MD assigns analog inputs 1 to 8 to a bit number of comparator byte 1. This input bit of the comparator is set to "1" if the comparison between the applied analog value and the associated threshold value (SD41600 \$SN_COMPAR_THRESHOLD_1 fulfills the condition parameterized in (MD10540 \$MN_COMPAR_TYPE_1).

An analog input can be assigned to a plurality of comparator input bits.

The following generally applies to comparator byte 1:

COMPAR_ASSIGN_ANA_INPUT_1 [b] = n

with index: b = number of comparator input bit (0 to 7)

n = number of analog input (1 to 8)

Example:

```
COMPAR_ASSIGN_ANA_INPUT_1[0] = 1
COMPAR_ASSIGN_ANA_INPUT_1[1] = 2
COMPAR_ASSIGN_ANA_INPUT_1[2] = 1
COMPAR_ASSIGN_ANA_INPUT_1[3] = 3
COMPAR_ASSIGN_ANA_INPUT_1[4] = 3
COMPAR_ASSIGN_ANA_INPUT_1[5] = 1
COMPAR_ASSIGN_ANA_INPUT_1[6] = 1
COMPAR_ASSIGN_ANA_INPUT_1[7] = 1
```

Analog input 1 affects input bits 0, 2, 5, 6 and 7 of comparator byte 1

Analog input 2 affects input bit 1 of comparator byte 1

Analog input 3 affects input bits 3 and 4 of comparator byte 1

Related to:

MD10540 \$MN_COMPAR_TYPE_1

MD10541 \$MN_COMPAR_TYPE_2

10531	COMPAR_ASSIGN_ANA_INPUT_2			N10	A4	
-	Hardware assignment of analog inputs for comparator byte 2			BYTE	PowerOn	
-						
-	8	0, 0, 0, 0, 0, 0, 0, 0	-	-	7/2	M

Description:

This MD assigns analog inputs 1 to 8 to a bit number of comparator byte 2. This input bit of the comparator is set to "1" if the comparison between the applied analog value and the associated threshold value (SD41601 \$SN_COMPAR_THRESHOLD_2 fulfills the condition parameterized in (MD10541 \$MN_COMPAR_TYPE_2).

An analog input can be assigned to a plurality of comparator input bits.

The following generally applies to comparator byte 2:

COMPAR_ASSIGN_ANA_INPUT_2 [b] = n

with index: b = number of comparator input bit (0 to 7)

n = number of analog input (1 to 8)

Example:

```
COMPAR_ASSIGN_ANA_INPUT_2[0] = 1
COMPAR_ASSIGN_ANA_INPUT_2[1] = 2
COMPAR_ASSIGN_ANA_INPUT_2[2] = 1
COMPAR_ASSIGN_ANA_INPUT_2[3] = 3
COMPAR_ASSIGN_ANA_INPUT_2[4] = 3
COMPAR_ASSIGN_ANA_INPUT_2[5] = 1
```

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```

COMPAR_ASSIGN_ANA_INPUT_2[6] = 1
COMPAR_ASSIGN_ANA_INPUT_2[7] = 1
Analog input 1 affects input bits 0, 2, 5, 6 and 7 of comparator byte 2
Analog input 2 affects input bit 1 of comparator byte 2
Analog input 3 affects input bits 3 and 4 of comparator byte 2
Related to:
MD10540 $MN_COMPAR_TYPE_1
MD10541 $MN_COMPAR_TYPE_2

```

10540	COMPAR_TYPE_1			N10	A4	
-	Parameterization for comparator byte 1			UDWORD	PowerOn	
-						
-	-	0	0	0x7FFFFFFF	7/2	M

Description: This MD can be used to make the following settings for the individual output bits (0 to 7) of comparator byte 1:

- Bits 0 to 7: Comparison type mask (for comparator output bits 0 to 7)
 - Bit = 1: output bit = 1 if analog value $\geq$ threshold value
 - Bit = 0: output bit = 1 if analog value $<$ threshold value
(Threshold value defined by SD41600 \$SN_COMPAR_THRESHOLD_1)
- Bits 8 to 15: Not used (defined to be set to 0)
- Bits 16 to 23: Assignment of a HW output byte for outputting the comparator states (statement of the byte address)
 - Byte = 0: No output via digital NC outputs
 - Byte = 1: Output via digital onboard NC outputs (1 to 4)
 - Byte = 2: Output via external digital NC outputs 9 to 16
 - Byte = 3: Output via external digital NC outputs 17 to 24
 - Byte = 4: Output via external digital NC outputs 25 to 32
 - Byte = 5: Output via external digital NC outputs 33 to 40
- Bits 24 to 31: Inversion mask for the output of the comparator states (bits 0 to 7)
 - Bit = 0: Output bit is not inverted
 - Bit = 1: Output bit is inverted

Related to:

```

MD10530 $MN_COMPAR_ASSIGN_ANA_INPUT_1
MD10531 $MN_COMPAR_ASSIGN_ANA_INPUT_2
SD41600 $SN_COMPAR_THRESHOLD_1
SD41601 $SN_COMPAR_THRESHOLD_2
MD10360 $MN_FASTIO_DIG_NUM_OUTPUTS

```

10541	COMPAR_TYPE_2			N10	A4	
-	Parameterization of comparator byte 2			UDWORD	PowerOn	
-						
-	-	0	0	0x7FFFFFFF	7/2	M

Description: This MD can be used to make the following settings for the individual output bits (0 to 7) of comparator byte 2:

- Bits 0 to 7: Comparison type mask (for comparator output bits 0 to 7)
 - Bit = 1: output bit = 1 if analog value $\geq$ threshold value
 - Bit = 0: output bit = 1 if analog value $<$ threshold value
(Threshold value defined by SD41601 \$SN_COMPAR_THRESHOLD_2)

- Bits 8 to 15: not used (defined to be set to 0)
- Bits 16 to 23: Assignment of a HW output byte for outputting the comparator states (statement of the byte address)
- Byte = 0: no output via digital NC outputs
 - Byte = 1: output via digital onboard NC outputs (1 to 4)
 - Byte = 2: output via external digital NC outputs 9 to 16
 - Byte = 3: output via external digital NC outputs 17 to 24
 - Byte = 4: output via external digital NC outputs 25 to 32
 - Byte = 5: output via external digital NC outputs 33 to 40
- Bits 24 to 31: Inversion mask for the output of the comparator states (bits 0 to 7)
 - Bit = 0: Output bit is not inverted
 - Bit = 1: Output bit is inverted

Related to:

MD10530 \$MN_COMPAR_ASSIGN_ANA_INPUT_1
 MD10531 \$MN_COMPAR_ASSIGN_ANA_INPUT_2
 SD41600 \$SN_COMPAR_THRESHOLD_1
 SD41601 \$SN_COMPAR_THRESHOLD_2
 MD10360 \$MN_FASTIO_DIG_NUM_OUTPUTS

10600	FRAME_ANGLE_INPUT_MODE			EXP, N01, N09	K2	
-	Sequence of rotation in FRAME			BYTE	PowerOn	
-						
-	-	1	1	2	7/2	M

Description: FRAME_ANGLE_INPUT_MODE sets how the rotations (ROT and AROT) around the three geometry axes are defined if more than one rotation is programmed in a block. The order in which these rotations are programmed within the block is irrelevant.

The rotations can be set to be calculated according to:

- Euler angle with FRAME_ANGLE_INPUT_MODE = 2
 The rotations are calculated according to the Euler angle in the following order:
 1. Rotation around Z
 2. Rotation around X
 3. Rotation around Y
- RPY with FRAME_ANGLE_INPUT_MODE = 1
 The rotations are calculated according to the Euler angle in the following order:
 1. Rotation around Z
 2. Rotation around Y
 3. Rotation around X

10602	FRAME_GEOAX_CHANGE_MODE			EXP, N01, N09	K2	
-	Frames when changing geometry axes			BYTE	PowerOn	
-						
-	-	0	0	5	7/2	M

Description: Geometry axes can be switched over in the following states:

- Selection and deselection of transformations
- Switchable geometry axes GEOAX()

The current total frame is then defined as follows:

0: The current total frame is canceled.

1: The current total frame is recalculated when geometry axes are switched over. Translations, scaling and mirroring for the new geometry axes become active. The rotations of the old geometry axes still apply.

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2: The current total frame is recalculated when geometry axes are switched over. Translations, scaling and mirroring for the new geometry axes become active. If rotations were active before switching over to the current base frames, current settable frame or programmable frame, switchover is canceled with an alarm.

3: The current total frame is deleted when selecting and deselecting transformations. When the GEOAX() command is entered, the frame is recalculated and translation, scaling and mirroring for the new geometry axes become active. The rotations of the old geometry axes still apply.

10604	WALIM_GEOAX_CHANGE_MODE			EXP, N01, N09	A3	
-	Working area limitation by changing geometry axes			BYTE	PowerOn	
-						
-	-	0	0	1	7/2	M

Description: This machine data specifies whether a potentially active working area limitation will remain active after geo axis replacement, or whether it will be deactivated.

Meaning of the MD values:

= 0 Working area limitation will be deactivated when replacing geo axis.

= 1 Working area limitation will remain activated when replacing geo axis.

10610	MIRROR_REF_AX			EXP, N01, N09	K2	
-	Reference axis for mirroring			BYTE	PowerOn	
-						
-	-	0	0	3	7/2	M

Description: 0: Mirroring always takes place in the stated axis, without scaling.

The mirroring of a geometry axis can always be related to a defined reference axis.

1: x is the reference axis

Mirroring of the x axis is unique.

Mirroring of the y axis is mapped on:

a mirroring of the x axis and

a rotation of the z axis through 180 degrees.

Mirroring of the z axis is mapped on:

a mirroring of the x axis and

a rotation of the x axis through 180 degrees and

a rotation of the z axis through 180 degrees

2: y is the reference axis

Mirroring of the x axis is mapped on:

a mirroring of the y axis and

a rotation of the z axis through 180 degrees.

Mirroring of the y axis is unique.

Mirroring of the z axis is mapped on:

a mirroring of the y axis and

a rotation of the x axis through 180 degrees

3: z is the reference axis

Mirroring of the x axis is mapped on:

a mirroring of the z axis and

a rotation of the z axis through 180 degrees and

a rotation of the x axis through 180 degrees

Mirroring of the y axis is mapped on:

a mirroring of the z axis and

a rotation of the x axis through 180 degrees.
Mirroring of the z axis is unique.

10612	MIRROR_TOGGLE			EXP, N01, N09	K2	
-	Mirror toggle			BYTE	PowerOn	
-						
-	-	1	0	1	7/2	M

Description: Mirror toggle function.
 1: Programmed axis values are not evaluated. Toggle switching behavior.
 0: Programmed axis values are evaluated.
 The axes are mirrored in the case of values not equal to 0 if they are not already mirrored. Mirroring is disabled if the value is 0.

10613	NCBFRAME_RESET_MASK			EXP	K2	
-	Active NCU global base frames after reset			UDWORD	Reset	
-						
-	-	0xFFFF	0	0xFFFF	7/2	M

Description: Bit mask for the reset setting of the NCU global base frames which are included in the channel.
 The following applies:
 When MD20110 \$MC_RESET_MODE_MASK bit0 = 1 and bit14 = 1
 The entire base frame is derived on reset from the linking of the NCU global base frame field elements whose bit in the bit mask is 1.
 When MD20110 \$MC_RESET_MODE_MASK bit0 = 1 and bit14 = 0
 The entire base frame is deselected on reset.

10615	NCBFRAME_POWERON_MASK			EXP, N12	K2	
-	Reset global base frames after power on			UDWORD	PowerOn	
-						
-	-	0	0	0xFFFF	7/2	M

Description: This machine data defines whether global base frames are reset in the data management on Power On.
 That is

- Offsets are set to 0,
- Scalings are set to 1.
- Mirroring is disabled.

The individual base frames can be selected separately.
 Bit 0 means base frame 0, bit 1 base frame 1 etc.
 Value=0: Base frame is retained on Power On
 Value=1: Base frame is reset in the data management on Power On.
 Related to:
 MD24004 \$MC_CHBFRAME_POWERON_MASK

10616	MAPPED_FRAME_MASK			N01	-	
-	Enable frame mapping			UDWORD	PowerOn	
-						
-	-	0x3001	0	0x00007FFF	7/2	M

Description: Bit mask for channel-specific data management frames, the axial frames of which can be mapped onto other axial frames.
 The mapping takes place via MD32075 \$MA_MAPPED_FRAME[AXn] = "AXm".

2.3 NC machine data

Bit 0:	\$P_SETFR	System frame for actual value setting and scratching
Bit 1:	\$P_EXTFR	System frame for external work offset
Bit 2:	\$P_PARTFR	System frame for TCARR and PAROT
Bit 3:	\$P_TOOLFR	System frame for TOROT and TOFRAME
Bit 4:	\$P_WPFR	System frame for workpiece reference points
Bit 5:	\$P_CYCFR	System frame for cycles
Bit 6:	\$P_TRAFR	System frame for transformations
Bit 7:	\$P_ISO1FR	System frame for ISO G51.1 Mirror
Bit 8:	\$P_ISO2FR	System frame for ISO G68 2DROT
Bit 9:	\$P_ISO3FR	System frame for ISO G68 3DROT
Bit 10:	\$P_ISO4FR	System frame for ISO G51 Scale
Bit 11:	\$P_RELFR	System frame for relative coordinate systems
Bit12:	\$P_CHBFR	Channel-specific basic frames
Bit13:	\$P_UIFR	Settable frames
Bit14:	\$P_GFR	Grinding frames

10617	FRAME_SAVE_MASK			EXP	K2	
-	Behavior of frames in SAVE subroutines			UDWORD	PowerOn	
-						
-	-	0	0	0x7	7/2	M

Description:

This machine data is used to define which frames are restored with SAVE attribute at return from a subprogram.

Bit 0: Settable frames G54 through G599

Value = 0:

If the same G code is active at subprogram return and subprogram call, the active settable frame is maintained. If not, the settable frame is reactivated when the subprogram is called.

Value = 1:

At subprogram return, the settable frame is reactivated when the subprogram is called.

Bit 1: Basic frame

Value = 0:

The active basic frame is not changed at subprogram return. This is also the case if a basic frame change is carried out in the subprogram by an operation or by an implicit frame deselection (possibly through TRAFOOF).

Value = 1:

At subprogram return, the basic frame is reactivated when the subprogram is called.

Bit 2: Grinding frames GFRAME0 through GFRAME100

Value = 0:

If the same G code is active at subprogram return and subprogram call, the active grinding frame is retained. If not, the grinding frame is reactivated when the subprogram is called.

Value = 1:

At subprogram return, the grinding frame is reactivated when the subprogram is called.

10618	PROTAREA_GEOAX_CHANGE_MODE			EXP, N01, N09	A3	
-	Protection range on change of geometry axes			UBYTE	PowerOn	
-						
-	-	0x0	0x0	0x3	7/2	M

Description:

This machine data is used to define whether any active protection zones will remain active after a transformation change or geo axis replacement, or whether they will be deactivated.

The machine data is bit-coded with the following meanings:

Bit 0 = 0

Protection zones deactivated on transformation change.

Bit 0 = 1

Active protection zones remain active after transformation change.

Bit 1 = 0

Protection zones deactivated on geo axis replacement.

Bit 1 = 1

Active protection zones remain active after geo axis replacement.

10619	COLLISION_TOLERANCE			EXP	-	
mm	Tolerance for collision check			DOUBLE	NEW CONF	
-						
-	-	1	0.001	1000.0	7/3	M

Description: This parameter is used to set the required collision check accuracy. This means: If the distance between two protection zones is smaller than this value, a collision of those two protection zones may be signalled. But: Two protection zones that overlap by less than this value cannot be classified as colliding.

10620	EULER_ANGLE_NAME_TAB			N01, N09	F2, TE4	
-	Name of Euler angle			STRING	PowerOn	
-						
-	3	A2, B2, C2	-	-	7/2	M

Description:

- The name entered must not conflict with the designation and assignment of machine and geometry axis names.
- The name entered must not conflict with channel axis names in the channel (MD20080 \$MC_AXCONF_CHANAX_NAME_TAB), names for directional vectors (MD10640 \$MN_DIR_VECTOR_NAME_TAB), names for intermediate point coordinates for CIP (MD10660 \$MN_INTERMEDIATE_POINT_NAME_TAB) or the names for interpolation parameters (MD10650 \$MN_IPO_PARAM_NAME_TAB).
- The name entered must not contain the following reserved address letters:
 - D Tool offset (D function)
 - E Reserved
 - F Feedrate (F function)
 - G Preparatory function
 - H Auxiliary function (H function)
 - L Subprogram call
 - M Special function (M function)
 - N Subblock
 - P Number of subroutine repetitions
 - R Arithmetic parameter
 - S Spindle speed (S function)
 - T Tool (T function)
- Nor are keywords (e.g. DEF, SPOS etc.) or predefined identifiers (e.g. ASPLINE, SOFT) allowed.
- An angle identifier consists of a valid address letter (A, B, C, I, J, K, Q, U, V, W, X, Y, Z), followed by an optional numerical extension (1-99).

2.3 NC machine data

10621	COLLISION_PREP_CALC_TIME			EXP	-	
s	Maximum computation time of the preparative collision check.			DOUBLE	NEW CONF	
-						
-	-	0.0	0.0	10.0	1/1	M

Description: The maximum computing time of the preparatory collision check is set with this machine data.

>0: After the set time, the preparatory collision check of the current block is interrupted. That makes computing time available to the external communication.

0: The preparatory collision check is not interrupted. That does not make any computing time available to the external communication during the collision check.

A communication failure may occur between HMI and NCK in extreme cases.

A value of 3 s is recommended.

10622	COLLISION_SAFETY_DIST			EXP	-	
mm	Safety distance for collision check			DOUBLE	NEW CONF	
-						
-	-	0.0	0.000	1000.0	7/3	M

Description: If the distance between two protection zones becomes smaller than this safety distance, this is regarded as a collision. This machine data is globally effective for protective zone pairs for which no special safety distance was specified (s. function COLLCHECK).

10624	ORIPATH_LIFT_VECTOR_TAB			N01, N09	-	
-	Name of retraction vector for path-relative orientation.			STRING	PowerOn	
-						
-	3	A8, B8, C8	-	-	7/2	M

Description: List of identifiers for components of the retraction vector during reorientations for path relative interpolation of the tool orientation.

The rules for axis identifiers as described in MD20080 \$MC_AXCONF_CHANAX_NAME_TAB apply to the selection of identifiers. The identifiers must be selected so that they do not cause any conflicts with other identifiers (axes, normal vectors, direction vectors, conical interpolation vectors, interpolation parameters, intermediate point coordinates).

10626	ORIPATH_LIFT_FACTOR_NAME			N01, N09	-	
-	Name of relative safety clearance with ORIPATH			STRING	PowerOn	
-						
-	-	ORIPLF	-	-	7/2	M

Description: Identifier for relative factor for determining a safety clearance for the retracting movement during reorientations for path relative interpolation of the tool orientation.

The rules for axis identifiers as described in MD20080 \$MC_AXCONF_CHANAX_NAME_TAB apply to the selection of identifiers. The identifiers must be selected so that they do not cause any conflicts with other identifiers (axes, normal vectors, direction vectors, conical interpolation vectors, interpolation parameters, intermediate point coordinates).

10630	NORMAL_VECTOR_NAME_TAB			N01, N09	F2	
-	Name of normal vectors			STRING	PowerOn	
-						
-	6	A4, B4, C4, A5, B5, C5	-	-	7/2	M

Description: Normal vector programming from software version 3.2

List of identifiers for the normal vector components at the beginning and end of the block.

The rules for axis identifiers described in MD20080 \$MC_AXCONF_CHANAX_NAME_TAB apply to the selection of identifiers.

The identifiers must be selected so that they do not cause any conflicts with other identifiers (axes, Euler angles, direction vectors, interpolation parameters, intermediate point coordinates).

10640	DIR_VECTOR_NAME_TAB			N01, N09	F2, TE4	
-	Name of direction vectors			STRING	PowerOn	
-						
-	6	A3, B3, C3, AN3, BN3, CN3	-	-	7/2	M

Description: List of identifiers for the direction vector components. (A3 to C3)
 List of identifiers for the vector components perpendicular to the direction vector (AN3 to CN3)
 The rules for axis identifiers described in MD20080 \$MC_AXCONF_CHANAX_NAME_TAB apply to the selection of identifiers.
 The identifiers must be selected so that they do not cause any conflicts with other identifiers (axes, Euler angles, normal vectors, interpolation parameters, intermediate point coordinates).

10642	ROT_VECTOR_NAME_TAB			N01, N09	F2	
-	Name of rotation vectors			STRING	PowerOn	
-						
-	3	A6, B6, C6	-	-	7/2	M

Description: List of identifiers for the rotation vector components in taper direction
 The rules for axis identifiers as described in MD20080 \$MC_AXCONF_CHANAX_NAME_TAB apply to the selection of identifiers.
 The identifiers must be selected so that they do not cause any conflicts with other identifiers (axes, Euler angles, normal vectors, interpolation parameters, intermediate point coordinates).

10644	INTER_VECTOR_NAME_TAB			N01, N09	F2	
-	Name of intermediate vector components			STRING	PowerOn	
-						
-	3	A7, B7, C7	-	-	7/2	M

Description: List of identifiers for the intermediate vector components
 The rules for axis identifiers described in MD20080 \$MC_AXCONF_CHANAX_NAME_TAB apply to the selection of identifiers.
 The identifiers must be selected so that they do not cause any conflicts with other identifiers (axes, Euler angles, normal vectors, interpolation parameters, intermediate point coordinates).

10646	ORIENTATION_NAME_TAB			N01, N09	F2	
-	Identifiers for programming a 2nd orientation path			STRING	PowerOn	
-						
-	3	XH, YH, ZH	-	-	7/2	M

Description: List of identifiers for programming of the 2nd space curve for tool orientation
 The rules for axis identifiers as described in MD20080 \$MC_AXCONF_CHANAX_NAME_TAB apply to the selection of identifiers.

2.3 NC machine data

The identifiers must be selected so that they do not cause any conflicts with other identifiers (axes, Euler angles, normal vectors, interpolation parameters, intermediate point coordinates).

10648	NUTATION_ANGLE_NAME			N01, N09	F2	
-	Name of aperture angle			STRING	PowerOn	
-						
-	-	NUT	-	-	7/2	M

Description: Identifier for the opening angle for orientation interpolation

The rules for axis identifiers as described in MD20080 \$MC_AXCONF_CHANAX_NAME_TAB apply to the selection of identifiers.

The identifiers must be selected so that they do not cause any conflicts with other identifiers (axes, Euler angles, normal vectors, direction vectors, intermediate point coordinates).

10650	IPO_PARAM_NAME_TAB			EXP, N01	K2	
-	Name of interpolation parameters			STRING	PowerOn	
-						
-	3	I, J, K	-	-	7/2	M

Description: List of identifiers for the interpolation parameters

The rules for axis identifiers described in MD20080 \$MC_AXCONF_CHANAX_NAME_TAB apply to the selection of identifiers.

The identifiers must be selected so that they do not cause any conflicts with other identifiers (axes, Euler angles, normal vectors, direction vectors, intermediate point coordinates).

Corresponds with:

MD10651 \$MN_IPO_PARAM_THREAD_NAME_TAB

MD10660 \$MN_INTERMEDIATE_POINT_NAME_TAB

References: /PA/, Programming Guide: Fundamentals"

10651	IPO_PARAM_THREAD_NAME_TAB			EXP, N01	K2	
-	Name of the interpolation parameter for convex thread			STRING	PowerOn	
-						
-	3	IR, JR, KR	-	-	7/2	M

Description: Identifier list of interpolation parameters for convex threads

When selecting identifiers, the rules for axis identifiers described in MD20080 \$MC_AXCONF_CHANAX_NAME_TAB apply.

The identifiers must be selected so that there is no conflict with other identifiers (axes, Euler angle, normal vector, direction vector, intermediate point coordinate).

Corresponds with:

MD10650 \$MN_IPO_PARAM_NAME_TAB

MD10660 \$MN_INTERMEDIATE_POINT_NAME_TAB

10660	INTERMEDIATE_POINT_NAME_TAB			EXP, N01	K2	
-	Name of interpolation point coordinates for G2/G3			STRING	PowerOn	
-						
-	3	I1, J1, K1	-	-	7/2	M

Description: List of identifiers for the intermediate point coordinates

The rules for axis identifiers described in MD20080 \$MC_AXCONF_CHANAX_NAME_TAB apply to the selection of identifiers. The identifiers must be selected so that they do not cause any conflicts with other identifiers (axes, Euler angles, normal vectors, direction vectors, intermediate point coordinates).

Related to:

MD10650 \$MN_IPO_PARAM_NAME_TAB

MD10651 \$MN_IPO_PARAM_THREAD_NAME_TAB

References: /PG/, Programming Guide: Fundamentals

10670	STAT_NAME			N01, N09	F2	
-	Name of state information			STRING	PowerOn	
-						
-	-	STAT	-	-	7/2	M

Description: Identifier for position information for solving ambiguities in Cartesian PTP travel.
An identifier must be chosen that does not conflict with other identifiers (e.g. axes, Euler angles, normal vectors, direction vectors, intermediate point coordinates).

10672	TU_NAME			N01, N09	F2	
-	Name of state information of axes			STRING	PowerOn	
-						
-	-	TU	-	-	7/2	M

Description: Identifier for position information of axes for solving ambiguities in Cartesian PTP travel.
An identifier must be chosen that does not conflict with other identifiers (e.g. axes, Euler angles, normal vectors, direction vectors, intermediate point coordinates).

10674	PO_WITHOUT_POLY			N01	F2	
-	Polynomial programming programmable without G function POLY			BOOLEAN	PowerOn	
-						
-	-	FALSE	FALSE	TRUE	7/2	M

Description: Until now, the G function POLY has always had to be active during polynomial programming with PO[xx] = (xx), otherwise an alarm was output.
If MD10674 \$MN_PO_WITHOUT_POLY is set to TRUE, no alarm is output with POLY inactive during polynomial programming. The end point of the polynomial is then approached with the linear interpolation G1.
There is no polynomial interpolation if POLY is inactive.

10682	CONTOUR_SAMPLING_FACTOR			N01, EXP	-	
-	Contour sampling factor			DOUBLE	Reset	
-						
-	-	1.0	0.0	-	1/1	M

Description: This factor defines the maximum time interval in which a curved contour is sampled in the interpolator.
The maximum sampling time results from the set interpolation cycle (see MD10071 \$MN_IPO_CYCLE_TIME), the factor set with this data, and the tolerance set for the geometry axes in MD33100 \$MA_COMPRESS_POS_TOL[].

10700	PREPROCESSING_LEVEL			N01, N02	V2, K1	
-	Program preprocessing level			UBYTE	PowerOn	
-						
-	-	0x25	0	0x7F	2/2	M

2.3 NC machine data

Description:

Bit 0= 0:

No preprocessing

Bit 0= 1:

The call description of the cycles is formed during control power on. All the programs in the directories `_N_CUS_DIR`, `_N_CMA_DIR` and `_N_CST_DIR` can be called in the part program without `EXTERNAL` declaration. If the parameter interface of a cycle is changed in the control, then this change does not become active until after Power On.

Bit 1=1:

During control power on, all cycles in the directories `_N_CUS_DIR`, `_N_CMA_DIR` and `_N_CST_DIR` are preprocessed to form a process-optimizing compilation. These cycles are then processed more quickly. Changes to the cycle programs do not become active until after the next Power On.

Bit 2=1:

During control power on, the Siemens cycles in the directory `_N_CST_DIR` are preprocessed to form a process-optimizing compilation (from SW 3.5).

Bit 3=1:

During control power on, the user cycles in the directory `_N_CUS_DIR` are preprocessed to form a process-optimizing compilation (from SW 3.5).

Bit 4=1:

Preprocessing the user cycles in the directory `_N_CMA_DIR`

Bit 5=1:

All files marked with `PREPRO` in the `PROG` statement line are preprocessed (from SW 6.4)

Bit 5=0:

During control power on, all cycles in the directories activated by bits 1 to 4 are preprocessed. This also applies to programs that are not marked with `PREPRO`.

Bit 6=1:

The compilation is stored in SRAM if there is inadequate space in DRAM (from SW 7.1).

Memory space is required for preprocessing cycles. Better utilization of memory can be achieved by selective setting of the preprocessing:

The runtime-critical cycles are brought together in one directory. The remaining cycles are in the other directory.

References:

/PG/, "Programming Guide Fundamentals" (`EXTERNAL` declaration)

10702	IGNORE_SINGLEBLOCK_MASK			N01	K1, Z1	
-	Prevents stopping at specific blocks in single block mode			UDWORD	PowerOn	
-						
-	-	0	0	0x1FFFF	7/2	M

Description:

This machine data prevents stopping at certain blocks with single block.

Single block stop can be prevented with the following bits of the mask:

Bit0 = 1

Means that there is no stop in any internal ASUB block. Exception: The single block stop has been explicitly activated by the `SBLON` command.

There are three different internal ASUBs that are triggered by different events.

- Repos: In the case of the events: change of operating mode to a manual mode (JOG, JOGREF, etc.) unless `MODESWITCH_MASK` is not set, switch skip block on and off, activate machine data, switch-on overstore, axis replacement, subroutine level cancelation, switch-on single block, switch dry run feedrate on and off, alarm with compensation block.

- Return: Delete distance-to-go, switchover after `TEACH-IN` (if available), or deselection of MDI with corresponding `MODESWITCH_MASK`.

- `_N_PROG_EVENT_SPF`: Parameterizing MD 20108 `$MC_PROG_EVENT_MASK` parameterizes the events whereby `_N_PROG_EVENT_SPF` is executed.

Bit1 = 1

Means that there is no stop in any user ASUB block. Exception: The single block stop has been explicitly activated via the SBLON command.

User ASUBs are linked to an interrupt by the part program command SETINT or via the `PI-_N_ASUP__`. The interrupt is then activated via PLC or the high-speed inputs, and the user ASUBs are retracted.

This disables machine data MD20117 `$MC_IGNORE_SINGLEBLOCK_ASUP`. The NCK behavior corresponds to the machine data assignment MD20117 `$MC_IGNORE_SINGLEBLOCK_ASUP=FFFFFFFF`.

Bit2 = 1

Means that there is no stop in any intermediate block. Intermediate blocks are generated at, among other events, tool change, ADIS and complicated geometry.

Bit3 = 1

Means that there is no stop in the block search pickup block. The block search pickup block is the 1st block that is loaded into the main run at the start after the search target has been found in the program.

Bit4 = 1

Means that there is no stop in the INIT blocks. INIT blocks are generated from reset immediately after a part program start.

Bit5 = 1

Means that there is no stop in any subprogram block with the parameter DISPL0F.

Bit6 = 1

Means that there is no stop in any block in which the NCK cannot reorganize.

Reorganize is an internal procedure that is needed for mode change after JOG/JOGREF..., switch skip block on and off, activate machine data, axis replacement, switch on overstore, switch on single block, switch dry run feedrate on and off, subroutine level cancelation, user ASUBs delete distance-to-go, switchover after TEACH-IN (if available). Reorganize is never needed in Reset state.

Example blocks in which reorganize is impossible:

- Tool change
- 1st block after the Repos procedure
- Block after an ASUB from JOG/canceled

Bit7 = 1

Means that there cannot be a stop in any block in which repositioning is impossible.

Reposition is an internal procedure that is needed for mode change after JOG/JOGREF..., switch skip block on and off, activate machine data, axis replacement, switch on overstore, switch on single block, switch dry run feedrate on and off, subroutine level cancelation, and possibly user ASUBs. Reposition is never needed in Reset state.

Example blocks in which reposition is impossible:

- G33 + blocks in which reorganize is impossible.

Bit8 = 1

Means that there is no stop in a residual block that does not contain traversing information.

Bit9 = 1

Means that there is no stop in a run in/main run synchronization block (e.g. STOPRE, \$Variable) that is repeated because of an interruption with Reorg (e.g. mode change).

Bit10 = 1

Means that there is no stop in a "tool selection block". "Tool selection block" only occurs with tool management (magazine management or TMMG) active. This block gives the corresponding tool change command to the PLC.

This block is generally generated by T programming from the part program.

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Example block "N1010 T="Drill" M6 D1"

Depending on machine data, the "tool selection block" can be held in the interpolator until the PLC has acknowledged the corresponding tool change (see MD20310 \$MC_TOOL_MANAGEMENT_MASK). However the program status remains in "run".

Bit11= 1

The control has to automatically generate implicit GET blocks for the axis replacement function (axis replacement: 2 or more channels control one axis alternately) if no explicit GET(D) has been programmed and the following block wants to traverse the axis. (The other channel had previously used this axis).

An explicitly programmed GET may appear as follows "getd(x1,y1,z1) or get(x1,y1,z1)".

There is no stop at explicit or implicit GET blocks in the single block with this bit 11.

Bit12= 1

There is no stop in the single block type 2 in the SBLON block.

Bit13= 1

If an axis is pulled out in the middle of a block and possibly assigned to another channel, then there is no stop at the PREMATURE end of this block. This block follows a REPOS in order to traverse it to the end, there is no stop until this end has been reached.

Bit14=1

In a part program line, in which a substitution subroutine is called due to NC language replacement, only one stop is performed under the condition that the subroutine includes PROC attribute SBLOF. It is irrelevant whether the subroutine is called at block start and/or end or whether it is exited with M17 or RET.

Bit15=1

Means that there is no stop in any user ASUB block. Exception: The single block stop has been explicitly activated via the SBLON command.

There are three different internal ASUBs that are triggered by different events.

- Repos: In the case of the events: change of operating mode to a manual mode (JOG, JOGREF,...) unless MODESWITCH_MASK is not set, switch skip block on and off, activate machine data, switch-on overstore, axis replacement, subroutine level cancelation, switch-on single block, switch dry run feedrate on and off, alarm with compensation block.

- Return: Delete distance-to-go, switchover after TEACH-IN (if available), or deselection of MDI with corresponding MODESWITCH_MASK.

Bit16=1

Activating SERUPRO (search run via prog test) prevents stopping at single blocks.

Related to:

MD20117 \$MC_IGNORE_SINGLEBLOCK_ASUP

10704	DRYRUN_MASK			N01	V1	
-	Dry run feedrate activation			BYTE	PowerOn	
-						
-	-	0	0	2	7/2	M

Description:

DRYRUN_MASK == 0

Dryrun can only be switched on or off at the end of the block.

When DRYRUN_MASK = 1 is set, the dry run feedrate can also be activated during program execution (in the part program block).

NOTICE!

After activating dry run feedrate, the axes are stopped for the duration of the reorganization process.

DRYRUN_MASK == 2

Dryrun can be switched on or off in every phase and the axes are not stopped.

NOTICE:

However, the function does not become active until a "later" block in the program execution and this is with the next (implicit) StopRe block.

Related to:

SD42100 \$SC_DRY_RUN_FEED

10706	SLASH_MASK			N01	PG, A2	
-	Activation of block skip			BYTE	PowerOn	
-						
-	-	0	0	2	7/2	M

Description: If SLASH_MASK = 0, skip block can only be activated when stopped at the end of the block
If SLASH_MASK = 1, skip block can also be activated during program execution.

NOTICE!

After activating skip block, the axes are stopped for the duration of the reorganization process.

If SLASH_MASK = 2, skip block can be activated in every phase.

Notice!

However, the function does not become active until a "later" block in the program execution, and this is with the next (implicit) StopRe block.

10707	PROG_TEST_MASK			N01	K1	
-	Program test mode			UDWORD	PowerOn	
-						
-	-	0x11	0	0x1F	7/2	M

Description: Bit-coded mask for program test

Bit 0 == 1 Program test cannot be deselected in 'Stopped' program status.

Bit 1 == 1 Enable to activate the program test using the PI command _N_NCKMOD

Bit 2 == 1 Activation of program test with accelerated feed in normal program processing. If the bit is set, the program test is active in all channels with accelerated feed via the VDI signal in the first channel. The VDI signal has no effect in all other channels as long as the bit is set. The value in \$MC_SERUPRO_SPEED_FACTOR of the first channel is used as the feed. Only released for test purposes.

Bit 3 == 1 Activation of program test with accelerated feed in the simulation.

Bit 4 == 1 Activation of accelerated program test takes place in synchronized multi-channel mode.

Bit 5..31 As yet unused.

Program test with normal processing is always activated via the VDI interface.

Program test in simulation is always activated via the NCKMode PI.

Program test block search is always activated via the Find-Pi.

10708	SERUPRO_MASK			N01	K1	
-	Block search modes			UDWORD	PowerOn	
-						
-	-	0	0	0x3f	7/2	M

Description: Bit-coded mask for block search via program test (abbr. SERUPRO).

SERUPRO block search is activated with the PI service _N_FINDBL mode parameter == 5.

SERUPRO means SEarchRun by PROgram test; in other words, proceed under program test from start of program to search target. Note: Program test does not move any axes.

Bit 0 == 0

There is a stop at M0 during the search phase.

Bit 0 == 1

2.3 NC machine data

There is no stop at M0 during the search phase.

Bit 1 == 0

Alarm 16942 cancels the search phase on part program command START.

Bit 1 == 1

Alarm 16942 is switched off.

NOTICE:

A start program command might actually start the other channel!

Bit 2 == 0

Switches the function "Group SERUPRO" off

Bit 2 == 1

Switches the function "Group SERUPRO" on.

"Group SERUPRO" enables a search routine in which the start part program command is changed into a search routine for the other channel.

Bit 3 == 0

Forces all channels that have started SERUPRO to end SERUPRO simultaneously unless they are canceled via Reset or the channel reaches M30 without finding the search target. In other words, all channels that find the search target (including self-acting SERUPRO) terminate SERUPRO simultaneously.

Bit 3 == 1

Switches this function off

Bit 4 == 0

Take external override into account in SERUPRO.

Bit 4 == 1

An external override (sent via PLC signal or MCP) is ignored during SERUPRO.

Bit 5 == 0

With SERUPRO, complex path calculations are made.

Bit 5 == 1

With SERUPRO, calculation is made with simple, computing-time-optimized algorithms.

Bit 6 .. 31

As yet unused.

10709	PROG_SD_POWERON_INIT_TAB			EXP, N01	K1	
-	Setting data to be initialized			DWORD	PowerOn	
-						
-	30	43200, 43202, 0, 0, 0, 0, 0, 0...	-	-	7/2	M

Description:

Setting data to be initialized:

The values of the programmable SD indicated in this MD are set to their initial values on control power up.

Only the setting data listed in the table below, however, can be initialized. If invalid setting data numbers are configured, then the alarm 4009 is output at the next run-up of the control. The alarm shows the index used for configuring the invalid setting data. The alarm can only be eliminated by changing the invalid setting data, i.e. by entering either a valid number or zero!

	(GCODE)
SD42000 \$SC_THREAD_START_ANGLE	SF
SD42010 \$SC_THREAD_RAMP_DISP	DITS/DITE
SD42125 \$SC_SERUPRO_SYNC_MASK	
SD42400 \$SC_PUNCH_DWELLTIME	PDELAYON
SD42402 \$SC_NIBPUNCH_PRE_START_TIME	
SD42404 \$SC_MINTIME_BETWEEN_STROKES	

SD42800	\$SC_SPIND_ASSIGN_TAB	SETMS
SD43200	\$SA_SPIND_S	S with G94,G95,G97,G971,G972
SD43202	\$SA_SPIND_CONSTCUT_S	S with G96,G961,G962
SD43210	\$SA_SPIND_MIN_VELO_G25	G25 S
SD43220	\$SA_SPIND_MAX_VELO_G26	G26 S
SD43230	\$SA_SPIND_MAX_VELO_LIMS	LIMS
SD43235	\$SA_SPIND_USER_VELO_LIMIT	
SD43300	\$SA_ASSIGN_FEED_PER_REV_SOURCE	FPRAON
SD43350	\$SA_AA_OFF_LIMIT	
SD43420	\$SA_WORKAREA_LIMIT_PLUS	G26
SD43430	\$SA_WORKAREA_LIMIT_MINUS	G25
SD43600	\$SA_IPOBRAKE_BLOCK_EXCHANGE	
SD43610	\$SA_ADISPOSA_VALUE	
SD43700	\$SA_OSCILL_REVERSE_POS1	OSP1
SD43710	\$SA_OSCILL_REVERSE_POS2	OSP2
SD43720	\$SA_OSCILL_DWELL_TIME1	OST1
SD43730	\$SA_OSCILL_DWELL_TIME2	OST2
SD43740	\$SA_OSCILL_VELO	FA
SD43750	\$SA_OSCILL_NUM_SPARK_CYCLES	OSNSC
SD43760	\$SA_OSCILL_END_POS	OSE
SD43770	\$SA_OSCILL_CTRL_MASK	OSCTRL
SD43780	\$SA_OSCILL_IS_ACTIVE	OS
SD43790	\$SA_OSCILL_START_POS	

10710	PROG_SD_RESET_SAVE_TAB			EXP, N01	A3, V1	
-	Setting data to be updated			DWORD	PowerOn	
-						
-	30	0, 0, 0, 0, 0, 0, 0, 0...	-	-	7/2	M

Description:

Setting data to be backed up

The values of the SDs listed in this table are stored in non-volatile memory, i.e. they remain valid after power ON. The setting data whose HMI numbers were entered in the backup list are written into the (buffered) active file system after the description of the part program on reset.

Programmable setting data are:

	(GCODE)
SD 42000 \$SC_THREAD_START_ANGLE	SF
SD 42010: \$SC_THREAD_RAMP_DISP	DITS/DITE
SD 42400 \$SC_PUNCH_DWELLTIME	PDELAYON
SD 42800 \$SC_SPIND_ASSIGN_TAB	SETMS
SD 43200: \$SA_SPIND_S	S with G94,G95,G97,G971,G972
SD 43202: \$SA_SPIND_CONSTCUT_S	S with G96,G961,G962
SD 43210 \$SA_SPIND_MIN_VELO_G25	G25S
SD 43220 \$SA_SPIND_MAX_VELO_G26	G26 S
SD 43230 \$SA_SPIND_MAX_VELO_LIMS	LIMS
SD 43300 \$SA_ASSIGN_FEED_PER_REV_SOURCE	FPRAON
SD 43420 \$SA_WORKAREA_LIMIT_PLUS	G26
SD 43430 \$SA_WORKAREA_LIMIT_MINUS	G25
SD 43700 \$SA_OSCILL_REVERSE_POS1	OSP1
SD 43710 \$SA_OSCILL_REVERSE_POS2	OSP2

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```

SD 43720  $SA_OSCILL_DWELL_TIME1          OST1
SD 43730  $SA_OSCILL_DWELL_TIME2          OST2
SD 43740  $SA_OSCILL_VELO                 FA
SD 43750  $SA_OSCILL_NUM_SPARK_CYCLES     OSNSC
SD 43760  $SA_OSCILL_END_POS              OSE
SD 43770  $SA_OSCILL_CTRL_MASK            OSCTRL
SD 43780  $SA_OSCILL_IS_ACTIVE            OS

```

The values of D43420 \$SA_WORKAREA_LIMIT_PLUS (working area limitation plus) and SD43430 \$SA_WORKAREA_LIMIT_MINUS (working area limitation minus) are to be stored in the buffered RAM after every RESET, M02, M30 or M17.

```
--> PROG_SD_RESET_SAVE_TAB[0] = 43420
```

```
--> PROG_SD_RESET_SAVE_TAB[1] = 43430
```

See also: 'REDEF: change attributes of NC language elements', setting data/PRLOC

10712	NC_USER_CODE_CONF_NAME_TAB			EXP, N01, N12	TE1, B1	
-	List of reconfigured NC codes			STRING	PowerOn	
-						
-	200	-	-	-	2/2	M

Description: List of identifiers of the NC codes reconfigured by the user.

The list is to be structured as follows:

Even address: Identifier to be changed

Subsequent odd address: New identifier

The following three types of NC codes can reconfigured:

1. G codes e.g.: G02, G64, ASPLINE...
2. NC addresses e.g.: RND, CHF, ...
3. Pre-defined subprograms e.g.: CONTPRON, ...

10713	M_NO_FCT_STOPRE			EXP, N12, N07	H2	
-	M function with preprocessing stop			DWORD	PowerOn	
-						
-	15	-1, -1, -1, -1, -1, -1, -1, -1...	-	-	7/2	M

Description: The M functions defined by MD10713 \$MN_M_NO_FCT_STOPRE perform an implicit preprocessing stop.

That is, the interpretation of the next part program line will be stopped until the block with the M function defined in that way has been processed completely (PLC acknowledgment, motion, etc.).

10714	M_NO_FCT_EOP			EXP, N07	K1, H2	
-	M function for spindle active after reset			DWORD	PowerOn	
-						
-	-	-1	-	-	7/2	M

Description: For spindles where a '2' is configured in MD35040 \$MA_SPIND_ACTIVE_AFTER_RESET, no spindle reset is enabled with this M function when the part program is terminated. The spindle therefore remains active after the end of the part program.

Proposal: M32

Restrictions: see MD10715 \$MN_M_NO_FCT_CYCLE

Related to:

MD35040 \$MA_SPIND_ACTIVE_AFTER_RESET

MD10714 \$MN_M_NO_FCT_EOP,

```

MD10715 $MN_M_NO_FCT_CYCLE,
MD20094 $MC_SPIND_RIGID_TAPPING_M_NR,
MD22254 $MC_AUXFU_ASSOC_M0_VALUE
MD10814 $MN_EXTERN_M_NO_MAC_CYCLE,
MD10804 $MN_EXTERN_M_NO_SET_INT
MD10806 $MN_EXTERN_M_NO_DISABLE_INT,
MD10800 $MN_EXTERN_CHAN_SYNC_M_NO_MIN,
MD10802 $MN_EXTERN_CHAN_SYNC_M_NO_MAX
MD20095 $MC_EXTERN_RIGID_TAPPING_M_NR
MD26008 $MC_NIBBLE_PUNCH_CODE

```

10715	M_NO_FCT_CYCLE	EXP, N12, N07	H2, K1
-	M function to be replaced by a subroutine	DWORD	PowerOn
-			
-	30	-1, -1, -1, -1, -1, -1, -1, -1...	-

Description:

M number with which a subprogram is called.

The name of the subprogram is stated in MD10716 \$MN_M_NO_FCT_CYCLE_NAME[n]. If the M function defined in MD10715 \$MN_M_NO_FCT_CYCLE[n] is programmed in a part program block, the subprogram defined in MD10716 \$MN_NO_FCT_CYCLE_NAME[n] will be started at the end of the block. If the M function is programmed again in the subprogram, no further substitution is performed by a subprogram call. Other substitutions configured in MD10715 \$MN_M_NO_FCT_CYCLE are not performed in the subprogram either. MD10715 \$MN_M_NO_FCT_CYCLE[n] is effective both in Siemens mode G290 and in external language mode G291.

The subprograms configured with MD10716 \$MN_M_NO_FCT_CYCLE_NAME[n] and MD10717 \$MN_T_NO_FCT_CYCLE_NAME must not be active simultaneously in one block (line of a part program). This means that no more than one M/T function replacement can be active in any one block. Neither an M98 nor a modal subprogram call may be programmed in a block with the M function replacement.

Subprogram return and end of part program are also not permitted. Alarm 14016 is output in the event of a conflict.

Restrictions:

M functions with a fixed meaning and configurable M functions are checked for conflicting settings. A conflict is reported with an alarm.

The following M functions are checked:

- M0 to M5,
- M17, M30,
- M19,
- M40 to M45,
- M function for spindle/axis mode switchover according to MD20094 \$MC_SPIND_RIGID_TAPPING_M_NR (default: M70),
- M functions for nibbling/punching as configured in MD26008 \$MC_NIBBLE_PUNCH_CODE if activated by MD26012 \$MC_PUNCHNIB_ACTIVATION.
- M19, M96-M99 for applied external language (MD18800 \$MN_MM_EXTERN_LANGUAGE).

Exception: The M functions for the tool change defined by MD22560 \$MC_TOOL_CHANGE_M_CODE.

10716	M_NO_FCT_CYCLE_NAME	EXP, N12, N07	K1
-	Subroutine name for M function replacement	STRING	PowerOn
-			
-	30	-	-

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Description:

The machine data contains the name of the cycle. This cycle is called if the M function has been programmed from MD10715 \$MN_M_NO_FCT_CYCLE.

If the M function is programmed in a motion block, the cycle is executed after the motion.

MD10715 \$MN_M_NO_FCT_CYCLE is active in both Siemens mode G290 and in external language mode G291.

If a T number is programmed in the call block, then the programmed T number can be polled in the cycle under the variable \$P_TOOL.

M and T function replacements must not be programmed simultaneously in one block. This means that not more than one M or T function replacement may be active in any one block. Neither an M98 nor a modal subprogram call may be programmed in a block with M function replacement.

Moreover, neither subprogram return nor part program end are allowed.

Alarm 14016 is issued if there is a conflict.

Related to:

MD10715 \$MN_M_NO_FCT_CYCLE,

MD10717 \$MN_T_NO_FCT_CYCLE_NAME

10717	T_NO_FCT_CYCLE_NAME			EXP, N12, N07	K1	
-	Name of tool-changing cycle for T function replacement			STRING	PowerOn	
-						
-	-	-	-	-	7/2	M

Description:

Cycle name for tool change routine on call-up with a T function.

If a T function is programmed in a part program block, the subprogram defined in T_NO_FCT_CYCLE_NAME is called at the end of the block.

The T number programmed can be polled in the cycle via system variables \$C_T / \$C_T_PROG as a decimal value and via \$C_TS / \$C_TS_PROG as a string (only with tool management). MD10717 \$MN_T_NO_FCT_CYCLE_NAME is active both in Siemens mode G290 and in external language mode G291.

MD10716 \$MN_M_NO_FCT_CYCLE_NAME and MD10717 \$MN_T_NO_FCT_CYCLE_NAME must not be active in one block at the same time, i.e. no more than one M/T function replacement can be active per block. Neither an M98 nor a modal subprogram call can be programmed in a block with a T function replacement. Furthermore, neither subprogram return nor part program end are allowed.

Alarm 14016 is output in the event of a conflict.

Related to:

MD10715 \$MN_M_NO_FCT_CYCLE,

MD10716 \$MN_M_NO_FCT_CYCLE_NAME

10718	M_NO_FCT_CYCLE_PAR			EXP, N12, N07	K1	
-	M function replacement with parameters			DWORD	PowerOn	
-						
-	-	-1	-	-	7/2	M

Description:

If an M function replacement was configured with MD10715 \$MN_M_NO_FCT_CYCLE[n] / MD10716 \$MN_M_NO_FCT_CYCLE_NAME[n], a parameter transfer via system variable can be specified for one of these M functions using MD10718 \$MN_M_NO_FCT_CYCLE_PAR, in the same way as T function replacement. The parameters stored in the system variables always refer to the part program line where the M function to be replaced was programmed.

The following system variables are available:

\$C_ME : Address extension of the replaced M function

\$C_T_PROG : TRUE if address T was programmed

\$C_T : Value of address T (Integer)

\$C_TE : Address extension of address T
 \$C_TS_PROG : TRUE if address TS was programmed
 \$C_TS : Value of address TS (string, only with tool management)
 \$C_D_PROG : TRUE if address D was programmed
 \$C_D : Value of address D
 \$C_DL_PROG : TRUE if address DL was programmed
 \$C_DL : Value of address DL

10719	T_NO_FCT_CYCLE_MODE			EXP, N12, N07	K1	
-	Setting of T function substitution			UDWORD	PowerOn	
-						
-	-	0	0	0x7	7/2	M

Description:

This machine data parameterizes the execution of the replacement subprogram for the tool and tool offset selection.

Bit 0 = 0:

D or DL number is transferred to the replacement subprogram (default value)

Bit 0 = 1:

The D or DL number is not transferred to the replacement subprogram if the following conditions are fulfilled: MD22550 \$MC_TOOL_CHANGE_MODE = 1 Programming D/DL with T or M function with which the tool change cycle is called, in a part program line.

Bit 1 = 0

Execution of the replacement subprogram at end of block (default value)

Bit 1 = 1

Execution of the replacement subprogram at block start

Bit 2 = 0:

Execution of the replacement subprogram according to the settin of bit 1

Bit 2 = 1:

Execution of the replacement subprogram at block start and at end of block.

10720	OPERATING_MODE_DEFAULT			N01	H2	
-	Setting of mode after power ON			BYTE	PowerOn	
-						
-	10	7, 7, 7, 7, 7, 7, 7...	0	12	7/2	M

Description:

Default modes of the mode groups after power ON.

If no mode is selected by the PLC, all the channels associated with mode group n are in the mode preset by OPERATING_MODE_DEFAULT[n -1] after power ON:

0 = Automatic mode

1 = Automatic mode, submode REPOS

2 = MDI mode

3 = MDI mode, submode REPOS

4 = MDI mode, submode Teach In

5 = MDI mode, submode Reference point approach

6 = JOG mode

7 = JOG mode, submode Reference point approach

8 = AUTO mode, submode Teach In

9 = AUTO mode, submode Teach In, submode Reference point approach

10 = AUTO mode, submode Teach In, submode Repos

11 = MDI mode, submode Teach In, submode Reference point approach

12 = MDI mode, submode Teach In, submode Repos

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NOTICE! Depending on the machine data MD10721 \$MN_OPERATING_MODE_EXTENDED, the mode set here might not be adopted after power ON

10721	OPERATING_MODE_EXTENDED			N01	H2	
-	Extended setting of mode after power ON			BYTE	PowerOn	
-						
-	10	0, 0, 0, 0, 0, 0, 0, 0...	0	1	7/2	M

Description: Extended setting of an operating mode of the operating mode groups after power on:
 0 = Selection of the operating mode according to MD10720 \$MN_OPERATING_MODE_DEFAULT
 1 = Selection of the JOG mode if the PLC signal "Retract data available" (DB21-30 DBX377.5) is set in at least one channel of the operating mode group

10722	AXCHANGE_MASK			EXP, N01	K5	
-	Parameterization for axis replacement behavior			UDWORD	PowerOn	
-						
-	-	0	0	0xFFFF	7/2	M

Description: The axis replacement behavior can be changed with this machine data.

Bit0 = 1
 Means that there is an automatic axis replacement via channels even if the axis has been brought into a neutral state by Waitp.

Bit1 = 1
 Means that an AXCTSWE fetches all the axis container axes that can be assigned to the channel by means of implicit GET or GETD, and an axis replacement is not permitted again until after the axis container rotation.

Bit2 = 1
 Means that, in the case of a GET, an intermediate block without preprocessing stop is generated, and whether a reorganization is needed is not checked until main run.

Bit3 = 1 means, that the NC carries out an axis replacement request for the VDI interface only for:

- an axis exclusively controlled by the PLC (MD30460 \$MA_BASE_FUNCTION_MASK Bit 4 == 1)
- a permanently assigned PLC axis (MD30460 \$MA_BASE_FUNCTION_MASK Bit 5 == 1)

For such axes, the VDI interface signal 'Axis replacement possible' is always 1.

For all other axes, the VDI interface signal 'Axis replacement possible' is always 0.

For permanently assigned PLC axes, an axis replacement is possible only from neutral axis to PLC axis
 or from PLC axis to neutral axis.

Bit3 = 0 means that an axis replacement can be requested by the PLC for each axis.

For permanently assigned PLC axes, an axis replacement is only possible from neutral axis to PLC axis
 or from PLC axis to neutral axis.

10724	NC_SYS_CODE_CONF_NAME_TAB			EXP, N01	TE1, B1	
-	List of reconfigured NC codes			STRING	PowerOn	
-						
-	20	-	-	-	ReadOnly	S

Description: Identifier list of internal NC codes
 Reserved for internal applications

10735	JOG_MODE_MASK			EXP, N01	K1	
-	Settings for JOG mode			UDWORD	PowerOn	
-						
-	-	0	0	0x1ff	7/2	M

Description:

Bit 0:

Enables JOG in automatic.

JOG is enabled in automatic when all channels in the mode group are in the RESET state and no channel of the DRF mode group has been selected. The mode group changes internally to JOG with the +/- key and the handwheel, and the axis moves. After the JOG motion has ended, a change back to AUTO is also made internally.

Bit 1:

Position with AxFrame.

The function 'JOG to position' considers all axial frames and, in the case of an axis configured as geometry axis, the tool length offset.

Bit 2:

Travel in opposite direction.

The functions 'JOG to position' and 'Approach machine fixed point manually' allow travel in opposite direction, i.e. away from the specified position.

Bit 3:

Tool radius offset.

MD21020 \$MC_WORKAREA_WITH_TOOL_RADIUS is active with JOG motions of the geometry axes.

Bit 4:

Alarm suppression operating range limit in the basic coordinate system in JOG.

Alarms that would be output in JOG when an operating range limit is reached in the basic coordinate system, are suppressed.

Bit 5:

Alarm suppression operating range limit in the workpiece coordinate system in JOG.

Alarms that would be output in JOG when an operating range limit is reached in the workpiece coordinate system, are suppressed.

Bit 6, 7:

JOG of circles:

Bit 7 and bit 6 = 0: traversing the 2nd geometry axis of the active plane to PLUS for radius increase, traversing to MINUS for radius decrease independently of inner or outer machining being active.

Bit 7 = 1 and bit 6 = 0: traversing the 2nd geometry axis of the active plane to PLUS always travels in the direction of the limiting circle. This means that the radius is increased on inner machining and decreased on outer machining.

Bit 7 = 1 and bit 6 = 1: traversing the 2nd geometry axis of the active plane to MINUS always travels in the direction of the limiting circle. This means that the radius is increased on inner machining and decreased on outer machining.

Bit 8:

Bit 8 = 0 If there is a JOG retract movement, the retraction axis can only be jogged in the plus direction.

Bit 8 = 1 If there is a JOG retract movement, the retraction axis can only be jogged in the plus and minus direction.

Bits 9-31:

Currently unassigned.

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10750	SPRINT_FORMAT_P_CODE			N12	PGA	
-	String coding of the SPRINT format %P			DWORD	PowerOn	
-						
-	-	0	0	2	7/2	I

Description: Description:
 Specification of the character or punched tape code used to code the string which the SPRINT command generates with format control character %P:
 0: ASCII
 1: ISO (DIN66024)
 2: EIA (RS-244)

10751	SPRINT_FORMAT_P_DECIMAL			N12	PGA	
-	Parameterization of the SPRINT format %P			DWORD	PowerOn	
-						
-	-	0	0	1	7/2	I

Description: Description:
 Parameterization of the format description %n.mP of the SPRINT command
 Value range:
 0: The format specification %n.mP generates a string from a transfer parameter of type REAL or INT consisting of an integer with n + m places. The first n places represent the integer places and the following m places the decimal places of the transfer parameter. Missing decimal places are filled with 0. If there are more than m decimal places, the number is rounded. Missing integer places are filled with spaces.
 1: The format specification %n.mP generates a string from a transfer parameter of type REAL or INT that consists of a decimal number with up to n integer places, the decimal point and m decimal places, which are filled with 0 or rounded as necessary.

10760	G53_TOOLCORR			N12	FBFA	
-	Method of operation of G53, G153 and SUPA			UDWORD	NEW CONF	
-						
-	-	0	0	0x3	7/2	M

Description: With this MD you define whether tool length offset and tool radius offset are also to be suppressed with language commands G53, G153 and SUPA
 The machine data is bit-coded.
 Bit 0 = 0: G53, G153 and SUPA cause block-by-block suppression of work offsets. The active tool length offset and tool radius offset remain active.
 Bit 0 = 1: G53, G153 and SUPA cause block-by-block suppression of work offsets, active tool length offset and tool radius offset. The tool length behavior can be modified with bit 1.
 Bit 1 is only evaluated, if the value of bit 0 is 1.
 Bit1 = 0: with bit 0 set, the tool length is always suppressed with G53, G153 and SUPA.
 Bit1 = 1: with bit 0 set the tool length is only suppressed with G53, G153 and SUPA, if a cutting edge is not selected in the same block (this can also be the cutting edge that is already active).

10800	EXTERN_CHAN_SYNC_M_NO_MIN			EXP, N12	H2	
-	1st M function for channel synchronization			DWORD	PowerOn	
-						
-	-	-1	-	-	7/2	M

Description: M number of the first M function which can be used to perform a channel (program) synchronization in ISO2/3 mode.

To avoid conflicts with standard M functions the lowest permissible value is 100. If you enter a value between 0 and 99, alarm 4170 will be issued.

10802	EXTERN_CHAN_SYNC_M_NO_MAX	EXP, N12	H2
-	Last M function for channel synchronization	DWORD	PowerOn
-			
-	-	-1	-

Description: M number of the last M function which can be used to perform a channel (program) synchronization in ISO2/3 mode.

In combination with MD10800 \$MN_EXTERN_CHAN_SYNC_M_NO_MIN, the machine data defines an M number range reserved for channel synchronization. This range may be a maximum of 10 times the number of channels as only 10 WAIT marks may be set for each channel.

Alarm 4170 is output if a value is entered between 0 and 99 or less than MD10800 \$MN_EXTERN_CHAN_SYNC_M_NO_MIN.

10804	EXTERN_M_NO_SET_INT	EXP, N12	H2, K1
-	M function to activate ASUB	DWORD	PowerOn
-			
-	-	96	-

Description: M function number used to activate an interrupt program (ASUB) in ISO2/3 mode. The interrupt program is always started by the 1st high-speed input of the numerical control.

The M number defined in the machine data replaces M96 in external language mode.

Restrictions: Refer to MD10715 \$MN_M_NO_FCT_CYCLE

Related to:

MD10714 \$MN_M_NO_FCT_EOP,
MD10715 \$MN_M_NO_FCT_CYCLE,
MD20094 \$MC_SPIND_RIGID_TAPPING_M_NR,
MD22254 \$MC_AUXFU_ASSOC_M0_VALUE
MD10814 \$MN_EXTERN_M_NO_MAC_CYCLE,
MD10804 \$MN_EXTERN_M_NO_SET_INT
MD10806 \$MN_EXTERN_M_NO_DISABLE_INT,
MD10800 \$MN_EXTERN_CHAN_SYNC_M_NO_MIN,
MD10802 \$MN_EXTERN_CHAN_SYNC_M_NO_MAX
MD20095 \$MC_EXTERN_RIGID_TAPPING_M_NR
MD26008 \$MC_NIBBLE_PUNCH_CODE

10806	EXTERN_M_NO_DISABLE_INT	EXP, N12	H2, K1
-	M function to deactivate ASUB	DWORD	PowerOn
-			
-	-	97	-

Description: M function number used to deactivate an interrupt program (ASUB) in ISO2/3 mode. The M number defined in the machine data replaces M97 in external language mode.

Restrictions: refer to MD10715 \$MN_M_NO_FCT_CYCLE

MD10714 \$MN_M_NO_FCT_EOP,
MD10715 \$MN_M_NO_FCT_CYCLE,
MD20094 \$MC_SPIND_RIGID_TAPPING_M_NR,
MD22254 \$MC_AUXFU_ASSOC_M0_VALUE
MD10814 \$MN_EXTERN_M_NO_MAC_CYCLE,
MD10804 \$MN_EXTERN_M_NO_SET_INT

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```

MD10806 $MN_EXTERN_M_NO_DISABLE_INT,
MD10800 $MN_EXTERN_CHAN_SYNC_M_NO_MIN,
MD10802 $MN_EXTERN_CHAN_SYNC_M_NO_MAX
MD20095 $MC_EXTERN_RIGID_TAPPING_M_NR
MD26008 $MC_NIBBLE_PUNCH_CODE

```

10808	EXTERN_INTERRUPT_BITS_M96			EXP, N12	FBFA	
-	Activate interrupt program (ASUB)			UDWORD	PowerOn	
-						
-	-	0	0	0x7FFFFFFF	7/2	M

Description:

Setting the various bits can influence the processing of the interrupt routine activated by M96 P...

Bit 0 = 0,

No interrupt program possible, M96/M97 are normal M functions

Bit 0 = 1,

Using M96/M97 to activate an interrupt program is allowed

Bit 1 = 0,

Continue processing part program at the final position of the next block after the interrupt block

Bit 1 = 1,

Continue processing part program from interrupt position

Bit 2 = 0,

The interrupt signal immediately interrupts the current block and starts the interrupt routine

Bit 2 = 1,

The interrupt routine will not be started until the end of the block

Bit 3 = 0,

Interrupt machining cycle at an interrupt signal

Bit 3 = 1,

Do not start interrupt program until the end of a machining cycle.

10810	EXTERN_MEAS_G31_P_SIGNAL			EXP, N12	FBFA	
-	Config. of measuring inputs for G31 P..			UBYTE	PowerOn	
-						
-	4	1, 1, 1, 1	0	0x3	7/2	M

Description:

This machine data defines the assignment of measurement inputs 1 and 2 to the P numbers programmed with G31 P1 (- P4). The machine data is bit-coded. Only bits 0 and 1 are evaluated. For example, if bit 0 = 1 in MD10810 \$MN_EXTERN_MEAS_G31_P_SIGNAL[1], the 1st measurement input is activated with G31 P2. If MD10810 \$MN_EXTERN_MEAS_G31_P_SIGNAL[3]=2, the 2nd measurement input is activated with G31 P4.

Bit 0: = 0, Do not evaluate measurement input 1 with G31 P1 (- P4)

Bit 0: = 1, Activate measurement input 1 with G31 P1 (- P4)

Bit 1: = 0, Do not evaluate measurement input 2 with G31 P1 (- P4)

Bit 1: = 1, Activate measurement input 2 with G31 P1 (- P4)

10812	EXTERN_DOUBLE_TURRET_ON			EXP, N12	FBFA	
-	Double turret with G68			BOOLEAN	PowerOn	
-						
-	-	FALSE	FALSE	TRUE	7/2	M

Description:

This machine data is used to determine whether double-slide machining (channel synchronization for 1st and 2nd channel) is to be started using G68 or whether the second tool of a double turret (= two closely-linked tools at a distance defined in the MD42162 SC_EXTERN_DOUBLE_TURRET_DIST) is to be activated.

FALSE:

Channel synchronization for double-slide machining

TRUE:

Load 2nd tool of a double turret (that is, activate \$SC_EXTERN_DOUBLE_TURRET_DISTANCE as additive work offset and mirroring around Z axis)

10814	EXTERN_M_NO_MAC_CYCLE			EXP, N12	H2, K1	
-	Macro call via M function			DWORD	PowerOn	
-						
-	30	-1, -1, -1, -1, -1, -1, -1, -1...	-	-	7/2	M

Description:

A macro is called with this M number.

The name of the subprogram is stated in MD10815 \$MN_EXTERN_M_NO_MAC_CYCLE_NAME[n].

If the M function specified with MD10814 \$MN_EXTERN_M_NO_MAC_CYCLE[n] is programmed in a part program block, the subprogram defined in MD10815 \$MN_EXTERN_M_NO_MAC_CYCLE_NAME[n] is started. All addresses programmed in the block are written into the corresponding variables.

If the M function is programmed again in the subprogram, there is no longer a replacement by a subprogram call.

MD10814 \$MN_EXTERN_M_NO_MAC_CYCLE[n] is only active in the external language mode G291.

The subprograms configured with MD10815 \$MN_EXTERN_M_NO_MAC_CYCLE_NAME[n] must not be active simultaneously in a block (part program line), i.e. only one M function replacement can become active in any one block. Neither an M98 nor a modal subprogram call may be programmed in the block with the M function replacement.

Subprogram return and the part program end are also not permitted. Alarm 14016 is issued in case of a conflict. Restrictions: see MD10715 \$MN_M_NO_FCT_CYCLE

Related to:

MD10714 \$MN_M_NO_FCT_EOP,
MD10715 \$MN_M_NO_FCT_CYCLE,
MD20094 \$MC_SPIND_RIGID_TAPPING_M_NR,
MD22254 \$MC_AUXFU_ASSOC_M0_VALUE
MD10814 \$MN_EXTERN_M_NO_MAC_CYCLE,
MD10804 \$MN_EXTERN_M_NO_SET_INT
MD10806 \$MN_EXTERN_M_NO_DISABLE_INT,
MD10800 \$MN_EXTERN_CHAN_SYNC_M_NO_MIN,
MD10802 \$MN_EXTERN_CHAN_SYNC_M_NO_MAX
MD20095 \$MC_EXTERN_RIGID_TAPPING_M_NR
MD26008 \$MC_NIBBLE_PUNCH_CODE

10815	EXTERN_M_NO_MAC_CYCLE_NAME			EXP, N12	H2	
-	Name of subroutine for M function macro call			STRING	PowerOn	
-						
-	30	-	-	-	7/2	M

Description:

Name of the subprogram started by a call via the M function defined by MD10814 \$MN_EXTERN_M_NO_MAC_CYCLE[n].

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10816	EXTERN_G_NO_MAC_CYCLE			EXP, N12	FBFA	
-	Macro call via G function			DOUBLE	PowerOn	
-						
-	50	-1., -1., -1., -1., -1., -1., -1., -1....	-	-	7/2	M

Description:

G number for calling a macro.

The name of the subprogram is stated in MD10817 \$MN_EXTERN_G_NO_MAC_CYCLE_NAME[n].

If the G function specified with MD10816 \$MN_EXTERN_G_NO_MAC_CYCLE[n] is programmed in a part program block, the subprogram defined in MD10817

\$MN_EXTERN_M_NO_MAC_CYCLE_NAME[n] is started. All addresses programmed in the block are written in the corresponding \$C_xx variables.

No subprogram call is executed if a subprogram call is already active via an M/G macro or an M replacement. If a standard G function is programmed in this case, this code is executed. Otherwise, alarm 12470 is issued.

MD10816 \$MN_EXTERN_G_NO_MAC_CYCLE[n] is only active in the external language mode G291.

Only a single subprogram call may be included in any one block. This means that only a single M/G function replacement may be programmed in a block, and no additional subprogram (M98) or cycle call may be included in the block.

Furthermore, a subprogram return and a part program end are not permitted in the same block.

Alarm 14016 is issued in case of a conflict.

10817	EXTERN_G_NO_MAC_CYCLE_NAME			EXP, N12	FBFA	
-	Name of subroutine for G function macro call			STRING	PowerOn	
-						
-	50	-	-	-	7/2	M

Description:

Name of the subprogram started by call via the G function defined by MD10816 \$MN_EXTERN_G_NO_MAC_CYCLE[n].

10818	EXTERN_INTERRUPT_NUM_ASUP			EXP, N12	FBFA	
-	Interrupt number for ASUB start (M96)			BYTE	PowerOn	
-						
-	-	1	1	8	7/2	M

Description:

Number of the interrupt input starting an asynchronous subprogram activated in ISO mode. (M96 <program number>)

10820	EXTERN_INTERRUPT_NUM_RETRAC			EXP, N12	FBFA	
-	Interrupt number for rapid retraction (G10.6)			BYTE	PowerOn	
-						
-	-	2	1	8	7/2	M

Description:

Number of the interrupt input triggering rapid retraction to the position programmed with G10.6 in ISO mode.

10830	EXTERN_PRINT_DEVICE			EXP, N12	FBFA	
-	Output device for ISOPRINT			STRING	PowerOn	
-						
-	-	-	-	-	7/2	I

Description:

Path of output device for ISOPRINT

10831	EXTERN_PRINT_MODE			EXP, N12	FBFA	
-	Parameterize output device for ISOPRINT			UDWORD	PowerOn	
-						
-	-	0	0	0x3f	7/2	I

Description: Parameterize output device for ISOPRINT
 Bit 0: 0= Synchronous output
 1= Asynchronous output
 Bit 1: 0= Exclusive assignment
 1= Shared assignment
 Bit 2: Output of DC2 (H12) on opening
 Bit 3: Output of DC4 (H14) on closing
 Bit 4: Output string concluded with LF
 Bit 5: Output string concluded with CR + LF

10850	MM_EXTERN_MAXNUM_OEM_GC_CODES			EXP, N01, N12	-	
-	Maximum number of OEM G codes			DWORD	PowerOn	
-						
-	-	0	0	1000	1/1	M

Description: This machine data is used to define the number of G codes implemented for an external language via an OEM application.

10880	MM_EXTERN_CNC_SYSTEM			N01, N12	FBFA	
-	Definition of the control system to be adapted			DWORD	PowerOn	
-						
-	-	-	1	3	7/2	M

Description: Definition of the external CNC system whose part programs are to be executed on the SINUMERIK control in addition to SINUMERIK code (ISO_1):
 1: ISO_21: System Fanuc0 milling (5.1 and higher)
 2: ISO_31: System Fanuc0 turning (P5.2 and higher)
 3: External language via OEM application (P6.2 and higher)
 4: ISO_22: System Fanuc0 Milling (P7 and higher)
 5: ISO_32: System Fanuc0 Turning (P7 and higher)

10881	MM_EXTERN_GCODE_SYSTEM			N01, N12	FBFA	
-	ISO_3 Mode: GCodeSystem			DWORD	PowerOn	
-						
-	-	0	0	2	7/2	M

Description: Definition of the GCodeSystem to be actively executed in ISO_3 Mod (turning):
 Value = 0 : ISO_3: Code system B
 Value = 1 : ISO_3: Code system A
 Value = 2 : ISO_3: Code system C

10882	NC_USER_EXTERN_GC_CODES_TAB			N12	FBFA	
-	List of user-specific G commands of an external NC language			STRING	PowerOn	
-						
-	60	-	-	-	2/2	M

Description: List of G commands of external NC languages which have been reconfigured by the user.

Only G codes can be reconfigured, e.g.: G20, G71.

10884	EXTERN_FLOATINGPOINT_PROG			N12	FBFA	
-	Evaluation of programmed values without decimal point			BOOLEAN	PowerOn	
-						
-	-	TRUE	FALSE	TRUE	7/2	M

10886	EXTERN_INCREMENT_SYSTEM			N12	FBFA	
-	Incremental system in external language mode			BOOLEAN	PowerOn	
-						
-	-	FALSE	FALSE	TRUE	7/2	M

10888	EXTERN_DIGITS_TOOL_NO			N12	FBFA	
-	Digits for T number in ISO mode			BYTE	PowerOn	
-						
-	-	2	0	8	7/2	M

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10889	EXTERN_DIGITS_OFFSET_NO			N12	FBFA	
-	Digits for offset number in ISO mode			BYTE	PowerOn	
-						
-	-	0	0	8	7/2	M

Description: This machine data is only active when MD10880 \$MN_MM_EXTERN_CNC_SYSTEM == 2.
Number of digits of the offset number in the programmed T word.
From the programmed T word, the number of leading digits specified in MD10889 \$MN_EXTERN_DIGITS_OFFSET_NO are interpreted as the offset number.
The following digits address the tool number.

10890	EXTERN_TOOLPROG_MODE			N12	FBFA	
-	Tool change programming for external language			UDWORD	PowerOn	
-						
-	-	0x0	0	0x7FFFFFFF	7/2	M

Description: Configuration for programming the tool change in an external programming language:

Bit0=0:
Only active for the ISO mode turning: The tool number and offset number are programmed in the T word. \$MN_DIGITS_TOOLNO defines the number of leading digits, which form the tool number.
Example:
\$MN_DIGITS_TOOLNO = 2
T=1234 ; tool number 12,
; offset number 34

Bit0=1:
Only active in the ISO mode turning: Only the tool number is programmed in the T word. Offset number == tool number. \$MN_DIGITS_TOOLNO is irrelevant.
Example:
T=12 ; tool number 12
; offset number 12

Bit1=0:
Only active in the ISO mode turning:
If the number of digits programmed in the T word is the same as the number defined in MD10888 \$MN_EXTERN_DIGITS_TOOL_NO, then leading 0s are added

Bit1=1:
Is only active for the ISO mode turning:
If the number of digits programmed in the T word is the same as the number of digits specified in MD10888 \$MN_EXTERN_DIGITS_TOOL_NO, the programmed number is the offset number and tool number

Bit2=0:
Is only active for the ISO mode turning: ISO T offset selection only with D (Siemens cutting edge number)

Bit2=1:
Is only active for the ISO mode turning: ISO T offset selection only with H (\$TC_DPH[t,d])

Bit6=0:
The offset memories for the tool length and tool radius are linked so that tool length and tool radius are always selected when either H or D is programmed.

Bit6=1:

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The offset memories for the tool length and tool radius are not linked, so that the number of the tool length value is selected when H is programmed, and the number of the tool radius value is selected when D is programmed.

Bit7=0:

Is only active for the ISO mode turning. If T substitution (MD10717 \$MN_T_NO_FCT_CYCLE_NAME) is active, the H number programmed in the T word is transferred to the cycle in the variable \$C_D.

Bit7=1:

Is only active in the ISO mode turning. If T substitution (MD10717 \$MN_T_NO_FCT_CYCLE_NAME) is active, the Siemens cutting edge number D corresponding to the H number programmed in the T word is transferred to the cycle in the variable \$C_D.

10900	INDEX_AX_LENGTH_POS_TAB_1			N09	T1	
-	Number of positions for indexing axis table 1			DWORD	Reset	
-						
-	-	0	0	60	7/2	M

Description:

The indexing position table is used to assign the axis positions in the valid unit of measurement (mm, inches or degrees) to the indexing positions [n] on the indexing axis. The number of indexing positions used in table 1 is defined by MD10900 \$MN_INDEX_AX_LENGTH_POS_TAB_1.

These indexing positions must be assigned valid values in table 1. Any indexing positions in the table above the number specified in the machine data are ignored. Up to 60 indexing positions (0 to 59) can be entered in the table.

Table length = 0 means that the table is not evaluated. If the length is not equal to 0, then the table must be assigned to an axis with MD30500 \$MA_INDEX_AX_ASSIGN_POS_TAB.

If the indexing axis is defined as a rotary axis (MD30300 \$MA_IS_ROT_AX = "1") with modulo 360° (MD30310 \$MA_ROT_IS_MODULO = "1"), the machine data defines the last indexing position after which, with a further traversing movement in the positive direction, the indexing positions begin again at 1.

Special cases:

Alarm 17090 "Value violates upper limit" if values over 60 are entered in MD10900 \$MN_INDEX_AX_LENGTH_POS_TAB_1.

Related to:

MD30500 \$MA_INDEX_AX_ASSIGN_POS_TAB (axis is an indexing axis)

MD10910 \$MN_INDEX_AX_POS_TAB_1 (indexing position table 1)

MD30300 \$MA_IS_ROT_AX (rotary axis)

MD30310 \$MA_ROT_IS_MODULO (modulo conversion for rotary axis)

10910	INDEX_AX_POS_TAB_1			N09	T1	
mm/inch, degrees	Indexing position table 1			DOUBLE	Reset	
-						
-	60	0., 0., 0., 0., 0., 0., 0., 0., 0....	-	-	7/2	M

Description:

The indexing position table is used to assign the axis positions in the valid unit of measurement (mm, inches or degrees) to the indexing positions [n] on the indexing axis. [n] = indexing for the entry of the indexing positions in the indexing position table.

Range: 0 y n x 59, where 0 corresponds to the 1st indexing position and 59 to the 60th indexing position.

Note.

Programming with the absolute indexing position (e.g. CAC) starts with indexing position 1. This corresponds to the indexing position with indexing n = 0 in the indexing position table.

The following should be noted when entering the indexing positions:

- Up to 60 different indexing positions can be stored in the table.
- The 1st entry in the table corresponds to indexing position 1; the nth entry corresponds to indexing position n.
- The indexing positions must be entered in the table in ascending order (starting with the negative and going to the positive traversing range) with no gaps between the entries. Consecutive position values must not be identical.
- If the indexing axis is defined as a rotary axis (MD30300 \$MA_IS_ROT_AX = "1") with modulo 360° (MD30310 \$MA_ROT_IS_MODULO = "1"), then the position values are limited to a range of 0° x pos. < 360°.

The number of indexing positions used in the table is defined by MD10900 \$MN_INDEX_AX_LENGTH_POS_TAB_1.

Entering the value 1 in axial MD30500 \$MA_INDEX_AX_ASSIGN_POS_TAB assigns indexing position table 1 to the current axis.

Special cases:

Alarm 17020 "Illegal array index" if over 60 positions are entered in the table.

Related to:

MD30500 \$MA_INDEX_AX_ASSIGN_POS_TAB (axis is an indexing axis)

MD10900 \$MN_INDEX_AX_LENGTH_POS_TAB_1 (number of indexing positions used in table 1)

MD30300 \$MA_IS_ROT_AX (rotary axis)

MD30310 \$MA_ROT_IS_MODULO (modulo conversion for rotary axis)

10920	INDEX_AX_LENGTH_POS_TAB_2				N09	T1	
-	Number of positions for indexing axis table 2				DWORD	Reset	
-							
-	-	0	0	60	7/2	M	

Description:

The indexing position table is used to assign the axis positions in the valid unit of measurement (mm, inches or degrees) to the indexing positions [n] on the indexing axis. The number of indexing positions used in table 2 is defined by MD10920 \$MN_INDEX_AX_LENGTH_POS_TAB_2.

These indexing positions in table 2 must be assigned valid values. Any indexing positions in the table above the number specified in the machine data are ignored. Up to 60 indexing positions (0 to 59) can be entered in the table.

Table length = 0 means that the table is not evaluated. If the length is not equal to 0, the table must be assigned to an axis with MD30500 \$MA_INDEX_AX_ASSIGN_POS_TAB.

If the indexing axis is defined as a rotary axis (MD30300 \$MA_IS_ROT_AX = "1") with modulo 360° (MD30310 \$MA_ROT_IS_MODULO = "1"), the machine data defines the last indexing position after which, with a further traversing movement in the positive direction, the indexing positions begin again at 1.

Not relevant for tool magazines (revolvers, chain magazines)

Special cases:

Alarm 17090 "Value violates upper limit" if a value over 60 is entered in MD10920 \$MN_INDEX_AX_LENGTH_POS_TAB_2.

Related to:

MD30500 \$MA_INDEX_AX_ASSIGN_POS_TAB (axis is an indexing axis)

MD10930 \$MN_INDEX_AX_POS_TAB_2 (indexing position table 2)

MD30300 \$MA_IS_ROT_AX (rotary axis)

MD30310 \$MA_ROT_IS_MODULO (modulo conversion for rotary axis)

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10930	INDEX_AX_POS_TAB_2			N09	T1	
mm/inch, degrees	Indexing position table 2			DOUBLE	Reset	
-						
-	60	0., 0., 0., 0., 0., 0., 0., 0....	-	-	7/2	M

Description:

The indexing position table is used to assign the axis positions in the valid unit of measurement (mm, inches or degrees) to the indexing positions [n] on the indexing axis.
[n] = indexing for the entry of the indexing positions in the indexing position table.

Range: 0 y n x 59, where 0 corresponds to the 1st indexing position and 59 to the 60th indexing position.

Note:

Programming with the absolute indexing position (e.g. CAC) starts with indexing position 1. This corresponds to the indexing position with indexing n = 0 in the table.

The following should be noted when entering the indexing positions:

- Up to 60 different indexing positions can be stored in the table.
- The 1st entry in the table corresponds to indexing position 1; the nth entry corresponds to indexing position n.
- The indexing positions should be entered in the table in ascending order (starting with the negative and going to the positive traversing range) with no gaps between the entries. Consecutive position values must not be identical.
- If the indexing axis is defined as a rotary axis (MD30300 \$MA_IS_ROT_AX = "1") with modulo 360° (MD30310 \$MA_ROT_IS_MODULO = "1"), then the position values are limited to a range of 0° x pos. < 360°.

The number of indexing positions used in the table is defined by MD10920 \$MN_INDEX_AX_LENGTH_POS_TAB_2.

Entering the value 1 in axial MD30500 \$MA_INDEX_AX_ASSIGN_POS_TAB assigns indexing position table 1 to the current axis.

Special cases:

Alarm 17020 "Illegal array index" if over 60 positions are entered in the table.

Related to:

MD30500 \$MA_INDEX_AX_ASSIGN_POS_TAB (axis is an indexing axis)

MD10920 \$MN_INDEX_AX_LENGTH_POS_TAB_2 (num ber of indexing positions used in table 2)

MD30300 \$MA_IS_ROT_AX(rotary axis)

MD30310 \$MA_ROT_IS_MODULO (modulo conversion for rotary axis)

10940	INDEX_AX_MODE			EXP	T1	
-	Settings for indexing position			UDWORD	PowerOn	
-						
-	-	0	0	0x1	7/2	M

Description:

Affects the display of indexing positions (AA_ACT_INDEX_AX_POS_NO and aaActIndexAxPosNo).

Bit 0 = 0:

Indexing position display changes on reaching/passing the indexing position (indexing range lies between the indexing positions, compatible behavior).

Bit 0 = 1:

Indexing position display changes on passing the half indexing axis position (indexing range lies quasi symmetrically round the indexing position)

11100	AUXFU_MAXNUM_GROUP_ASSIGN			N01, N07, N02	H2	
-	Number of auxiliary functions distr. amongst aux. fct. groups			DWORD	PowerOn	
-						
-	-	1	1	255	7/2	M

Description:

The maximum number of auxiliary functions that can be assigned to a group by

AUXFU_ASSIGN_TYPE,
AUXFU_ASSIGN_EXTENTION,
AUXFU_ASSIGN_VALUE and
AUXFU_ASSIGN_GROUP.

This number includes only the user-defined auxiliary functions, not the predefined auxiliary functions.

Related to:

MD22010 \$MC_AUXFU_ASSIGN_TYPE[n].

11110	AUXFU_GROUP_SPEC			N07	H2	
-	Auxiliary function group specification			UDWORD	PowerOn	
-						
-	168	0x81, 0x21, 0x41, 0x41, 0x41, 0x41, 0x41, 0x41...	0	0x7FFFFFFF	7/2	M

Description:

Defines the output options for the auxiliary functions belonging to a group.

However, the output option of an auxiliary function configured by MD22080 \$MC_AUXFU_PREDEF_SPEC[preIndex] or MD22035 \$MC_AUXFU_ASSIGN_SPEC[auxIndex] has a higher priority.

Bit 0=1 "Normal" acknowledgment after an OB1 cycle

Bit 1=1 "Quick" acknowledgment with OB40

Bit 2=1 No predefined auxiliary function

Bit 3=1 No output to PLC

Bit 4=1 Spindle response after acknowledgment by the PLC

Bit 5=1 Output prior to motion

Bit 6=1 Output during motion

Bit 7=1 Output at end of block

Bit 8=1 No output after block search types 1, 2, 4

Bit 9=1 Collection during block search type 5 (SERUPRO)

Bit 10 = 1 No output during block search type 5 (SERUPRO)

Bit 11 = 1 Cross-channel auxiliary function during block search type 5 (SERUPRO)

Bit 12 = 1 Output via synchronized action

Bit 13 = 1 Implicit auxiliary function

Bit 14 = 1 Active M01

Bit 15 = 1 No output during running-in test

Bit 16 = 1 Nibbling off

Bit 17 = 1 Nibbling on

Bit 18 = 1 Nibbling

The MD must be defined for each existing auxiliary function group.

The index [n] corresponds to the auxiliary function group index: 0...63

The assignment of individual auxiliary functions to specific groups is defined in channel-specific machine data (AUXFU_PREDEF_TYPE, AUXFU_PREDEF_EXTENTION, AUXFU_PREDEF_VALUE, AUXFU_PREDEF_GROUP, AUXFU_ASSIGN_TYPE, AUXFU_ASSIGN_EXTENTION, AUXFU_ASSIGN_VALUE, AUXFU_ASSIGN_GROUP).

M0, M1, M2, M17 and M30 are assigned to group 1 by default.

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The specification of this group (0x81: output duration 1 OB1 pass, output at end of block) must not be changed.

All spindle-specific auxiliary functions (M3, M4, M5, M19, M70) are assigned to group 2 by default.

If several auxiliary functions with different output types (before / during / at end of motion) are programmed in one motion block, then the output of the individual auxiliary functions corresponds to their output types.

All auxiliary functions are output simultaneously in a block without motion.

Default setting:

AUXFU_GROUP_SPEC[0]=81H

AUXFU_GROUP_SPEC[1]=21H

AUXFU_GROUP_SPEC[2]=41H

...

AUXFU_GROUP_SPEC[n]=41H

11120	LUD_EXTENDED_SCOPE			N01	PG	
-	Function "program global user data (PUD)" is active			BOOLEAN	PowerOn	
-						
-	-	FALSE	0	-	7/2	M

Description: Activate function "Program-global user data (PUD)":
MD = 0: User data of the main program level are only active on this level.
MD = 1: User data of the main program level are also visible in the subprogram levels.

11140	GUD_AREA_SAVE_TAB			N01	-	
-	Additional saving for GUD modules			UDWORD	Immediately	
-						
-	9	0, 0, 0, 0, 0, 0, 0, 0...	0	0x1	7/2	M

Description: This data indicates in which area the contents of the GUD module are also saved.

MD11140 \$MN_GUD_AREA_SAVE_TAB[0] : SGUD_DEF

MD11140 \$MN_GUD_AREA_SAVE_TAB[1] : MGUD_DEF

MD11140 \$MN_GUD_AREA_SAVE_TAB[2] : UGUD_DEF

MD11140 \$MN_GUD_AREA_SAVE_TAB[3] : GUD4_DEF

MD11140 \$MN_GUD_AREA_SAVE_TAB[4] : GUD5_DEF

MD11140 \$MN_GUD_AREA_SAVE_TAB[5] : GUD6_DEF

MD11140 \$MN_GUD_AREA_SAVE_TAB[6] : GUD7_DEF

MD11140 \$MN_GUD_AREA_SAVE_TAB[7] : GUD8_DEF

MD11140 \$MN_GUD_AREA_SAVE_TAB[8] : GUD9_DEF

BitNo. Hexadec. Meaning when bit is set

Value

0 (LSB) 0x00000001 TOA area

11160	ACCESS_EXEC_CST			N01	-	
-	Execution right for /_N_CST_DIR			BYTE	PowerOn	
-						
-	-	7	0	7	7/2	M

Description: Execution right assigned to the program stored in directory /_N_CST_DIR :

Value 0: Siemens password

Value 1: Machine OEM password

Value 2: Password of setup engineer, service

Value 3: End user password

Value 4: Keyswitch position 3
 Value 5: Keyswitch position 2
 Value 6: Keyswitch position 1
 Value 7: Keyswitch position 0
 Machine data can only be written with values 0 and 1, and with the corresponding password also active.

11161	ACCESS_EXEC_CMA	N01	-
-	Execution right for /_N_CMA_DIR	BYTE	PowerOn
-			
-	-	7	0
-	-	7	7/2
-	-	-	M

Description: Execution right assigned to the programs stored in directory /_N_CMA_DIR :

Value 0: Siemens password
 Value 1: Machine OEM password
 Value 2: Password of setup engineer, service
 Value 3: End user password
 Value 4: Keyswitch position 3
 Value 5: Keyswitch position 2
 Value 6: Keyswitch position 1
 Value 7: Keyswitch position 0
 Machine data can only be written with values 0 and 1, and with the corresponding password also active.

11162	ACCESS_EXEC_CUS	N01	-
-	Execution right for /_N_CUS_DIR	BYTE	PowerOn
-			
-	-	7	0
-	-	7	7/3
-	-	-	U

Description: Execution right assigned to the programs stored in directory /_N_CUS_DIR :

Value 0: Siemens password
 Value 1: Machine OEM password
 Value 2: Password of setup engineer, service
 Value 3: End user password
 Value 4: Keyswitch position 3
 Value 5: Keyswitch position 2
 Value 6: Keyswitch position 1
 Value 7: Keyswitch position 0
 Machine data can only be written with values 0, 1 and 2, and with the corresponding password also active.

11165	ACCESS_WRITE_CST	N01	-
-	Write protection for directory /_N_CST_DIR	DWORD	PowerOn
-			
-	-	-1	-1
-	-	7	7/2
-	-	-	M

Description: Set write protection for cycle directory /_N_CST_DIR:

Assigned to the programs:
 Value -1: Keep the value currently set
 Value 0: Siemens password
 Value 1: Machine OEM password
 Value 2: Password of setup engineer, service

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Value 3: End user password
 Value 4: Keyswitch position 3
 Value 5: Keyswitch position 2
 Value 6: Keyswitch position 1
 Value 7: Keyswitch position 0

The machine data can only be written with values 0 and 1, and with the corresponding password also active.

11166	ACCESS_WRITE_CMA			N01	-	
-	Write protection for directory /_N_CMA_DIR			DWORD	PowerOn	
-						
-	-	-1	-1	7	7/2	M

Description: Set write protection for cycle directory /_N_CMA_DIR:

Assigned to the programs:

Value -1: Keep the value currently set
 Value 0: Siemens password
 Value 1: Machine OEM password
 Value 2: Password of setup engineer, service
 Value 3: End user password
 Value 4: Keyswitch position 3
 Value 5: Keyswitch position 2
 Value 6: Keyswitch position 1
 Value 7: Keyswitch position 0

The machine data can only be written with values 0 and 1, and with the corresponding password also active.

11167	ACCESS_WRITE_CUS			N01	-	
-	Write protection for directory /_N_CUS_DIR			DWORD	PowerOn	
-						
-	-	-1	-1	7	7/3	U

Description: Set write protection for cycle directory /_N_CUS_DIR:

Assigned to the programs:

Value -1: Keep the value currently set
 Value 0: Siemens password
 Value 1: Machine OEM password
 Value 2: Password of setup engineer, service
 Value 3: End user password
 Value 4: Keyswitch position 3
 Value 5: Keyswitch position 2
 Value 6: Keyswitch position 1
 Value 7: Keyswitch position 0

The machine data can only be written with values 0, 1 and 2, and with the corresponding password also active.

11170	ACCESS_WRITE_SACCESS			N01	-	
-	Write protection for _N_SACCESS_DEF			BYTE	PowerOn	
-						
-	-	7	0	7	7/2	M

Description: Set write protection for definition file /_N_DEF_DIR/_N_SACCESS_DEF:

Value 0: Siemens password
 Value 1: Machine OEM password
 Value 2: Password of setup engineer, service
 Value 3: End user password
 Value 4: Keyswitch position 3
 Value 5: Keyswitch position 2
 Value 6: Keyswitch position 1
 Value 7: Keyswitch position 0

The machine data can only be written with values 0 and 1, and with the corresponding password also active.

11171	ACCESS_WRITE_MACCESS			N01	-	
-	Write protection for _N_MACCESS_DEF			BYTE	PowerOn	
-						
-	-	7	0	7	7/2	M

Description: Set write protection for definition file /_N_DEF_DIR/_N_MACCESS_DEF:

Value 0: Siemens password
 Value 1: Machine OEM password
 Value 2: Password of setup engineer, service
 Value 3: End user password
 Value 4: Keyswitch position 3
 Value 5: Keyswitch position 2
 Value 6: Keyswitch position 1
 Value 7: Keyswitch position 0

The machine data can only be written with values 0 and 1, and with the corresponding password also active.

11172	ACCESS_WRITE_UACCESS			N01	-	
-	Write protection for _N_UACCESS_DEF			BYTE	PowerOn	
-						
-	-	7	0	7	7/3	U

Description: Set write protection for definition file /_N_DEF_DIR/_N_UACCESS_DEF:

Value 0: Siemens password
 Value 1: Machine OEM password
 Value 2: Password of setup engineer, service
 Value 3: End user password
 Value 4: Keyswitch position 3
 Value 5: Keyswitch position 2
 Value 6: Keyswitch position 1
 Value 7: Keyswitch position 0

The machine data can only be written with values 0, 1 and 2, and with the corresponding password also active.

11200	INIT_MD			EXP, N01	IAF, IA	
-	Standard machine data loaded at next Power On			UBYTE	PowerOn	
-						
-	-	0	0	0x3f	7/2	M

Description: A power on must be triggered after setting MD11200 \$MN_INIT_MD. The function is executed and the MD reset to "0" at power on.

Meaning of the input:

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Bit 0 set:

All machine data (with the exception of the memory-configuring data) will be overwritten with the compiled values at the next NCK power on.

Bit 1 set:

All memory-configuring machine data will be overwritten with the compiled values at the next NCK power on.

Bit 2 set:

The OEM machine data and the SIEMENS cycle machine data brought in by compile cycles will be deleted from the buffered memory at the next power on.

Bit 3 set:

All setting data will be overwritten with the compiled values at the next power on.

Bit 4 set:

All option data will be overwritten with the compiled values at the next power on.

Bit 5 set:

The passive file system (including PowerFail log file) will be deleted at the next power on of the NCK.

INIT_MD is automatically set to 0 at power on.

Memory configuring MDs are:

- MD10010 \$MN_ASSIGN_CHAN_TO_MODE_GROUP
- All machine data starting with "MM_"
 - MD 18000 - 18999 (general MD)
 - MD 28000 - 28999 (channel-specific MD)
 - MD 38000 - 38999 (axis-specific MD)

11202	MD_MODE_MASK			EXP, N01	IA	
-	Behavior of machine data changes			UBYTE	PowerOn	
-						
-	-	0	0	-	7/2	M

Description:

Behavior of machine data changes

Bit 0 (LSB): When configuring linear/rotary axes, do not load initial values for axis type-dependent MDs

Due to the existence of one plausible default value each for a linear axis or rotary axis, axial machine data can facilitate setup for the user. With the switchover process (Lin -> Rot, or Rot -> Lin), the respectively configured default values become active as actual values at the next warm restart of the controller.

11210	UPLOAD_MD_CHANGES_ONLY			N01, N05	-	
-	Machine data backup of changed machine data only			UBYTE	Immediately	
-						
-	-	0xFF	0	-	7/3	M

Description:

Either all data or only those data which differ from the default setting can be set to be output when creating standard archives (ARC) and copying 'NC active data'.

Bit0(LSB) Effectiveness of the differential upload with INI/TEA files

0: All data are output

1: Only those MDs that have changed in comparison to the compiled values are output

Bit1 is reserved and acts like bit 0

Bit2 Change to an array element

0: Complete arrays are output

1: Only those elements of an array that have changed are output

Bit3 R variables (only for INI files)

0: All R variables are output

1: Only R variables not equal to '0' are output

Bit4 Frames (only for INI files)

0: All frames are output

1: Only those frames that are not zero frames are output.

Bit5 Tool data (cutting edge parameters) (only for INI files)

0: All tool data are output

1: Only those tool data not equal to '0' are output.

Bit6 Buffered system variables (\$AC_MARKER[], \$AC_PARAM[] only for INI files)

0: All system variables are output

1: Only those system variables not equal to '0' are output

Bit7 Synchronized actions GUD (for INI files only)

0: All Syna GUD are output

1: Only those Syna GUD not equal to '0' are output

Active: The change in the data becomes active on the start of the upload for the next range.

The settings are only active, if MD11212 \$MN_UPLOAD_CHANGES_ONLY=FALSE.

11212	UPLOAD_CHANGES_ONLY			N01, N05	-	
-	Data backup type for an active file system.			BOOLEAN	Immediately	
-						
-	-	TRUE	-	-	7/3	M

Description:

Only values of the selected file of the active file system that deviate from the default setting are backed up.

TRUE = only the values of the selected file of the active file system that deviate from the standard setting are backed up (a differential data backup)

The value of MD11210 \$MN_UPLOAD_MD_CHANGES_ONLY than has no effect.

FALSE = all values of the selected file of the active file system are backed up.

Same significance as MD11210 \$MN_UPLOAD_MD_CHANGES_ONLY=0.

However, if MD11210 \$MN_UPLOAD_MD_CHANGES_ONLY is not equal to 0, then this setting is active.

11220	INI_FILE_MODE			N01, N05	G2	
-	Error response to INI file errors			BYTE	Reset	
-						
-	-	1	0	2	7/2	M

Description:

If, while reading machine data files (INI files) into controls, data are read in

- that are faulty or
- do not agree with the check sum

then alarms are generated and the reading in may be canceled. The following control behaviors can be selected via machine data

settings:

0: Output of an alarm, cancelation on detection of 1st error. (As SW versions 1 and 2).

1: Output of an alarm, continuation of execution. An alarm with the number of errors is output at the end of execution.

2: Execution continues despite possible errors. An alarm with the number of errors is output at the end of execution.

11230	MD_FILE_STYLE			N01, N05	-	
-	Structure of machine data backup files			UBYTE	Immediately	
LINK, -						
-	-	0x3	0	-	7/3	M

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Description: Appearance of a machine data file at 'upload'

Bit 0 (LSB): Line check sum is generated

Bit 1:
MD numbers are generated

Bit 2:
Channel axis name as field index with axis-MD in the TEA file

Bit 3:
With an NCU-link, the MDs of the LINK axes are also output.

Bit 4:
All local axes are output (even when they are not activated by MD20070 \$MC_AXCONF_MACHAX_USED)

Active:
The change in the data becomes active on the start of the upload for the next area.

Default setting:
The line check sums and MD numbers are generated, but not channel names as field index with axis-MD.

11250	PROFIBUS_SHUTDOWN_TYPE			EXP, N01	G3, FBU	
-	PROFIBUS/PROFINET shutdown handling			BYTE	PowerOn	
-						
-	-	0	0	2	7/2	M

Description: For PROFIBUS/PROFINET only:

Handling of PROFIBUS/PROFINET when shutting down NCK (NCK reset)

Value 0:
The bus is shut down directly from cyclic operation, without 'prewarning'

Value 1:
When shutting down NCK, the bus is changed to the CLEAR state for at least 20 cycles. Then, it is shut down. If this is not possible on the hardware side, the procedure described for value 2 is used instead.

Value 2:
When shutting down NCK, the bus is changed to a state where all drives are sent a zero word as control word1 and control word2 (pseudoclear) for at least 20 cycles. The bus itself remains in the Operate status.

11280	WPD_INI_MODE			N01	-	
-	Handling of INI files in workpiece directory			BYTE	PowerOn	
-						
-	-	0	0	1	7/2	M

Description: Processing mode of INI files in the workpiece directory:

Value = 0:
An INI file with the name of the workpiece and stored in the workpiece directory is executed on the first NC start after workpiece selection.

Value = 1:
INI files with the names of the selected part program and extensions are executed on the first NC start after workpiece selection

SEA,
GUD,
RPA,
UFR,
PRO,
TOA,

TMA and
CEC
.

11285	MACH_MODEL_MODE			EXP	-	
-	Type of file with machine model			BYTE	Immediately	
-						
-	-	0	0	1	3/3	U

Description: If 3D protection zones have been defined, creation of a machine model can be requested with this machine data.
Value 0: No model is created.
Value 1: After each change (including activation) of the 3D protection zones, a machine model is created in user directory /_N_VRML_DIR with the name _N_VRMLMODEL_WRL.

11294	SIEM_TRACEFILES_CONFIG			EXP	-	
-	Configuration of the SIEM* trace file			UDWORD	PowerOn	
-						
-	-	0	0	0x7FFFFFFF	2/2	M

Description: Configuration of the tracefiles SIEM*
Bit0:
Additional information about the PDUs sent is to be entered in _N_SIEMDOMAINSEQ_MPF for download
Bit1:
Additional information about the PDUs received is to be entered in _N_SIEMDOMAINSEQ_MPF for download
Bit2:
Trace of warm start and connection cancelation in _N_SIEMDOMAINSEQ_MPF
Bit4:
Additional information about the PDUs sent is to be entered in _N_SIEMDOMAINSEQ_MPF for upload
Bit5:
Additional information about the PDUs received is to be entered in _N_SIEMDOMAINSEQ_MPF for upload

11297	PROTOK_IPOCYCLE_CONTROL			N01	-	
-	Prevent overrun of IPO time level			BYTE	PowerOn	
-						
-	10	1, 1, 1, 1, 1, 1, 1...	0	1	1/1	M

Description: Setting whether an overflow of the time level is to be prevented during the recording of data in the time level of the IPO.
If applicable, data sets are discarded when the function is active, and are not entered in the log file in order to prevent an impending overflow of the IPO time level.
This may mean that data sets are also then lost if a level overflow would not yet have occurred with the function inactive.
The individual values apply to the users of the logging function, which are assigned the following functions:
0: Reserved for system functions: simultaneous recording, simulation, synchronized action analysis
1: Reserved for system functions: determining program runtimes, multi-step editor
2: Reserved for OEM applications
3: Reserved for OEM applications

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- 4: Reserved for OEM applications
- 5: Reserved for system functions: trace
- 6: Reserved for system functions: trace
- 7: Reserved for system functions: trace
- 8: Reserved for system functions: trace
- 9: Reserved for system functions: action log

11298	PROTOK_PREPTIME_CONTROL			N01	-	
-	Interruption time prep time level in seconds.			DOUBLE	PowerOn	
-						
-	10	1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0...	-	-	1/1	M

Description:

Time in seconds, for which the prep time level may be blocked. If the PREP does not manage to pass through within the set time, the cyclic events are not logged. It is thus ensured that operation cannot be completely blocked by data recording.

The individual values apply to the users of the logging function, which are assigned the following functions:

- 0: Reserved for system functions: simultaneous recording, simulation, synchronized action analysis
- 1: Reserved for system functions: determining program runtimes, multi-step editor
- 2: Reserved for OEM applications
- 3: Reserved for OEM applications
- 4: Reserved for OEM applications
- 5: Reserved for system functions: trace
- 6: Reserved for system functions: trace
- 7: Reserved for system functions: trace
- 8: Reserved for system functions: trace
- 9: Reserved for system functions: action log

11300	JOG_INC_MODE_LEVELTRIGGRD			N01	H1, R1	
-	INC and REF in jog mode			BOOLEAN	PowerOn	
-						
-	-	TRUE	0	-	7/2	M

Description:

- 1: Jog mode for JOG-INC and reference point approach

JOG-INC:

When the traversing key is pressed in the required direction (e.g. +), the axis begins to traverse the set increment. If the key is released before the increment has been completely traversed, the movement is interrupted and the axis stops. If the same key is pressed again, the axis completes the remaining distance-to-go until this is 0.

- 0: Continuous operation for JOG-INC and reference point approach

JOG-INC:

When the traversing key is pressed (first rising edge) the axis travels the whole set increment. If the same key is pressed again (second rising edge) before the axis has completed traversing the increment, the movement is canceled, i.e. not completed.

The differences in axis travel behavior between the jog mode and continuous operation in incremental traversing are described in detail in the relevant chapters.

For travel behavior in reference point approach see

References: /FB/, R1, "Reference Point Approach"

MD irrelevant for:

Continuous traversing (JOG continuous)

11310	HANDWH_REVERSE	N09	H1
-	Threshold for direction change handwheel	BYTE	PowerOn
-			
-	-	2	0
-	-	-	7/2
-	-	-	M

Description: Handwheel travel:
Value = 0:
No immediate travel in the opposite direction
Value > 0:
Immediate travel in the opposite direction if the handwheel is turned at least the stated number of pulses in the opposite direction.
Whether this machine data is also active for handwheel travel with DRF depends on bit10 of MD20624 \$MC_HANDWH_CHAN_STOP_COND.

11320	HANDWH_IMP_PER_LATCH	N09	H1
-	Handwheel pulses per detent position	DOUBLE	PowerOn
-			
-	6	1., 1., 1., 1., 1., 1.	-
-	-	-	7/2
-	-	-	M

Description: The connected handwheels are adapted to the control in MD11320 \$MN_HANDWH_IMP_PER_LATCH.
The number of pulses generated by the handwheel for each handwheel detent position has to be entered. The handwheel pulse weighting must be defined separately for each connected handwheel (1 to 3). With this adaptation, each handwheel detent position has the same effect as one press of the traversing key in incremental traversal.
Entering a negative value reverses the direction of rotation of the handwheel.
Related to:
MD31090 \$MA_JOG_INCR_WEIGHT
(weighting of an increment of a machine axis for INC/manual).

11322	CONTOURHANDWH_IMP_PER_LATCH	N09	H1
-	Contour handwheel pulses per detent position	DOUBLE	PowerOn
-			
-	6	1., 1., 1., 1., 1., 1.	-
-	-	-	7/2
-	-	-	M

Description: Adaptation factor to the hardware of the contour handwheel:
Enter the number of pulses issued per detent position by the contour handwheel.
Because of this normalization, a detent position of the contour handwheel corresponds to one press of a key with incremental jog processes.
Sign reversal reverses the direction of evaluation.

11324	HANDWH_VDI_REPRESENTATION	N01	OEM
-	Display of handwheel number in VDI Interface	DWORD	PowerOn
-			
-	-	0	0
-	-	1	7/2
-	-	-	M

Description: The number of the handwheel is displayed in the channel/axis-specific signals of the VDI interface:
Value = 0 :
Bit coded (1 of 3, only 3 handwheels can be displayed)
Value = 1 :

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Binary coded (6 handwheels can be displayed)

11330	JOG_INCR_SIZE_TAB	EXP, N09	H1
-	Increment size for INC/handwheel	DOUBLE	PowerOn
-			
-	5	1., 10., 100., 1000., 10000.	0.0
-		-	7/2
-			M

Description:

In incremental traversal or handwheel travel, the number of increments to be traversed by the axis can be defined by the user, e.g. via the machine control panel.

In addition to the variable increment size (INCvar), 5 fixed increment sizes (INC...) can also be set.

The increment size for each of these 5 fixed increments is defined collectively for all axes by entering values in JOG_INCR_SIZE_TAB [n]. The default setting is INC1, INC10, INC100, INC1000 and INC10000.

The entered increment sizes are also active for DRF.

The size of the variable increment is defined in SD41010 \$SN_JOG_VAR_INCR_SIZE.

Related to:

MD31090 \$MA_JOG_INCR_WEIGHT (weighting of an increment for INC/manual)
 NC/PLC interface signal DB21-30 DBX41.0-.4, DBX47.0-.4, DBX53.0-.4
 (Geometry axis 1-3 active machine function: INC1; ...; INC10000)
 NC/PLC interface signal DB31, ... DBB65.0 - .5
 (active machine function: INC1; ...; INC10000).

11342	ENC_HANDWHEEL_MODULE_NR	N01	H1
-	3rd handwheel: drive number / measuring circuit number	BYTE	PowerOn
-			
-	-	0	0
-		31	7/2
-			M

Description:

Only for test purposes for PROFIBUS/PROFINET:

Number of the module within a segment (MD11340 \$MN_ENC_HANDWHEEL_SEGMENT_NR), used to address the 3rd handwheel.

= 0: The configuration of a 3rd handwheel is deactivated, in this case

the setting of MD11340 \$MN_ENC_HANDWHEEL_SEGMENT_NR and

MD11344 \$MN_ENC_HANDWHEEL_INPUT_NR are irrelevant.

Corresponds with MD11340 \$MN_ENC_HANDWHEEL_SEGMENT_NR

MD11344 \$MN_ENC_HANDWHEEL_INPUT_NR

11344	ENC_HANDWHEEL_INPUT_NR	N01	H1
-	3rd handwheel: Input to module/meas. circ. Board	BYTE	PowerOn
-			
-	-	1	1
-		2	7/2
-			M

Description:

Only for test purposes for PROFIBUS/PROFINET:

Number of the input on a module used to address the 3rd handwheel.

840D: 1/2 = upper/lower actual value input

Corresponds with MD11340 \$MN_ENC_HANDWHEEL_SEGMENT_NR

MD11342 \$MN_ENC_HANDWHEEL_MODULE_NR

11346	HANDWH_TRUE_DISTANCE	N01	H1, P1, W1
-	Handwheel default path or velocity	BYTE	PowerOn
-			
-	-	1	0
-		7	7/2
-			M

Description:

Setting the behavior for traversing with the handwheel, contour handwheel and with FDA=0:

Value = 1: (default value)

The default settings of the handwheel are path inputs. No pulses are lost. Residual axis motions occur as a result of the limitation to a maximal permissible velocity.

Value = 0:

The default settings of the handwheel are velocity inputs. The axes stop as soon as the handwheel stops. The motion is immediately braked if no pulses come from the handwheel in an interpolation cycle. Therefore, only a short residual motion of the axes can occur as a result of the braking ramp. The handwheel pulses do not supply a path default.

Value = 2:

The default settings of the handwheel are velocity inputs. The axes are intended to stop as soon as the handwheel stops. The motion is immediately braked if no pulses come from the handwheel in an interpolation cycle. However, in contrast to value = 0 braking is not along the shortest possible path but to the next possible point in an intended grid.

Each increment in the grid corresponds to a displacement which the selected axis travels per handwheel grid position (see MD31090 \$MA_JOG_INCR_WEIGHT and

see MD31090 \$MA_JOG_INCR_WEIGHT and,

MD11330 \$MN_JOG_INCR_SIZE_TAB,

MD20620 \$MC_HANDWH_GEOAX_MAX_INCR_SIZE).

MD32080\$MA_HANDWH_MAX_INCR_SIZE

The start of the traversing is taken as the zero point of the grid.

Value = 3:

The default settings of the handwheel are path inputs. If premature braking is required on account of settings in other machine data

MD11310 \$MN_HANDWH_REVERSE != 0

MD20624 \$MC_HANDWH_CHAN_STOP_COND

MD32084 \$MA_HANDWH_STOP_COND

then in contrast to value = 1 braking is not along the shortest possible path, but to the next possible point in an intentional grid (see value = 2).

Value = 6:

Same as value = 2, but travel does not stop at the last possible grid position in front of a limit, but at the limit.

Value = 7:

Same as value = 3, but travel does not stop at the last possible grid position in front of a limit, but at the limit.

11350	HANDWHEEL_SEGMENT			N09	H1	
-	Handwheel segment			DWORD	PowerOn	
-						
-	6	0, 0, 0, 0, 0, 0	0	255	7/2	M

Description:

Machine data defines which

hardware segment the handwheel is connected to:

0 = SEGMENT_EMPTY ;no handwheel

1 = SEGMENT_840D_HW ;handwheel at 840D HW

2 = SEGMENT_8xxD_HW ;handwheel at 828D sl, 808D -HW

5 = SEGMENT_PROFIBUS ;handwheel at PROFIBUS

7 = SEGMENT_ETHERNET ;handwheel at Ethernet

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11351	HANDWHEEL_MODULE			N09	H1	
-	Handwheel module			BYTE	PowerOn	
-						
-	6	0, 0, 0, 0, 0, 0	0	6	7/2	M

Description: Machine data specifies the hardware module to which the handwheel is connected.
(Content dependent on MD11350 \$MN_HANDWHEEL_SEGMENT):
0 = no handwheel configured
MD11351 \$MN_HANDWHEEL_MODUL =
1 ;SEGMENT_840D_HW
1 ;SEGMENT_8xxD_HW; 828D s1, 808D -HW
1..6 ;SEGMENT_PROFIBUS/PROFINET ;index for MD11353
\$MN_HANDWHEEL_LOGIC_ADDRESS[(x-1)]
1 ;SEGMENT_ETHERNET

11352	HANDWHEEL_INPUT			N09	H1	
-	Handwheel connection			BYTE	PowerOn	
-						
-	6	0, 0, 0, 0, 0, 0	0	6	7/2	M

Description: Machine data which is intended to select the handwheels connected to a hardware module:
0 = No handwheel configured
1..6 = Handwheel connection to HW module/Ethernet interface

11353	HANDWHEEL_LOGIC_ADDRESS			N04, N10	H1	
-	Logical handwheel slot addresses			DWORD	PowerOn	
-						
-	6	0, 0, 0, 0, 0, 0	0	16383	7/2	M

Description: For PROFIBUS/PROFINET only:
Logical start address of the hand wheel slots if handwheels are connected by PROFIBUS/PROFINET (MD11340 \$MN_HANDWHEEL_SEGMENT = 5)

11354	HANDWHEEL_FILTER_TIME			N09	-	
s	Filter time for handwheel pulses			DOUBLE	PowerOn	
-						
-	6	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	0.0	2.0	7/2	M

Description: The filter time indicates the time during which the pulses from the handwheel are output to the interpolator. The values are incremented internally in interpolation cycles.
In the case of a filter time setting = 0.0, the pulses from the handwheel are output to the interpolator within a single interpolation cycle. This can cause the controlled axis to exhibit jerk during traversing.
Machine data is valid for the following types of handwheel (see 11350 \$MN_HANDWHEEL_SEGMENT):
SEGMENT_ETHERNET:
• Recommended filter time: 0.2 - 0.5 s

11398	AXIS_VAR_SERVER_SENSITIVE	EXP	B3
-	Axis-Var server response	UBYTE	PowerOn
-			
-	-	0	0
-	-	-	7/2
-	-	-	M

Description: The axis-variable server supplies the data for the OPI blocks SMA/SEMA, SGA/SEGA and SSP.

If no value can be supplied for an axis (e.g. because the axis is a link axis) then a default value (usually 0) is returned.

For debugging purposes, this machine data can be used to set the axis-var-server to sensitive so that an error message is returned instead of a default value.

0: default value
1: error message

11410	SUPPRESS_ALARM_MASK	EXP, N06	D1, M3, K3, S1, V1, W1
-	Mask for support of special alarm outputs	UDWORD	PowerOn
-			
-	-	0x108000	0
-	-	0xFFFFFFFF	7/2
-	-	-	M

Description: Mask for suppressing special alarm outputs

Bit set: The corresponding alarm (warning) is NOT triggered.

Bit 0:
Alarm 15110 "Channel %1 block %2 REORG not possible"

Bit 1:
Alarm 10763 "Channel %1 block %2. The path component of the block in the contour plane is zero"

Bit 2:
Alarm 16924 "Channel %1 Caution: Program testing can modify tool/magazine data"
--> Note: The alarm is only a message alarm

Bit 3:
Alarm 22010 "Channel %1 spindle %2 block %3. Actual gear stage does not correspond to set gear stage"

Bit 4:
Alarm 17188 "Channel %1 D number %2 with tool T nos. %3 and %4 defined"
Alarm 17189 "Channel %1 D number %2 of the tools in magazines/magazine locations %3 and %4 defined". The two alarms are of equal status and are only message alarms.

Bit 5:
Alarm 22071 "TO unit %1 tool %2 duplo no. %3 is active but not in the active wear grouping." The alarm is only a message alarm.

Bit 6:
Alarm 4027 "NOTICE! MD %1 was also changed for the other axes in the axis container %2 "

Alarm 4028 "NOTICE! The axial MDs in the axis container will be aligned on the next runup "

Bit 7:
Alarm 22070 "TO unit %1 please change tool T= %2 to magazine. Repeat data backup". The alarm is only a message alarm.

Bit 8:
Alarm 6411 "Channel %1 tool %2 with duplo no. %3 has reached tool prewarning limit"
Alarm 6413 "Channel %1 tool %2 with duplo no. %3 has reached tool monitoring limit."
The two alarms are only message alarms. They occur during program execution.

Bit 9:

2.3 NC machine data

Alarm 6410 "TO unit %1 tool %2 with duplo no. %3 has reached tool prewarning limit ."

Alarm 6412 "TO unit %1 tool %2 with duplo no. %3 has reached tool monitoring limit ".
The two alarms are only message alarms. They occur as a result of an operator action.

Bit10:

Alarm 10604 "channel %1 block %2 "Thread lead increase too high"

Alarm 10605 "channel %1 block %2 "Thread lead decrease too high"

Bit 11:

Alarm 14088 "Channel 51 block %2 axis %3 doubtful position".

Bit 12:

obsolete (Alarm 10607)"

Bit13:

Alarm 10704 " channel %1 block %2 Protection area monitoring is not
guaranteed."

Bit14:

Alarm 21701 "Measuring reactivated too soon (<2 IPO cycles)"

Bit15:

Alarm 5000 "Communication order cannot be executed"

Bit16:

Alarm 21600 "Monitoring active for ESR"

Bit17:

Alarm 16945 "Channel %1 action %2<ALNX> is delayed until block end"

Note: The alarm is only a message alarm.

Bit18:

Alarm 10750 "Channel %1 block %2 Activation of the tool radius compensation without
tool number"

Bit19: Alarm 17193 "Channel %1 block %2 The active tool ist no longer at tool
holder no./spindle no. %3, program %4"

Bit20:

Alarm 2900 "Reboot is delayed"

Bit21:

Alarm 22012 "Channel %1 block %2. Leading axis %3 is in simulation mode"

Alarm 22013 "Channel %1 block %2. Following axis %3 is in simulation mode"

Alarm 22014 "Channel %1 block %2. The dynamics of leading axis %3 and following axis
%4 are very different"

Alarm 22040 "Channel%1 Block %3 Spindle %2 not referenced with zero mark" is no longer
checked (cyclically) with

Bit21 set after power ON of the closed loop position control.

Bit22:

Alarm 26080 "Channel %1 retraction position of axis %2 not programmed or invalid"

Alarm 26081 "Channel %1 single axis trigger axis %2 is triggered, but axis is not PLC
controlled"

Bit23:

Alarm 16949 "Correspondence between marks of channel %1 and channel %2
is invalid"

Bit24:

Alarm 16950 "Channel %1 search run with holding block"

Bit25:

Alarm 22016 "Channel %1 block %2 following spindle %3 in range of reduced acceleration
capacity"

Bit26:

Alarm 22015 "Channel %1 block %2 following spindle %3 no dynamic response for additional motion"

Bit27:

Alarms 16112 and 22030 "Channel %1 block %2 following spindle %3 impermissible programming"

Bit28:

Alarm 26083 "Channel %1 ESR for PLC controlled axis %2 was triggered"

Bit29:

Alarm 16772 "Channel %1 block %2 axis %3 is following axis, coupling is opened"

Bit30:

Alarm 16600 "Channel %1 block %2 spindle %3 gear stage change not possible"

Bit31:

Alarm 16774 "Channel %1 axis %2 synchronization canceled"

11411	ENABLE_ALARM_MASK			EXP	D1, K1	
-	Activation of warnings			UDWORD	Reset	
-						
-	-	0x0	0	0x7FFFFFFF	7/2	M

Description:

Mask for generating alarms that are normally suppressed.

Bit set: Alarms of this alarm group are output.

Bit not set: Alarms of this alarm group are not output.

Bit Hex. Meaning

value

=====

0: 0x1 Alarms that have SHOWALARMAUTO as the alarm response are output.

1: 0x2 Alarms that have SHOWWARNING as the alarm response are output.

2: 0x4 Alarm 22280 "Thread power up path too short" is output.

3: 0x8 Alarms that are triggered by the NCU LINK MODULE are switched on.

4: 0x10 Alarm 10883 "Chamfer or rounding must be shortened" allowed.

5: 0x20 Alarm 20096 "Brake test canceled" is output.

6: 0x40 Alarm 16956 "Program cannot be started because of global start disable" is output.

Alarm 14005 "Program cannot be started because of program-specific start disable" is output. Alarm can only be switched on in channel status RESET, in all other channel states it is output without conditions.

7: 0x80 Alarm 16957 "Stop delay range is suppressed" is output.

8: 0x100 Alarm 1011 fine coding 150019 or 150020 "Incorrect axis number in the LINK".

9: 0x200 Alarm 22033 Diagnostics 1 to 6 for "Track synchronism" (linkages).

10: 0x400 Alarm 15122 "PowerOn after Powerfail: %1 data were restored, thereof %2 machine data, %3 errors" is output.

11: 0x800 Alarms 10722, 10723, 10732 or 10733 are output instead of alarms 10720, 10721, 10730 or 10731.

12: 0x1000 Alarm 22033 diagnostics greater than or equal to 7 for "Track synchronism" (linkages)

13: 0x2000 All alarms that refer to the rejection of an ASUB start are also output.

14: 0x4000 All alarms that refer to the rejection of a PI service are also output.

15: 0x8000 Alarm 14004 "channel-specific start disable is set" is output on an NC start. The alarm always appears with block search, irrespective of bit 15.

2.3 NC machine data

11412	ALARM_REACTION_CHAN_NOREADY	EXP, N01	D1
-	Alarm response CHAN_NOREADY permitted	BOOLEAN	PowerOn
-			
-	-	FALSE	0
-	-	-	7/2
-	-	-	M

Description: This MD is used for compatibility with the PLC systems older than SW4.1.
 If this MD is not set, the behavior implemented before SW4.1 (configured alarm reaction) is set
 With SW 4.1 and higher, it is possible to set signal CHANNEL_NOREADY on the PLC in response to alarms.
 If this MD is not set, then the alarm handler internally re-configures BAG_NOREADY into CHAN_NOREADY.

11414	ALARM_CLR_NCSTART_W_CANCEL	EXP, N01	D1
-	Clear NCSTART alarms with CANCEL	BOOLEAN	PowerOn
-			
-	-	FALSE	0
-	-	-	7/2
-	-	-	M

Description: If this MD is set, then alarms that have ClearInfo=NCSTART are cleared by the Alarm Cancel button as well as by NC-Start.
 If this MD is not set, then NCSTART alarms are not cleared by Cancel.
 The purpose of this MD is to provide compatibility with system behavior.

11415	SUPPRESS_ALARM_MASK_2	EXP, N06	-
-	Masking of alarm outputs	UDWORD	PowerOn
-			
-	-	0x400008	0
-	-	0x7FFFFFFF	7/2
-	-	-	M

Description: Mask for suppressing special alarm outputs
 Bit set: Corresponding alarm (warning) is NOT triggered.
 Bit Hex. Meaning
 Value
 =====
 0: 0x1 16773 "Channel %1 axis %3 is slave axis. The axis/spindle disables for the master axes differ."
 1: 0x2 2100 "NCK battery warning level reached"
 2101 "NCK battery alarm"
 2102 "NCK battery alarm"
 2: 0x4 2120 "NCK fan alarm" (ineffective on modules that require a fan due to their design)
 3: 0x8 15120 "PowerFail: Show buffer overflow"
 4: 0x10 15187 "Error during execution of PROGEVENT file"
 5: 0x20 15188 "Error during execution of ASUB file"
 6: 0x40 26120 "\$AA_ESR_ENABLE = 1 and axis is to become neutral"
 26121 "Axis is neutral and \$AA_ESR_ENABLE =1 is to be set"
 26123 "\$AA_ESR_ENABLE = 1 is to be set, but MD37500 \$MA_ESR_REACTION is not set"
 26124 "\$AC_TRIGGER triggered, but axis is neutral, ESR ignores this axis"
 7: 0x80: 10724 "Software limit violated at start of block"
 10734 "Operating range limit violated at start of block"
 10737 "Work (WCS) operating range limit violated at start of block"
 8: 0x100: 14008 "WRITE command in /_N_EXT_DIR"
 10734 "Operating range limit violated at start of block"

10737 "Work (WCS) operating range limit violated at start of block"

9: 0x200 14006 "Invalid program name"

10: 0x400: 4006 "Maximum number of axes that can be activated exceeded"

11: 0x800 16017 "LIFTFAST ignores this axis, as it cannot be used for the current axis type"

12: 0x1000 22025 "Channel %1 Block %2 Following axis/spindle %3 Synchronism (2): Fine tolerance exceeded"

- Exception: Alarm is generated if CPMALARM[FAx] bit 8 = 0 is programmed for the corresponding slave axis/spindle.

22026 "Channel %1 Block %2 Following axis/spindle %3 Synchronism (2): Coarse tolerance exceeded"

- Exception: Alarm is generated if CPMALARM[FAx] bit 9 = 0 is programmed for the corresponding slave axis/spindle.

13: 0x2000 22001 "Braking ramp longer than Stop D time."

22002 "Braking ramp longer than Stop D time with gear stage %3 reason %4"

14: 0x4000 16963 "ASUB start refused."

15: 0x8000 21751, "Limit velocity %2 deg/min on modulo axis %1 exceeded (defective cam output)"

21752, "Axis %1 minimum cam width cam %3 undershot at curr. velocity %2 "

16: 0x10000 17212 "Channel %1 Tool management: Load manual tool %3, Duplo no. %2 to spindle/toolholder"

17214 "Channel %1 Tool management: Unload manual tool %3 from spindle/toolholder %2"

17215 "Channel %1 Tool management: Unload manual tool %3 from buffer location %2"

17216 "Channel %1 Unload manual tool from toolholder %4 and load manual tool %3 %2"

17: 0x20000 16771 "Channel %1 Block %3 Following axis %2 Overlaid movement not enabled"

18: 0x40000 4039 "Channel %1 Axis container %2 Advance not allowed: Channel has no container axes"

19: 0x80000 7204 "The compile cycle %1 is a preliminary version"

20: 0x100000 This bit is effective at RESET. This means that the SHOWALARM and SETVDI responses of the following alarms can be suppressed:

10700 "Channel %1 block %2 NCK protection area %3 in automatic or MDI violated"

10701 "Channel %1 block %2 channel-specific protection area %3 in automatic or MDI violated"

21: 0x200000 26295 "Protection area %1 was only roughly approximated."

22: 0x400000 6030 "Information alarm: Channel/axis activation or storage option (MD19240, 19250) requires more memory than is available"

23: 0x800000 6035 "Information alarm: Less free memory detected during cold start than is defined in MD18050, 18060"

24: 0x1000000 380040 "PROFIBUS/PROFINET: Bus %3, configuration error %1, parameter %2"

PROFINET-device-specific consistency checks for Ti/To are disabled.

The setup engineer or user is thus responsible for ensuring that axes and distributed I/Os work synchronously with one another on the PROFINET, e.g. they can interpolate with one another.

2.3 NC machine data

11416	LINK_DYNMSG_ALARM_MASK			EXP, N06	-	
-	Mask for activating special alarm outputs with NCU-Link			UDWORD	Immediately	
-						
-	-	0x000001	0	0x1FF	7/2	M

Description: This mask is used by developers for diagnostics.

Mask for activating special alarm outputs with NCU-Link if non-cyclic messages cannot be transferred immediately.

Alarm 14764 (NCU-Link cannot immediately transfer all non-cyclic link messages of the stated type) is issued if, for the set type (corresponds to the bits of this MD), the affected message type could not be transferred immediately).

11420	LEN_PROTOCOL_FILE			N01	PGA	
-	Size of protocol files (kB)			DWORD	PowerOn	
-						
-	-	1	1	1000000	7/2	M

Description: Blocks from the part program can be stored in a file in the passive file system with the WRITE command. The length of the log file is limited. If this maximum length is exceeded, the WRITE command returns an error (error code 10).

11422	PROTOCOL_FILE_MODE			EXP, N01	PGA	
-	Setting the behavior of the WRITE command			UDWORD	PowerOn	
-						
-	-	0	0	0x3	7/2	M

Description: Setting the behavior of the WRITE command for writing to the passive file system

Bit 0 = 0:

The file created with WRITE is stored persistently in the USR area (see \$MM_U_FILE_MEM_SIZE).

The block written with WRITE becomes persistent immediately, i.e. it is stored power failsafe.

WRITE is slowed down by the backup with this setting.

Bit 0 = 1:

The file created with WRITE is stored persistently in the USR area (see \$MM_U_FILE_MEM_SIZE).

The block written with WRITE becomes persistent after a time delay.

WRITES less than one second old may be lost in the event of a power failure.

WRITE runs faster with this setting.

Bit 1: Reserved

11450	SEARCH_RUN_MODE			EXP, N01	K1, TE3, N4, H2, Z1	
-	Parameterization for search run			UDWORD	PowerOn	
-						
-	-	0x40	0	0xFF	7/2	M

Description: The behavior during the action blocks after block search can be affected by the following bits:

Bit 0 = 0:

Machining is stopped after loading of the last action block after block search, the NC/PLC interface signal DB21-30 DBX32.6 (last action block active) is set and alarm 10208 is output.

Bit 0 = 1:

Machining is stopped with the loading of the last action block after block search, and the NC/PLC interface signal DB21-30 DBX32.6 (last action block active) is set. Alarm 10208 is not output until the PLC requests it by setting the NC/PLC interface signal DB21-30 DBX1.6 (PLC action finished).

Application:

Starting an ASUB from the PLC after block search.

The message to the operator that another NC start is required in order to continue with the program is not to be displayed until after the end of the ASUB.

Bit 1 = 1

Automatic ASUB start after output of the action blocks. Alarm 10208 is not output until the ASUB has finished.

See also MD11620 \$MN_PROG_EVENT_NAME.

Bit 2 = 0:

Spindle: auxiliary functions are output in the action blocks.

Bit 2 = 1:

The output of the auxiliary functions in the action blocks is suppressed. The spindle programming collected by block search can be output at a later point in time (e.g. in an ASUB).

The program data for this are stored in the following system variables:

- \$P_SEARCH_S,
- \$P_SEARCH_SDIR,
- \$P_SEARCH_SGEAR,
- \$P_SEARCH_SPOS,
- \$P_SEARCH_SPOSMODE

Bit 3 = 1:

The cascaded search run is disabled (default setting: release).

Cascaded search run means that the search run is restarted immediately after finding a search target.

Bit 4: Reserved

Bit 5 = 0:

During block search to a nibbling block, the 1st nibbling stroke is not executed.

Bit 5 = 1:

During block search to a nibbling block, a punching stroke is triggered at block start (1st nibbling stroke).

Bit 6 = 0:

With block search, complex path calculations are made.

Bit 6 = 1:

With block search, calculation is made with simple, computing-time-optimized algorithms.

Bit 7 = 0:

Any adjustment movements that may be necessary on activation of a tangential axis coupling, during or after an SSL, are performed with the feed conditions active in the activation block (G0 or G1 with feedrate). In the case of G1, the feedrate can additionally be set in SD 42121: \$SC_AX_ADJUST_FEED.

Bit 7 = 1:

The adjustment movements necessary on activation of a tangential axis coupling, during or after an SSL, are always performed with rapid traverse feedrate (G0). In this case, the feedrate value in SD 42121: \$SC_AX_ADJUST_FEED is ignored.

2.3 NC machine data

11460	OSCILL_MODE_MASK			N09	P5	
-	Mode mask for asynchronous oscillation			UDWORD	PowerOn	
-						
-	-	0x0	0	0xFFFF	7/2	M

Description: Bit 0
Value 1
In the case of block search, the oscillation movement is started immediately after NC start, i.e. during approach to approach position, provided it has been activated in the program section being processed.
Value 0
(default value)
The oscillation movement is not started until the approach position is reached.

11470	REPOS_MODE_MASK			EXP, N01	K1	
-	Repositioning properties			UDWORD	PowerOn	
-						
-	-	0x8	0	0xFFFF	7/2	M

Description: This bit mask can be used to set the behavior of the control during repositioning.
Bit no. Meaning when bit set

0 (LSB)
The dwell time is continued in the residual block of the repositioning from where it was interrupted. (If the bit is not set, the dwell time is repeated completely).
1 Reserved
2 When the bit is set, the repositioning of individual axes can be prevented or delayed via the VDI interface.
3 When the bit is set, positioning axes are repositioned in the approach block during search run via program test.
4 As 3, but after every Repos, not only during search run.
5 When the bit is set, changed feeds and spindle speeds already become valid in the residual block, otherwise not until the following block.
6 When the bit is set, neutral axes and positioning spindles are repositioned after SERUPRO as command axes in the approach block.
7 The bit changes the behavior of the VDI-AXIN interface signal "Repos Delay". The level of "Repos Delay" is read if REPOSA is interpreted. Axes that are neither geo nor orientation axes are then excluded from the REPOS, that is REPOS does NOT move these axes.

11480	PLC_OB1_TRACE_DEPTH			EXP, N03, N09	-	
-	Buffer depth of PLC trace data at OB1			DWORD	PowerOn	
-						
-	-	2	2	8	2/2	M

Description: Buffer depth of PLC trace data at OB1.
Multiple values of PLC data are buffered, between the time of collection in the PLC and the time of inspection in NCK. Variables traced at "OB1" are collected once per complete PLC scan, but can only be inspected once per IPO cycle.
The buffer size must accommodate at least one more value than the total number of buffered values to be inspected. This is to prevent NCK from inspecting a value that the PLC is in the process of collecting.
A good value to start with is one more than MD10074 \$MN_PLC_IPO_TIME_RATIO.

The larger the buffer depth, the fewer PLC variables that can be traced, because there is a single, small, fixed pool of data slots for sending data samples from the PLC to NCK (64 data slots). Every PLC variable being traced is allocated as many data slots from the pool as the value of the buffer depth.

This single pool of data slots is shared by data collected at OB1, OB35, and OB40 (even though the buffer depths of OB1, OB35, and OB40 can be configured to be different from one another). It is also shared by all concurrent users of trace, even though the users might have no knowledge of one another.

11481	PLC_OB35_TRACE_DEPTH			EXP, N03, N09	-	
-	Buffer depth of PLC trace data at OB35			DWORD	PowerOn	
-						
-	-	2	2	8	2/2	M

Description:

Buffer depth of PLC trace data at OB35.

Multiple values of PLC data are buffered, between the time of collection in the PLC and the time of inspection in NCK. Variables traced at "OB35" are collected every time the PLC timer interrupts, but can only be inspected once per IPO cycle.

The buffer size must accommodate at least one more value than the number of buffered values to be inspected. This is to prevent NCK from inspecting a value that the PLC is in the process of collecting.

A good value to start with is one more than the number of PLC timer interrupts expected to occur every IPO cycle.

The larger the buffer depth, the fewer PLC variables that can be traced, because there is a single, small, fixed pool of data slots for sending data samples from the PLC to NCK (64 data slots). Every PLC variable being traced is allocated as many data slots from the pool as the value of the buffer depth.

The single pool of data slots is shared by data collected at OB1, OB35, and OB40 (even though the buffer depths of OB1, OB35, and OB40 can be configured to be different from each other). It is also shared by all concurrent users of trace, even though the users might have no knowledge of one another.

11482	PLC_OB40_TRACE_DEPTH			EXP, N03, N09	-	
-	Buffer depth of PLC trace data at OB40			DWORD	PowerOn	
-						
-	-	2	2	8	2/2	M

Description:

Buffer depth of PLC trace data at OB40.

Multiple values of PLC data are buffered, between the time of collection in the PLC and the time of inspection in NCK. Variables traced at "OB40" are collected just when the PLC receives the special, programmably initiated OB40 interrupt from NCK, but can only be inspected once per IPO cycle.

The buffer size must accommodate at least one more value than the number of buffered values to be inspected. This is to prevent NCK from inspecting a value that the PLC is in the process of collecting.

If the OB40 interrupt is issued less frequently than once per IPO cycle, then the OB40 buffer depth should be 2. Otherwise it should be one more than the largest number of interrupts expected during any one IPO cycle.

The larger the buffer depth, the fewer PLC variables that can be traced, because there is a single, small, fixed pool of data slots for sending data samples from the PLC to NCK (64 data slots). Every PLC variable being traced is allocated as many data slots from the pool as the value of the buffer depth.

The single pool of data slots is shared by data collected at OB1, OB35, and OB40 (even though the buffer depths of OB1, OB35, and OB40 can be configured to be different from each other). It is also shared by all concurrent users of trace, even though the users might have no knowledge of one another.

2.3 NC machine data

11500	PREVENT_SYNACT_LOCK			N01, N09	S5, FBSY	
-	Protected synchronized actions			DWORD	PowerOn	
-						
-	2	0, 0	0	1399	7/2	M

Description:

First and last IDs of a protected synchronized action area.

Synchronized actions with ID numbers in the protected area can no longer be

- overwritten
- disabled (CANCEL)
- locked (LOCK)

once they have been defined. Furthermore, protected synchronized actions cannot be locked by the PLC (LOCK). They are shown at the interface to the PLC as non-lockable.

Note:

The protection should be suspended while creating the synchronized actions to be protected, as otherwise a Power On will be necessary after every change in order to be able to redefine the logic. There is no area of protected synchronized actions with 0.0. The function is disabled. The values are read as absolute values, and over and under values can be given in any order.

11510	IPO_MAX_LOAD			N01, N05	-	
%	Max. permitted IPO load			DOUBLE	PowerOn	
-						
-	-	0.00	0.0	100.0	7/2	M

Description:

Enable utilization analysis via synchronized actions.

This MD11510 \$MN_IPO_MAX_LOAD sets the IPO computing time (in % of the IPO cycle) after which the variable \$AN_IPO_LOAD_LIMIT is to be set to TRUE. The variable is reset to FALSE if the value falls below this after having once exceeded it.

This diagnostics function is disabled if the machine data is 0.

11550	STOP_MODE_MASK			N01	V1	
-	Defines the stop behavior.			UDWORD	PowerOn	
-						
-	-	0	0	0x1	7/2	M

Description:

This MD describes the stop behavior of the NCK under certain conditions:

Bit no. Meaning

Bit 0 == 0 :=

No stop if G codes G331/G332 are active and a path motion or G4 has also been programmed.

Bit 0 == 1 :=

A stop is possible during G331/G332 with interruption of the continuous-path mode (G60 or G4 between G331/G332 blocks interrupt the continuous-path mode).

Bits 1.....15

Not assigned

11600	BAG_MASK			N01	K1, Z1	
-	Defines the mode group behavior			UDWORD	PowerOn	
-						
-	-	0	0	3	7/2	M

Description:

The MD describes the effect of the VDI signals on all channels of a mode group (BAG) and the behavior of the internal mode changeover in relation to ASUBs and interrupt routines.

Value = 0: When an interrupt is started in a channel of the mode group, all channels of the mode group respond normally to mode group VDI signals (such as BAG-RESET und BAG-STOP). If the interrupt is started from JOG, all channels of the mode group change internally into AUTO mode. Similarly, the mode group automatically switches back to JOG when the interrupt ends.

Value = 1: If an interrupt is started in a channel of the mode group, this channel no longer responds to mode group VDI signals (such as BAG-RESET and BAG-STOP). If, for example, BAG-STOP is triggered, all channels of the mode group are stopped, but the interrupt continues to run. A channel STOP remains active as before. Furthermore, if an interrupt is started from JOG in a channel of the mode group, only this channel automatically changes the mode to AUTO internally, all other channels of the mode group remain in JOG mode. The automatic switch back of the mode at the end of the interrupt only relates correspondingly to the channel in which the interrupt ran.

Value = 2: If an interrupt is started in a channel of the mode group, all channels of the mode group respond normally to mode group VDI signals (such as BAG-RESET and BAG-STOP). If an interrupt is started from JOG in a channel of the mode group, only this channel automatically changes the mode to AUTO internally. All other channels of the mode group remain in JOG mode. The automatic switch back of the mode at the end of the interrupt naturally only relates to the channel in which the interrupt ran. This behavior is not supported until V4.7 SP4 HF1. This setting was not defined in earlier versions. Furthermore, the functionality "JOG in ASUB" is permitted with this setting (see MD11602 \$MN_ASUP_START_MASK, bit3).

Value = 3: As value = 1. But the functionality "JOG in ASUB" is also permitted (see MD11602 \$MN_ASUP_START_MASK, bit3).

11602	ASUP_START_MASK			N01	K1, M3, TE3, TE7	
-	Ignore stop conditions for ASUB			UDWORD	PowerOn	
-						
-	-	0	0	0xf	7/2	M

Description:

This machine data defines which stop reasons are to be ignored on an ASUB start. The ASUB is started or the following stop reasons are ignored:

Bit 0:

STOP reason: STOP key, M0 or M01

An ASUB is started immediately if NCK is in RESET status (or JOG mode) (no ASUB can be started in RESET/JOG without this bit).

Bit 1:

Reserved! This bit was replaced by MD20105 \$MC_PROG_EVENT_IGN_REFP_LOCK and MD20115 \$MC_IGNORE_REFP_LOCK_ASUP.

Bit 2:

Start allowed even if a read-in disable is active; in other words, the blocks of the ASUB program are loaded and executed immediately. This therefore disables machine data MD20107 \$MC_PROG_EVENT_IGN_INHIBIT and MD20116 \$MC_IGNORE_INHIBIT_ASUP. The NCK behavior corresponds to the machine data assignment \$MC_PROG_EVENT_IGN_INHIBIT=H3F \$MC_IGNORE_INHIBIT_ASUP=FFFFFFFF.

If the bit is not set:

The assignment of machine data MD20107 \$MC_PROG_EVENT_IGN_INHIBIT and MD20116 \$MC_IGNORE_INHIBIT_ASUP are evaluated.

If the particular bit in \$MC_PROG_EVENT_IGN_INHIBIT or \$MC_IGNORE_INHIBIT_ASUP is 0, then although an ASUB or prog event are immediately internally initiated, the blocks of the ASUB program are only loaded when the read-in inhibit is withdrawn.

The path is decelerated immediately when the ASUB is triggered (except with option BLSYNC).

The read-in disable is set once more in the ASUB program.

Bit 3:

Notice:

2.3 NC machine data

The following function can always be activated in single-channel systems. Multi-channel systems require bit1 in MD11600 \$MN_BAG_MASK in addition. The function is active o_n_l_y for those ASUBs that were activated from the cancelation program status (Reset channel status). The function is not active in multi-channel systems without MD11600 \$MN_BAG_MASK bit1.

If an ASUB is started automatically from JOG, the user may stop in the middle of the ASUB program. JOG mode is displayed continuously for the user. With bit 3 set, the user may jog in this situation. This is not possible without bit 3. In this case, mode change is locked with alarm 16927. By pressing the Start key, the user can continue the ASUB program. As long as the ASUB program is running, the user is naturally not able to jog. At the end of the ASUB program, the user may jog again.

Bit 4...15: Reserved

Corresponds with:

MD11604 \$MN_ASUP_START_PRIO_LEVEL
MD20105 \$MC_PROG_EVENT_IGN_REFP_LOCK
MD20107 \$MC_PROG_EVENT_IGN_INHIBIT
MD20115 \$MC_IGNORE_REFP_LOCK_ASUP
MD20116 \$MC_IGNORE_INHIBIT_ASUP

11604	ASUP_START_PRIO_LEVEL			N01	K1, TE3, TE7	
-	Priorities from which 'ASUP_START_MASK' is effective			DWORD	PowerOn	
-						
-	-	0	0	128	7/2	M

Description: This machine data defines the ASUB priority from which MD11602 \$MN_ASUP_START_MASK is to be applied. MD11602 \$MN_ASUP_START_MASK is applied from the level specified here up to the highest ASUB priority level 1.

Related to:

MD11602 \$MN_ASUP_START_MASK

11610	ASUP_EDITABLE			N01	K1	
-	Activation of a user-specific ASUB program			UDWORD	PowerOn	
-						
-	-	0	0	0x7	7/2	M

Description: This MD determines whether user-specific routine: _N_ASUP_SPF stored in directory _N_CUS_DIR/_N_CMA_DIR is to be used to process RET and REPOS. The user ASUB is searched for first in _N_CUS_DIR.

Value: Meaning:

0 Routine _N_ASUP_SPF is not activated for either RET or REPOS.

Bit0 = 1 User-specific routine _N_ASUP_SPF is executed for RET, the routine supplied by the system is executed for REPOS.

Bit1 = 1 User-specific routine _N_ASUP_SPF is executed for REPOS, the routine supplied by the system is executed for RET

Bit0 = + bit1 = 3 User-specific routine _N_ASUP_SPF is executed for both RET and REPOS

Bit2 = 1 User ASUB _N_ASUP_SPF is searched for first in _N_CMA_DIR

Related to:

MD11612 \$MN_ASUP_EDIT_PROTECTION_LEVEL

11612	ASUP_EDIT_PROTECTION_LEVEL			N01	K1	
-	Protection level of the user-specific ASUB program			DWORD	PowerOn	
-						
-	-	2	0	7	7/2	M

Description: Protection level of the user-specific ASUB program for RET and/or REPOS

The data is active only if MD11610 \$MN_ASUP_EDITABLE is set to a value other than 0.
This machine data defines the protection level of the program _N_ASU_CUS.

MD irrelevant for:

MD11610 \$MN_ASUP_EDITABLE set to 0

Related to:

MD11610 \$MN_ASUP_EDITABLE

11620	PROG_EVENT_NAME				EXP, N12	K1	
-	Program name for PROG_EVENT				STRING	PowerOn	
-							
-	-	-	-	-	7/2	M	

Description: Name of the user program called by the "event-driven program calls" and "automatic ASUB start after block search" functions (MD11450 \$MN_SEARCH_RUN_MODE, bit 1).
_N_PROG_EVENT_SPF is the default setting.
The default setting is activated if MD11620 \$MN_PROG_EVENT_NAME includes a blank string.
If the machine data does not contain a blank string, then the syntax of the string is checked as in the case of a subprogram identifier. This means that the first two characters must be letters (not numbers) or underscores. If this is not the case, alarm 4010 is output during ramp-up.
The program must be located in a cycle directory. When it is called, the search runs through the cycle directories in accordance with the setting of MD11622 \$MN_PROG_EVENT_PATH.
The prefix (_N_) and the suffix (_SPF) of the program name are added automatically if they have not been specified.

11622	PROG_EVENT_PATH			N01	-	
-	Call path for PROG_EVENT			BYTE	PowerOn	
-						
-	-	3	0	3	7/2	M

Description: Path on which the user program set with MD11620 \$MN_PROG_EVENT_NAME is called in response to an event-driven program call configured with MD20108 \$MC_PROG_EVENT_MASK:
0: /_N_CMA_DIR
1: /_N_CUS_DIR
2: /_N_CST_DIR
3: Search path in the sequence /_N_CUS_DIR, /_N_CMA_DIR, and /_N_CST_DIR

11625	FILE_ONLY_WITH_EXTENSION			N01	-	
-	On program call, only search for files with an extension			BYTE	Reset	
-						
-	-	0	0	1	7/3	U

Description: This machine data can be used to set whether the file system is to be searched for files without an extension on a subprogram call. The search for files without an extension can be disabled to speed up the search for a program in the various paths in the file system, e.g. when using EES.
0: On subprogram calls, the search also includes files without an extension
1: On subprogram calls, the search is restricted to files with an extension (e.g. SPF, MPF etc.)

2.3 NC machine data

11626	CYCLES_ONLY_IN_CYCDIR				N01	-	
-	Search for subprograms with PROC instruction in the cycle directories only				BYTE	Reset	
-							
-	-	0	0	2	7/3	U	

Description:

This machine data can be set to limit the search for subprograms that have a PROC instruction and have been stored in the cycle directories (CUS, CMA, CST), to just these directories. The PROC instructions are read in during a warm restart. The function therefore only applies to subprograms that were in the cycle directories at the time of the warm restart.

Use: this setting prevents unnecessary accesses to the external storage during program execution by the function "Execution from External Storage EES" and therefore speeds up calling SIEMENS cycles, for example.

0: On subprogram calls, the NC program is searched for in all program directories in the search path

1: On subprogram calls, the NC program is searched for only in the cycle directories CUS, CMA, and CST

2: On subprogram calls, the NC program is searched for in the directory defined by the CALLPATH instruction, and then in the cycle directories CUS, CMA and CST

11640	ENABLE_CHAN_AX_GAP			N01, N11	K2	
-	Allow channel axis gaps in AXCONF_MACHAX_USED			UDWORD	PowerOn	
-						
-	-	0x0	0	0x1	2/2	M

Description:

Bit0 = 1

Machine data allows configuration of channel axis gaps in the MD20070

\$MC_AXCONF_MACHAX_USED.

Permits following MD assignment:

\$AXCONF_MACHAX_USED[0] = 1 ; 1st MA is 1st axis in channel

\$AXCONF_MACHAX_USED[1] = 2 ; 2nd MA is 2nd axis in channel

\$AXCONF_MACHAX_USED[2] = 0 ; Channel axis gap

\$AXCONF_MACHAX_USED[3] = 3 ; 3rd MA is 3rd axis in channel

\$AXCONF_MACHAX_USED[4] = 0

C A U T I O N:

(BIT0 set with MD20070 \$MC_AXCONF_MACHAX_USED):

If a geo axis is placed in a channel axis gap with MD20050

\$MC_AXCONF_GEOAX_ASSIGN_TAB[1]= 3, the control responds as with MD20050

\$MC_AXCONF_GEOAX_ASSIGN_TAB[1]= 0. This eliminates the geo axis!

Transformation machine data must not be assigned a channel axis number specified as a gap.

BIT1 - BIT31: not used.

Related to:

MD20080 \$MC_AXCONF_CHANAX_NAME_TAB,

MD20050 \$MC_AXCONF_GEOAX_ASSIGN_TAB,

MD20060 \$MC_AXCONF_GEOAX_NAME_TAB

MD20070 \$MC_AXCONF_MACHAX_USED

MD24... \$MC_TRAFO_AXES_IN...

MD24... \$MC_TRAFO_GEOAX_ASSIGN_TAB...

11717	D_NO_FCT_CYCLE_NAME			EXP, N12, N07	K1	
-	Subroutine name for D function replacement			STRING	PowerOn	
-						
-	-	-	-	-	7/2	M

Description:

Cycle name for replacement routine of the D function.

If a D function is programmed in a part program block, then, depending on machine data MD10717 \$MN_T_NO_FCT_CYCLE_NAME, MD10719 \$MN_T_NO_FCT_CYCLE_MODE and MD10718 \$MN_M_NO_FCT_CYCLE_PAR, the MD subprogram defined in MD11717 \$MN_D_NO_FCT_CYCLE_NAME is called.

The programmed D number can be polled in the cycle via system variable \$C_D / \$C_D_PROG.

MD11717 \$MN_D_NO_FCT_CYCLE_NAME is only active in Siemens mode (G290).

No more than one M/T/D function replacement can be active per part program line.

A modal subprogram call must not be programmed in the block with the D function replacement. Furthermore, neither subprogram return nor part program end are allowed.

In the event of a conflict alarm 14016 is output.

11750	NCK_LEAD_FUNCTION_MASK			N09	-	
-	Functions for master value coupling			UDWORD	NEW CONF	
-						
-	-	0x00	0	0x10	1/1	M

Description:

Special functions of the master value coupling are set with this MD.

The MD is bit-coded, the following bits are assigned:

Bits 0-3:

reserved

Bit 4 == 0:

the following axis of a master value coupling decelerates independently on NC or mode group stop or channel-specific feed disable

Bit 4 == 1:

the following axis of a master value coupling does not decelerate independently on NC or mode group stop or channel-specific feed disable

Bits 5-31:

reserved

11752	NCK_TRAIL_FUNCTION_MASK			N09	-	
-	Functions for coupled motion			UDWORD	NEW CONF	
-						
-	-	0x0	0	0x10	1/1	M

Description:

Special functions for coupled motions are set with this MD.

The MD is bit-coded; the following bits are assigned:

Bits 0-3:

reserved

Bit 4 = 0:

the following axis of a coupled axis grouping activated by a synchronized action decelerates independently on NC or mode group stop or channel-specific feed disable

Bit 4 = 1:

the following axis of a coupled axis grouping activated by a synchronized action does not decelerate independently on NC or mode group stop or channel-specific feed disable

Bit 5-31:

reserved

2.3 NC machine data

11756	NCK_EG_FUNCTION_MASK			N09	-	
-	Functions for Electronic Gear			UDWORD	NEW CONF	
-						
-	-	0x0	0	0x2F	1/1	M

Description: This MD is used to set special functions of Electronic Gear (EG).

The MD is bit-coded, the following bits are occupied:

Bit 0 - 4:
reserved

Bit 5 = 0:
Positions indicated in EGONSYN and EGONSYNE are evaluated according to setting G700 or G710 inch or metric that is valid in the currently machined part program block.

Bit 5 = 1
Positions indicated in EGONSYN and EGONSYNE are evaluated in the basic system involved.

Bit 6 - 31:
reserved

12000	OVR_AX_IS_GRAY_CODE			EXP, N10	V1, Z1	
-	Axis feedrate override switch Gray-coded			BOOLEAN	PowerOn	
-						
-	-	TRUE	0	-	7/2	M

Description: This machine data is used to adapt the axis feed override switch to the interface coding of the PLC interface.

1: The 5 low-order bits of the PLC interface signal DB31, ... DBB0 (Feed override A-H) are interpreted as a Gray code. The value which is read corresponds to a switch setting. It is used as an index for selecting the correct override factor from the table of MD12010 \$MN_OVR_FACTOR_AX_SPEED [n].

0: The feed override byte of the PLC interface is interpreted as a binary representation of the override value in percent (limit 200 percent).

Related to:
NC/PLC interface signal DB31, ... DBB0 (Feed override A-H), (axis-specific)
MD12010 \$MN_OVR_FACTOR_AX_SPEED [n]
(Evaluation of the axis feed override switch)

12010	OVR_FACTOR_AX_SPEED			EXP, N10	V1, Z1	
-	Evaluation of axis feedrate override switch			DOUBLE	PowerOn	
-						
-	31	0.00, 0.01, 0.02, 0.04, 0.06, 0.08, 0.10, 0.20...	0.00	2.00	7/2	M

Description: Evaluation of the axis velocity override switch with gray-coded interface.

Not relevant with:
MD12000 \$MN_OVR_AX_IS_GRAY_CODE = 0

Related to:
NC/PLC interface signal DB31, ... DBB0 (Feed override A-H), (axis-specific)

12020	OVR_FEED_IS_GRAY_CODE			EXP, N10	V1, Z1	
-	Path feedrate override switch Gray-coded			BOOLEAN	PowerOn	
-						
-	-	TRUE	0	-	7/2	M

Description: This machine data is used to adapt the path feed override switch to the interface coding of the PLC interface.

1: The 5 low-order bits of the NC/PLC interface signal DB31, ... DBB0 (Feed override A-H) are interpreted as a Gray code. The value which is read corresponds to a switch setting. It is used as an index for selecting the correct override factor from the table of MD12030 \$MN_OVR_FACTOR_FEEDRATE [n].

0: The feed override byte of the PLC interface is interpreted as a binary representation of the override value in percent (limit 200 percent).

Related to:

NC/PLC interface signal DB31, ... DBB0 (Feed override A-H)

MD12030 \$MN_OVR_FACTOR_FEEDRATE [n]

(Evaluation of the path feed override switch)

12030	OVR_FACTOR_FEEDRATE			EXP, N10	V1, B1, Z1	
-	Evaluation of path feedrate override switch			DOUBLE	PowerOn	
-						
-	31	0.00, 0.01, 0.02, 0.04, 0.06, 0.08, 0.10, 0.20...	0.00	2.00	7/2	M

Description: Evaluation of the feedrate override switch with gray-coded interface.

Special function of the 31st value for the velocity control:

The setting of the 31st override value defines the dynamic reserves which take the velocity control to be an excessive increase in the path feed. The setting should correspond to the highest override factor actually used.

The function of the 31st value is thus identical to the effect of MD12100 \$MN_OVR_FACTOR_LIMIT_BIN when using the binary-coded interface.

Not relevant with:

MD12020 \$MN_OVR_FEED_IS_GRAY_CODE = 0

Related to:

NC/PLC interface signal DB31, ... DBB0 (Feed override A-H)

12040	OVR_RAPID_IS_GRAY_CODE			EXP, N10	V1, Z1	
-	Rapid traverse override switch Gray-coded			BOOLEAN	PowerOn	
-						
-	-	TRUE	0	-	7/2	M

Description: This machine data is used to adapt the rapid traverse override switch to the interface coding of the PLC interface.

1: The 5 low-order bits of the PLC interface signal DB21-30 DBB5 (Rapid traverse override A-H) are interpreted as a Gray code. The value which is read corresponds to a switch setting.

It is used as an index for selecting the correct override factor from the table of MD12050 \$MN_OVR_FACTOR_RAPID_TRA[n].

0: The rapid traverse override byte of the PLC interface is interpreted as a binary representation of the override value in percent (limit 200 percent).

Related to:

NC/PLC interface signal DB21-30 DBB5 (Rapid traverse override A-H)

MD12050 \$MN_OVR_FACTOR_RAPID_TRA[n]

(Evaluation of the rapid traverse override switch)

12050	OVR_FACTOR_RAPID_TRA			EXP, N10	V1, Z1	
-	Evaluation of rapid traverse override switch			DOUBLE	PowerOn	
-						
-	31	0.00, 0.01, 0.02, 0.04, 0.06, 0.08, 0.10, 0.20...	0.00	1.00	7/2	M

Description: Evaluation of the rapid traverse override switch with gray-coded interface.

2.3 NC machine data

Not relevant with:

MD12040 \$MN_OVR_RAPID_IS_GRAY_CODE = 0

Related to:

NC/PLC interface signal DB21-30 DBB5 (Rapid traverse override A-H)

12060	OVR_SPIND_IS_GRAY_CODE			EXP, N10	V1, Z1	
-	Spindle override switch Gray-coded			BOOLEAN	PowerOn	
-						
-	-	TRUE	0	-	7/2	M

Description:

This machine data is used to adapt the spindle speed override switch to the interface coding of the PLC interface.

1: The 5 low-order bits of the "spindle speed override" PLC interface signal are interpreted as a Gray code. The value which is read corresponds to a switch setting. It is used as an index for selecting the correct override factor from the table of MD12070 \$MN_OVR_FACTOR_SPIND_SPEED [n].

0: The spindle speed override byte of the PLC interface is interpreted as a binary representation of the override value in percent (limit 200 percent).

Related to:

NC/PLC interface signal DB31, ... DBB19 (Spindle speed override)

MD12070 \$MN_OVR_FACTOR_SPIND_SPEED[n]

(Evaluation of the spindle speed override switch)

12070	OVR_FACTOR_SPIND_SPEED			EXP, N10	V1, Z1	
-	Evaluation of spindle override switch			DOUBLE	PowerOn	
-						
-	31	0.5, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85...	0.00	2.00	7/2	M

Description:

Evaluation of the spindle-specific override switch with Gray-coded interface.

Special function of the 31st value for the velocity control:

The setting of the 31st override value defines the dynamic reserves which take the velocity control to be an excessive increase in the spindle feed. The setting should correspond to the highest override factor actually used.

The function of the 31st value is thus identical to the effect of MD12100 \$MN_OVR_FACTOR_LIMIT_BIN when using the binary-coded interface.

Not relevant for:

MD12060 \$MN_OVR_SPIND_IS_GRAY_CODE = 0

Related to:

NC/PLC interface signal DB31, ... DBB19 (Spindle speed override)

12080	OVR_REFERENCE_IS_PROG_FEED			N10, N09	V1	
-	Override reference speed			BOOLEAN	PowerOn	
-						
-	-	TRUE	0	-	7/2	M

Description:

The entry in this MD specifies whether the spindle override given by the IS refers to the speed limited by MD/SD or to the programmed speed.

1: Spindle override acts with reference to the programmed speed
(programmed speed _ spindle override 100%)

0: Spindle override acts on the speed limited by MD or SD
(speed limited by MD/SD _ spindle override 100%)

Related machine data:

A speed limitation is effected by the following MDs or SDs:

MD35100	\$MA_SPIND_VELO_LIMIT	Maximum spindle speed
MD35130	\$MA_GEAR_STEP_MAX_VELO_LIMIT	Maximum speed of gear stage
MD35160	\$MA_SPIND_EXTERN_VELO_LIMIT	Spindle speed limitation by PLC
SD43220	\$SA_SPIND_MAX_VELO_G26	Maximum spindle speed
SD43230	\$SA_SPIND_MAX_VELO_LIMS	Spindle speed limitation with G96

12082	OVR_REFERENCE_IS_MIN_FEED			N10, N09	V1	
-	Specification of the reference of the path override			BOOLEAN	PowerOn	
-						
-	-	FALSE	0	-	7/2	M

Description: The reference speed for the path feed override specified via the machine control panel can be set differently from the standard.

0: Standard:

The override is relative to the programmed feed.

1: Special case:

The override is relative to the programmed feed or to the path feed limit, depending on which resulting value is lower. In this way, even for a great feed reduction (due to the permissible axis dynamics), the effect of the override value (in the range 0 to 100%) is always visible.

12090	OVR_FUNCTION_MASK			N01, N10, N09	-	
-	Selection of override specifications			UDWORD	Reset	
-						
-	-	0	0	0x01	7/2	M

Description: The functionality of the override switches can be affected by the bits.

Bit 0: = 0,

Standard: Spindle override active with G331/G332

= 1,

Path override is active instead of spindle override with G331/G332

(Tapping without compensating chuck)

12100	OVR_FACTOR_LIMIT_BIN			EXP, N10	V1, B1, Z1	
-	Limitation for binary-coded override switch			DOUBLE	PowerOn	
-						
-	-	1.2	0.0	2.0	7/2	M

Description: This machine data can be used as an additional limit for the override factor when using the binary-coded interface for path, axis and spindle feeds.

In this case, the maximum values

- 200% for channel-specific feed override
- 100% for channel-specific rapid traverse override
- 200% for axis-specific feed override
- 200% for spindle override

are replaced with the limit value entered in MD: OVR_FACTOR_LIMIT_BIN when this value is lower.

Example: OVR_FACTOR_LIMIT_BIN = 1.20

--> maximum override factor for

- channel-specific feed override =120%
- channel-specific rapid traverse override =100%
- axis-specific feed override =120%
- spindle override =120%

2.3 NC machine data

This value also defines the dynamic reserves maintained by the speed control for increasing the path and spindle feedrates.

References:

/FB/, B1, "Continuous Path Mode, Exact Stop and Look Ahead"

12200	RUN_OVERRIDE_0			N01, N09	FBMA, V1, Z1	
-	Traversing response with override 0			BOOLEAN	PowerOn	
-						
-	-	FALSE	0	-	7/2	M

Description:

= 0

Override 0 is active and means deceleration (JOG mode, safety function).

Bits 0 and 1 in MD32084 \$MA_HANDWH_STOP_COND for hand wheels and in MD20624 \$MC_HANDWH_CHAN_STOP_COND for machine axes define whether the pulses are collected for geometry axes and contour handwheel.

= 1

Traversing with handwheels and in JOG mode with fixed feedrates is also possible with a 0 % override.

Related to:

MD32084 \$MA_HANDWH_STOP_COND

MD20624 \$MC_HANDWH_CHAN_STOP_COND

12202	PERMANENT_FEED			N01, N09	Z1, V1	
mm/min	Fixed feedrates for linear axes			DOUBLE	Reset	
-						
-	4	0., 0., 0., 0.	0.0	-	7/2	M

Description:

In AUTOMATIC mode:

After activating a fixed feedrate via an interface signal, traversing is done with a fixed feedrate instead of the programmed feedrate.

Note:

The fixed feedrate is also evaluated in continuous-path mode in order to optimize the overhead for the Look Ahead calculation. Unnecessarily high values should therefore be avoided. Enter zero if a fixed feedrate is not wanted

In JOG mode:

After activating a fixed feedrate via an interface signal, and traversing the linear axis with a traversing key, traversing proceeds in the selected direction with the fixed feedrate.

n = 0, 1, 2, 3 mean fixed feedrates 1, 2, 3, 4. The values must be entered in ascending order.

Special cases, errors, ...

The maximum velocity defined by MD32000 \$MA_MAX_AX_VELO is active.

An override setting of 100 % is assumed. MD12200 \$MN_RUN_OVERRIDE_0 is active if the override is 0.

Related to:

MD12200 \$MN_RUN_OVERRIDE_0

12204	PERMANENT_ROT_AX_FEED			N01, N09	V1	
rev/min	Fixed feedrates for rotary axes			DOUBLE	Reset	
-						
-	4	0., 0., 0., 0.	0.0	-	7/2	M

Description:

Fixed feedrate values:

In AUTOMATIC mode:

After activating a fixed feedrate via an interface signal, traversing is done with a fixed feedrate instead of the programmed feedrate.

Note: PERMANENT_ROT_AX_FEED is used instead of PERMANENT_FEED for the path motion if all synchronously traversed axes in the current block are rotary axes. PERMANENT_FEED applies if linear and rotary axes are to be synchronously traversed together.

The fixed feedrate is also evaluated in continuous-path mode in order to optimize the overhead for the Look Ahead calculation. Unnecessarily high values should therefore be avoided. Enter zero if a fixed feedrate is not wanted

In JOG mode:

After activating a fixed feedrate via an interface signal, and traversing the rotary axis with a traversing key, traversing proceeds in the selected direction with the fixed feedrate.

n = 0, 1, 2, 3 mean fixed feedrates 1, 2, 3, 4.

Special cases, errors, ...

The maximum velocity defined by MD32000 \$MA_MAX_AX_VELO is active.

An override setting of 100 % is assumed. MD12200 \$MN_RUN_OVERRIDE_0 is active if the override is 0.

Related to:

MD12200 \$MN_RUN_OVERRIDE_0

12205	PERMANENT_SPINDLE_FEED			N01, N09	FBMA	
rev/min	Fixed feedrates for spindles			DOUBLE	Reset	
-						
-	4	0., 0., 0., 0.	0.0	-	7/2	M

Description:

Fixed feedrate values:

JOG: A spindle is traversed with a fixed feedrate by activating the traversing keys and activating the appropriate signals in the PLC interface.

The override is not active.

Depending upon MD12200 \$MN_RUN_OVERRIDE_0, traversing also takes place with override 0.

The value defined by MD32000 \$MA_MAX_AX_VELO is taken as the upper limit. If the fixed feedrate has a larger value, the aforementioned limiting value applies.

12300	CENTRAL_LUBRICATION			N01, N09	-	
-	Central lubrication active			BOOLEAN	PowerOn	
-						
-	-	FALSE	0	-	7/2	M

Description:

When a settable axial path has been exceeded, the axial VDI signals request a lubrication pulse from the PLC (compare MD33050 \$MA_LUBRICATION_DIST). These axial pulses act (by default) independently of each other.

If the machine construction requires a central lubrication, i.e. the lubrication pulse of any axis is acting on all axes, the corresponding path monitoring of all axes must be restarted after lubrication pulse output. This start synchronization of the monitoring is executed via MD12300 \$MN_CENTRAL_LUBRICATION=TRUE.

12510	NCU_LINKNO			N01	B3	
-	NCU number in an NCU cluster			DWORD	PowerOn	
-						
-	-	1	1	16	7/2	M

Description:

Number or name for identifying an NCU within an NCU grouping.

In an NCU grouping (NCU cluster), the NCUs are connected to one another by a link bus.

Related to:

2.3 NC machine data

MD18780 \$MN_MM_NCU_LINK_MASK

12520	LINK_TERMINATION			N01	B3	
-	NCU numbers for which bus termination resistances are activated			BYTE	PowerOn	
LINK, -						
-	2	0, 1	0	15	3/2	M

Description: LINK_TERMINATION defines with which NCUs the bus termination resistances for the timing circuit must be switched in through the link module.

Related to:

MD18780 \$MN_MM_NCU_LINK_MASK

12540	LINK_BAUDRATE_SWITCH			N01	B3	
-	Link bus baud rate			DWORD	PowerOn	
LINK, -						
-	-	9	0	9	3/2	M

Description: The assigned baud rate for the link communication is defined by the values entered:

Set value	Rate	
0	9,600	kBd
1	19,200	kBd
2	45,450	kBd
3	93,750	kBd
4	187,000	kBd
5	500,000	kBd
6	1,500	MBd
7	3,000	MBd
8	6,000	MBd
9	12,000	MBd

Not relevant for:

Systems without link modules

Related to:

MD18780 \$MN_MM_NCU_LINK_MASK

12550	LINK_RETRY_CTR			N01	B3	
-	Maximum number of message frame transmission retries			DWORD	PowerOn	
LINK, -						
-	-	4	1	15	3/2	M

Description: Maximum retry limit in cases of error.

Not relevant for:

Systems without link modules

Related to:

MD18780 \$MN_MM_NCU_LINK_MASK

12701	AXCT_AXCONF_ASSIGN_TAB1			N01	B3	
-	Assignment of an axis container location			STRING	PowerOn	
CTDE						
-	32	-	-	-	3/2	M

Description: Assignment of an axis container location (slot s) to a machine axis or link axis. A maximum of 32 locations can be assigned axes in an axis container.

Structure of entries:

NCm_AXn with NCU number m: 1..16
 and machine axis address n: 1... 31

Example:

```
NC2_AX1                      ; The axis is on the NCU2 and is the
                             ; 1st machine axis there.

AX5                           ; local axis 5 only with one NCU
                             ; the axis container mechanism is only used by
                             ; several channels of one NCU.
```

The reference to an axis container location of a channel is defined by the definitions in MD20070 \$MC_AXCONF_MACHAX_USED and MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB.

The actually assigned axis at a specific time is dependent upon the container rotation status. All channels that access an axis container use the same axis entries stored there. If channels of various NCUs access this container, then inter-NCU consistency must be ensured.

Example:

```
CHANDATA(1)
$MC_MACHAX_USED[4]=9 MD10002 $MN_AXCONF_LOGIC_MACHAX_TAB[8]=CL1_SL1
MD12701 $MN_AXCT_AXCONF_ASSIGN_TAB1[0]="NC1_AX1" MD12701
$MN_AXCT_AXCONF_ASSIGN_TAB1[1]="NC2_AX1"
```

This machine data is distributed via NCU-link.

Related to:

MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB

12702	AXCT_AXCONF_ASSIGN_TAB2			N01	B3	
-	Assignment of an axis container location			STRING	PowerOn	
CTDE						
-	32	-	-	-	3/2	M

Description: Assignment of an axis container location (slot s) to a machine axis or link axis. A maximum of 32 locations can be assigned axes in an axis container.

Structure of entries:

NCm_AXn with NCU number m: 1..16
 and machine axis address n: 1... 31

Example:

```
NC2_AX1                      ; The axis is on the NCU2 and is the
                             ; 1st machine axis there.

AX5                           ; local axis 5 only with one NCU
                             ; the axis container mechanism is only used by
                             ; several channels of one NCU.
```

The reference to an axis container location of a channel is defined by the definitions in MD20070 \$MC_AXCONF_MACHAX_USED and MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB.

The actually assigned axis at a specific time is dependent upon the container rotation status. All channels that access an axis container use the same axis entries stored there. If channels of various NCUs access this container, then inter-NCU consistency must be ensured.

Example:

```
CHANDATA(1)
$MC_MACHAX_USED[4]=9
MD10002 $MN_AXCONF_LOGIC_MACHAX_TAB[8]=CL1_SL1
MD12701 $MN_AXCT_AXCONF_ASSIGN_TAB1[0]="NC1_AX1"
MD12701 $MN_AXCT_AXCONF_ASSIGN_TAB1[1]="NC2_AX1"
```

This machine data is distributed via NCU-link.

2.3 NC machine data

Related to:

MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB

12703	AXCT_AXCONF_ASSIGN_TAB3	N01	B3
-	Assignment of an axis container location	STRING	PowerOn
CTDE			
-	32	-	-

Description:

Assignment of an axis container location (slot s) to a machine axis or link axis. A maximum of 32 locations can be assigned axes in an axis container.

Method of writing entries:

NCm_AXn with NCU number m: 1..16
 and machine axis address n: 1... 31

Example:

NC2_AX1 ; The axis is on the NCU2 and is the
 ; 1st machine axis there
 AX5 ; local axis 5, with only one NCU
 ; the axis container mechanism is only used by
 ; several channels of one NCU.

The reference to an axis container location of a channel is determined by the definitions in

MD20070 \$MC_AXCONF_MACHAX_USED and MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB.

The axis actually assigned at a given time is dependent upon the container rotation status. All channels that access an axis container use the same axis entries stored there. If channels from various NCUs access this container, ensure that there is consistency between the NCUs.

Example:

CHANDATA(1)
 \$MC_MACHAX_USED[4]=9 MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB[8]=CL1_SL1
 MD12701 \$MN_AXCT_AXCONF_ASSIGN_TAB1[0]="NC1_AX1" MD12701
 \$MN_AXCT_AXCONF_ASSIGN_TAB1[1]="NC2_AX1"

This machine data is distributed over the NCU-link.

Related to:

MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB

12704	AXCT_AXCONF_ASSIGN_TAB4	N01	B3
-	Assignment of an axis container location	STRING	PowerOn
CTDE			
-	32	-	-

Description:

Assignment of an axis container location (slot s) to a machine axis or link axis. A maximum of 32 locations can be assigned axes in an axis container. Method of writing entries:

NCm_AXn with NCU number m: 1..16
 and machine axis address n: 1... 31

Example:

NC2_AX1 ; The axis is on the NCU2 and is the
 ; 1st machine axis there
 AX5 ; local axis 5, with only one NCU
 ; the axis container mechanism is only used by
 ; several channels from one NCU.

The reference to an axis container location of a channel is determined by the definitions in MD20070 \$MC_AXCONF_MACHAX_USED and MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB.

The axis actually assigned at a given time is dependent upon the container rotation status. All channels that access an axis container use the same axis entries stored there. If channels from various NCUs access this container, ensure that there is consistency between the NCUs!

Example:

CHANDATA(1)

```
$MC_MACHAX_USED[4]=9      MD10002 $MN_AXCONF_LOGIC_MACHAX_TAB[8]=CL1_SL1      MD12701
$MN_AXCT_AXCONF_ASSIGN_TAB1[0]="NC1_AX1"      MD12701
$MN_AXCT_AXCONF_ASSIGN_TAB1[1]="NC2_AX1"
```

This machine data is distributed over the NCU-link.

Related to:

MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB

12705	AXCT_AXCONF_ASSIGN_TAB5			N01	B3	
-	Assignment of an axis container location			STRING	PowerOn	
CTDE						
-	32	-	-	-	3/2	M

Description: Assignment of an axis container location (slot s) to a machine axis or link axis. A maximum of 32 locations can be assigned axes in an axis container.

Method of writing entries:

NCm_AXn with NCU number m: 1..16
 and machine axis address n: 1... 31

Example:

```
NC2_AX1                      ; The axis is on the NCU2 and is the
                                    ; 1st machine axis there

AX5                            ; local axis 5, with only one NCU
                                    ; the axis container mechanism is only used by
                                    ; several channels of one NCU.
```

The reference to an axis container location of a channel is determined by the definitions in MD20070 \$MC_AXCONF_MACHAX_USED and MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB. The axis actually assigned at a given time is dependent upon the container rotation status. All channels that access an axis container use the same axis entries stored there. If channels from various NCUs access this container, ensure that there is consistency between the NCUs!

Example:

CHANDATA(1)

```
$MC_MACHAX_USED[4]=9
MD10002 $MN_AXCONF_LOGIC_MACHAX_TAB[8]=CL1_SL1      MD12701
$MN_AXCT_AXCONF_ASSIGN_TAB1[0]="NC1_AX1"
MD12701 $MN_AXCT_AXCONF_ASSIGN_TAB1[1]="NC2_AX1"
```

This machine data is distributed over the NCU-link.

Related to:

MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB

12706	AXCT_AXCONF_ASSIGN_TAB6			N01	B3	
-	Assignment of an axis container location			STRING	PowerOn	
CTDE						
-	32	-	-	-	3/2	M

Description: Assignment of an axis container location (slot s) to a machine axis or link axis. A maximum of 32 locations can be assigned axes in an axis container.

Method of writing entries:

2.3 NC machine data

NCm_AXn with NCU number m: 1..16
 and machine axis address n: 1... 31

Example:

NC2_AX1 ; The axis is on the NCU2 and is the
 ; 1st machine axis there

 AX5 ; local axis 5, with only one NCU
 ; the axis container mechanism is only used by
 ; several channels from one NCU.

The reference to an axis container location of a channel is determined by the definitions in MD20070 \$MC_AXCONF_MACHAX_USED and MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB.

The axis actually assigned at a given time is dependent upon the container rotation status. All channels that access an axis container use the same axis entries stored there. If channels from various NCUs access this container, ensure that there is consistency between the NCUs!

Example:

```
CHANDATA(1)
$MC_MACHAX_USED[4]=9      MD10002 $MN_AXCONF_LOGIC_MACHAX_TAB[8]=CL1_SL1      MD12701
$MN_AXCT_AXCONF_ASSIGN_TAB1[0]="NC1_AX1"      MD12701
$MN_AXCT_AXCONF_ASSIGN_TAB1[1]="NC2_AX1"
```

This machine data is distributed over the NCU-link.

Related to:

MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB

12707	AXCT_AXCONF_ASSIGN_TAB7			N01	B3	
-	Assignment of an axis container location			STRING	PowerOn	
CTDE						
-	32	-	-	-	3/2	M

Description:

Assignment of an axis container location (slot s) to a machine axis or link axis. A maximum of 32 locations can be assigned axes in an axis container.

Method of writing entries:

NCm_AXn with NCU number m: 1..16
 and machine axis address n: 1... 31

Example:

NC2_AX1 ; The axis is on the NCU2 and is the
 ; 1st machine axis there

 AX5 ; local axis 5, with only one NCU
 ; the axis container mechanism is only used by
 ; several channels from one NCU.

The reference to an axis container location of a channel is determined by the definitions in MD20070 \$MC_AXCONF_MACHAX_USED and MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB.

The axis actually assigned at a given time is dependent upon the container rotation status. All channels that access an axis container use the same axis entries stored there. If channels from various NCUs access this container, ensure that there is consistency between the NCUs!

Example:

```
CHANDATA(1)
$MC_MACHAX_USED[4]=9      MD10002 $MN_AXCONF_LOGIC_MACHAX_TAB[8]=CL1_SL1      MD12701
$MN_AXCT_AXCONF_ASSIGN_TAB1[0]="NC1_AX1"      MD12701
$MN_AXCT_AXCONF_ASSIGN_TAB1[1]="NC2_AX1"
```

This machine data is distributed over the NCU-link.

Related to:

MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB

12708	AXCT_AXCONF_ASSIGN_TAB8	N01	B3
-	Assignment of an axis container location	STRING	PowerOn
CTDE			
-	32	-	M

Description: Assignment of an axis container location (slot s) to a machine axis or link axis. A maximum of 32 locations can be assigned axes in an axis container.

Method of writing entries:

NCm_AXn with NCU number m: 1..16
 and machine axis address n: 1... 31

Example:

NC2_AX1 ; The axis is on the NCU2 and is the
 ; 1st machine axis there

AX5 ; local axis 5, with only one NCU
 ; the axis container mechanism is only used by
 ; several channels from one NCU.

The reference to an axis container location of a channel is determined by the definitions in MD20070 \$MC_AXCONF_MACHAX_USED and MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB.

The axis actually assigned at a given time is dependent upon the container rotation status. All channels that access an axis container use the same axis entries stored there. If channels from various NCUs access this container, ensure that there is consistency between the NCUs!

Example:

CHANDATA(1)

\$MC_MACHAX_USED[4]=9 MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB[8]=CL1_SL1

MD12701 \$MN_AXCT_AXCONF_ASSIGN_TAB1[0]="NC1_AX1" MD12701

\$MN_AXCT_AXCONF_ASSIGN_TAB1[1]="NC2_AX1"

This machine data is distributed over the NCU-link.

Related to:

MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB

12709	AXCT_AXCONF_ASSIGN_TAB9	N01	B3
-	Assignment of an axis container location	STRING	PowerOn
CTDE			
-	32	-	M

Description: Assignment of an axis container location (slot s) to a machine axis or link axis. A maximum of 32 locations can be assigned axes in an axis container.

Method of writing entries:

NCm_AXn with NCU number m: 1..16
 and machine axis address n: 1... 31

Example:

NC2_AX1 ; The axis is on the NCU2 and is the
 ; 1st machine axis there

AX5 ; local axis 5, with only one NCU
 ; the axis container mechanism is only used by
 ; several channels from one NCU.

The reference to an axis container location of a channel is determined by the definitions in MD20070 \$MC_AXCONF_MACHAX_USED and MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB.

2.3 NC machine data

The axis actually assigned at a given time is dependent upon the container rotation status. All channels that access an axis container use the same axis entries stored there. If channels from various NCUs access this container, ensure that there is consistency between the NCUs!

Example:

CHANDATA(1)

```
$MC_MACHAX_USED[4]=9      MD10002 $MN_AXCONF_LOGIC_MACHAX_TAB[8]=CL1_SL1      MD12701
$MN_AXCT_AXCONF_ASSIGN_TAB1[0]="NC1_AX1"      MD12701
$MN_AXCT_AXCONF_ASSIGN_TAB1[1]="NC2_AX1"
```

This machine data is distributed over the NCU-link.

Related to:

MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB

12710	AXCT_AXCONF_ASSIGN_TAB10			N01	B3	
-	Assignment of an axis container location			STRING	PowerOn	
CTDE						
-	32	-	-	-	3/2	M

Description:

Assignment of an axis container location (slot s) to a machine axis or link axis. A maximum of 32 locations can be assigned axes in an axis container.

Method of writing entries:

NCm_AXn with NCU number m: 1..16
 and machine axis address n: 1... 31

Example:

```
NC2_AX1                ; The axis is on the NCU2 and is the
                         ; 1st machine axis there
AX5                     ; local axis 5, with only one NCU
                         ; the axis container mechanism is only used by
                         ; several channels from one NCU.
```

The reference to an axis container location of a channel is determined by the definitions in MD20070 \$MC_AXCONF_MACHAX_USED and MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB. The axis actually assigned at a given time is dependent upon the container rotation status. All channels that access an axis container use the same axis entries stored there. If channels from various NCUs access this container, ensure that there is consistency between the NCUs!

Example:

CHANDATA(1)

```
$MC_MACHAX_USED[4]=9      MD10002 $MN_AXCONF_LOGIC_MACHAX_TAB[8]=CL1_SL1
MD12701 $MN_AXCT_AXCONF_ASSIGN_TAB1[0]="NC1_AX1"      MD12701
$MN_AXCT_AXCONF_ASSIGN_TAB1[1]="NC2_AX1"
```

This machine data is distributed over the NCU-link.

Related to:

MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB

12711	AXCT_AXCONF_ASSIGN_TAB11			N01	B3	
-	Assignment of an axis container location			STRING	PowerOn	
CTDE						
-	32	-	-	-	3/2	M

Description:

Assignment of an axis container location (slot s) to a machine axis or link axis. A maximum of 32 locations can be assigned axes in an axis container.

Method of writing entries:

NCm_AXn with NCU number m: 1..16

and machine axis address n: 1... 31

Example:

```
NC2_AX1      ; The axis is on the NCU2 and is the
              ; 1st machine axis there

AX5          ; local axis 5, with only one NCU
              ; the axis container mechanism is only used by
              ; several channels from one NCU.
```

The reference to an axis container location of a channel is determined by the definitions in MD20070 \$MC_AXCONF_MACHAX_USED and MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB.

The axis actually assigned at a given time is dependent upon the container rotation status. All channels that access an axis container use the same axis entries stored there. If channels from various NCUs access this container, ensure that there is consistency between the NCUs!

Example:

```
CHANDATA(1)

$MC_MACHAX_USED[4]=9      MD10002 $MN_AXCONF_LOGIC_MACHAX_TAB[8]=CL1_SL1      MD12701
$MN_AXCT_AXCONF_ASSIGN_TAB1[0]="NC1_AX1"      MD12701
$MN_AXCT_AXCONF_ASSIGN_TAB1[1]="NC2_AX1"
```

This machine data is distributed over the NCU-link.

Related to:

MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB

12712	AXCT_AXCONF_ASSIGN_TAB12	N01	B3
-	Assignment of an axis container location	STRING	PowerOn
CTDE			
-	32	-	-
		-	3/2
			M

Description:

Assignment of an axis container location (slot s) to a machine axis or link axis. A maximum of 32 locations can be assigned axes in an axis container.

Method of writing entries:

```
NCm_AXn      with NCU number m: 1..16
              and machine axis address n: 1... 31
```

Example:

```
NC2_AX1      ; The axis is on the NCU2 and is the
              ; 1st machine axis there

AX5          ; local axis 5, with only one NCU
              ; the axis container mechanism is only used by
              ; several channels from one NCU.
```

The reference to an axis container location of a channel is determined by the definitions in MD20070 \$MC_AXCONF_MACHAX_USED and MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB.

The axis actually assigned at a given time is dependent upon the container rotation status. All channels that access an axis container use the same axis entries stored there. If channels from various NCUs access this container, ensure that there is consistency between the NCUs!

Example:

```
CHANDATA(1)

$MC_MACHAX_USED[4]=9      MD10002 $MN_AXCONF_LOGIC_MACHAX_TAB[8]=CL1_SL1      MD12701
$MN_AXCT_AXCONF_ASSIGN_TAB1[0]="NC1_AX1"      MD12701
$MN_AXCT_AXCONF_ASSIGN_TAB1[1]="NC2_AX1"
```

This machine data is distributed over the NCU-link.

Related to:

MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB

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12713	AXCT_AXCONF_ASSIGN_TAB13			N01	B3	
-	Assignment of an axis container location			STRING	PowerOn	
CTDE						
-	32	-	-	-	3/2	M

Description:

Assignment of an axis container location (slot s) to a machine axis or link axis. A maximum of 32 locations can be assigned axes in an axis container.

Method of writing entries:

NCm_AXn with NCU number m: 1..16
 and machine axis address n: 1... 31

Example:

NC2_AX1 ; The axis is on the NCU2 and is the
 ; 1st machine axis there

 AX5 ; local axis 5, with only one NCU
 ; the axis container mechanism is only used by
 ; several channels from one NCU.

The reference to an axis container location of a channel is determined by the definitions in

MD20070 \$MC_AXCONF_MACHAX_USED and MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB.

The axis actually assigned at a given time is dependent upon the container rotation status. All channels that access an axis container use the same axis entries stored there. If channels from various NCUs access this container, ensure that there is consistency between the NCUs!

Example:

```
CHANDATA(1)
$MC_MACHAX_USED[4]=9      MD10002 $MN_AXCONF_LOGIC_MACHAX_TAB[8]=CL1_SL1      MD12701
$MN_AXCT_AXCONF_ASSIGN_TAB1[0]="NC1_AX1"      MD12701
$MN_AXCT_AXCONF_ASSIGN_TAB1[1]="NC2_AX1"
```

This machine data is distributed over the NCU-link.

Related to:

MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB

12714	AXCT_AXCONF_ASSIGN_TAB14			N01	B3	
-	Assignment of an axis container location			STRING	PowerOn	
CTDE						
-	32	-	-	-	3/2	M

Description:

Assignment of an axis container location (slot s) to a machine axis or link axis. A maximum of 32 locations can be assigned axes in an axis container.

Method of writing entries:

NCm_AXn with NCU number m: 1..16
 and machine axis address n: 1... 31

Example:

NC2_AX1 ; The axis is on the NCU2 and is the
 ; 1st machine axis there

 AX5 ; local axis 5, with only one NCU
 ; the axis container mechanism is only used by
 ; several channels from one NCU.

The reference to an axis container location of a channel is determined by the definitions in MD20070 \$MC_AXCONF_MACHAX_USED and MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB.

The axis actually assigned at a given time is dependent upon the container rotation status. All channels that access an axis container use the same axis entries stored there. If channels from various NCUs access this container, ensure that there is consistency between the NCUs!

Example:

CHANDATA(1)

\$MC_MACHAX_USED[4]=9 MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB[8]=CL1_SL1

MD12701 \$MN_AXCT_AXCONF_ASSIGN_TAB1[0]="NC1_AX1" MD12701

\$MN_AXCT_AXCONF_ASSIGN_TAB1[1]="NC2_AX1"

This machine data is distributed over the NCU-link.

Related to:

MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB

12715	AXCT_AXCONF_ASSIGN_TAB15			N01	B3	
-	Assignment of an axis container location			STRING	PowerOn	
CTDE						
-	32	-	-	-	3/2	M

Description: Assignment of an axis container location (slot s) to a machine axis or link axis. A maximum of 32 locations can be assigned axes in an axis container.

Method of writing entries:

NCm_AXn with NCU number m: 1..16

and machine axis address n: 1... 31

Example:

NC2_AX1 ; The axis is on the NCU2 and is the
; 1st machine axis there

AX5 ; local axis 5, with only one NCU
; the axis container mechanism is only used by
; several channels from one NCU.

The reference to an axis container location of a channel is determined by the definitions in MD20070 \$MC_AXCONF_MACHAX_USED and MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB.

The axis actually assigned at a given time is dependent upon the container rotation status. All channels that access an axis container use the same axis entries stored there. If channels from various NCUs access this container, ensure that there is consistency between the NCUs!

Example:

CHANDATA(1)

\$MC_MACHAX_USED[4]=9 MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB[8]=CL1_SL1 MD12701

\$MN_AXCT_AXCONF_ASSIGN_TAB1[0]="NC1_AX1" MD12701

\$MN_AXCT_AXCONF_ASSIGN_TAB1[1]="NC2_AX1"

This machine data is distributed over the NCU-link.

Related to:

MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB

12716	AXCT_AXCONF_ASSIGN_TAB16			N01	B3	
-	Assignment of an axis container location			STRING	PowerOn	
CTDE						
-	32	-	-	-	3/2	M

Description: Assignment of an axis container location (slot s) to a machine axis or link axis. A maximum of 32 locations can be assigned axes in an axis container.

Method of writing entries:

NCm_AXn with NCU number m: 1..16

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and machine axis address n: 1... 31

Example:

```
NC2_AX1      ; The axis is on the NCU2 and is the
              ; 1st machine axis there

AX5          ; local axis 5, with only one NCU
              ; the axis container mechanism is only used by
              ; several channels from one NCU.
```

The reference to an axis container location of a channel is determined by the definitions in MD20070 \$MC_AXCONF_MACHAX_USED and MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB.

The axis actually assigned at a given time is dependent upon the container rotation status. All channels that access an axis container use the same axis entries stored there. If channels from various NCUs access this container, ensure that there is consistency between the NCUs!

Example:

```
CHANDATA(1)

$MC_MACHAX_USED[4]=9      MD10002 $MN_AXCONF_LOGIC_MACHAX_TAB[8]=CL1_SL1      MD12701
$MN_AXCT_AXCONF_ASSIGN_TAB1[0]="NC1_AX1"      MD12701
$MN_AXCT_AXCONF_ASSIGN_TAB1[1]="NC2_AX1"
```

This machine data is distributed over the NCU-link.

Related to:

MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB

12750	AXCT_NAME_TAB			N01	B3	
-	Axis container identifier			STRING	PowerOn	
CTDE						
-	16	CT1, CT2, CT3, CT4, CT5, CT6, CT7, CT8...	-	-	1/1	M

Description:

List of axis container identifiers

In addition to the channel identifier of an axis, the axis container identifier, which can be defined by the user here, can also be used as an axis container name for e.g. a rotation of an axis container (AXCTSWE(CT1)).

12760	AXCT_FUNCTION_MASK			N09	-	
-	Functions for the axis container			UDWORD	NEW CONF	
-						
-	-	0x0	0	0x1	1/1	M

Description:

This MD is used to set the specific functions for the axis container.

The MD is bit-coded, the following bits are assigned:

Bit 0 = 0: For a direct axis container switch (AXCTSWED), all other channels must be in RESET status.

Bit 0 = 1: For a direct axis container switch (AXCTSWED), only those other channels which have interpolation right on axes of the axis container must be in RESET status.

13050	DRIVE_LOGIC_ADDRESS			N04, N10	G2	
-	Logical drive addresses			DWORD	PowerOn	
-						
-	31	4100, 4140, 4180, 4220, 4260, 4300, 4340, 4380...	258	16383	7/2	M

Description:

For PROFIdrive only:

Logical I/O addresses of the PROFIdrive drives on the PROFIBUS/PROFINET that can be assigned to an axis.

The MD value is the logical I/O address of the drive assigned with HW-Config (SIMATIC Manager S7).

The index n from \$MN_DRIVE_LOGIC_ADDRESS[n] is used for actual value and setpoint assignment:

MD30220 \$MA_ENC_MODULE_NR=n+1, MD30110 \$MA_CTRL_OUT_MODULE_NR=n+1.

13060	DRIVE_TELEGRAM_TYPE			N04, N10	G2	
-	Standard message frame type for PROFIdrive			DWORD	PowerOn	
-						
-	31	116, 116, 116, 116, 116, 116, 116, 116...	0	-	7/2	M

Description:

For PROFIdrive only:

Standard telegram type for PROFIdrive axes:

0 = No standard type, user-defined

(telegram type 103 is then used internally in the NCK,
whereby other process data can be added.)

1... 6 = PROFIdrive type

101...107 = SIEMENS type

116 = SIEMENS type as 106 plus trace data

118 = SIEMENS type as 116, but use of encoders 2+3

136 = SIEMENS type as 116 plus torque feedforward control

138 = SIEMENS type as 136, but use of encoders 2+3

139 = SIEMENS type telegram specifically for Weiss spindle functionality

Notes:

The descriptions of the SIEMENS telegram type can be found in the SINAMICS function plan.

Alarm 26015 is issued with reference to this machine data if the telegram configuration exhibits inconsistencies, i.e. if the telegram type selected on the NCK does not match the telegram type set on the drive (see drive parameter p922) and the process data configuration does not match (see drive parameters p923, p915, p916). The check for telegram configuration errors can be disabled using MD DRIVE_FUNCTION_MASK bit 15.

The SIEMENS telegram types 1xx must be operated in the SINUMERIK context in 611U interface mode.

13070	DRIVE_FUNCTION_MASK			N04, N10	G2	
-	PROFIdrive expansion functions			UDWORD	PowerOn	
-						
-	31	2, 2, 2, 2, 2, 2, 2...	0	0x7FFFFFFF	7/2	M

Description:

For PROFIdrive only:

Bit-coded mask for skipping the scope of available functions for PROFIdrive axes expected by the NCK.

Meaning of set bits:

Bit 0: Deactivation of axial drive alarm display

Note: the effect of this bit may be hidden, depending on the
value in MD13140 \$MN_PROFIBUS_ALARM_ACCESS.

Bit 1: Reserved, free (previous deactivation of 611U description file intermediate storage in the NCK)

Bit 2: Deactivation of axial encoder driver parameter accesses

Bit 3: Deactivation of axial output driver parameter accesses

Bit 4: Reserved, free (previous activation of DSC bits)

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- Bit 5: Deactivation of the 611U-specific drive parking (STW2.7/STA2.7)
 Bit 6: Deactivation of the 611U-specific travel to fixed stop (STW2.8/STA2.8)
 Bit 7: Deactivation of the 611U-specific motor switching int. (STW2.9 to 2.11)
 Bit 8: Deactivation of the 611U-specific ramp block (STW1.11+13)
 Bit 9: Deactivation of the 611U-specific function generator bits (STW1.8/STA1.13)
 Bit 10: Deactivation of the control of the holding brake (STW1.12 / STA2.5)
 Bit 11: Deactivation of the effect of OFF2/OFF3 on DB31, ... DBX93.5 (Drive Ready)
 Bit 12: Deactivation of the error/alarm class SINAMICS (STA1.11 to STA1.12)
 Bit 13: Drive parking simulation (STA2.7 = STW2.7)
 Bit 14: Selection of non-cyclical communication 0 = DPT 1 = DPV1
 Bit 15: Deactivation of the consistency check of the PROFIdrive message frame configuration

Configuration of bits 5 - 10 allows adaptation of certain control or status bits that are not standardized in the PROFIdrive profile. The bits may have a different significance and effect in the default setting of third-party drives.

13080	DRIVE_TYPE_DP			EXP	G2	
-	PROFIBUS/PROFINET drive type			BYTE	PowerOn	
-						
-	31	0, 0, 0, 0, 0, 0, 0, 0...	0	5	7/2	M

Description:

MD is relevant to PROFIdrive drives at the PROFIBUS/PROFINET:

Drive type:

0: No drive or drive type unknown (default),

software-internally treated as:

- 1: FDD drive (SRM: Synchronous rotary drive)
- 2: MSD drive (ARM: Asynchronous rotary drive)
- 3: Linear drive
- 4: Analog drive (no automatic entry)
- 5: Hydraulic drive

Note:

In general, the drive type is entered automatically with Siemens drives as soon as the drives start operating.

With non-Siemens drives (at least with linear drives), the value must be entered manually if automatic drive recognition is not possible.

13100	DRIVE_DIAGNOSIS			EXP, N05	-	
-	Diagnostics drive link			UDWORD	PowerOn	
-						
-	9	0, 0, 0, 0, 0, 0, 0, 0...	0	0x7FFFFFFF	7/2	M

Description:

reserved

13110	PROFIBUS_TRACE_ADDRESS			EXP	-	
-	PROFIBUS/PROFINET trace of I/O slots			DWORD	NEW CONF	
-						
-	14	0, 0, 0, 0, 0, 0, 0, 0...	0	-	2/2	M

Description:

For PROFIBUS/PROFINET only:

Logical I/O address that is to be recorded.

13111	PROFIBUS_TRACE_TYPE			EXP	-	
-	PROFIBUS/PROFINET trace settings			DWORD	NEW CONF	
-						
-	-	0	0	3	2/2	M

Description: For PROFIBUS/PROFINET only:
 0: Recording to the part program memory /_N_MPF_DIR/_N_SIEMDPTRC_MPF
 1: Recording to mass storage /user/sinumerik/data/temp/siemdptrc.trc
 2: Recording to the part program memory with runtime measurement
 3: Recording of cyclic PN-NCULINK communication

13112	PROFIBUS_TRACE_FILE_SIZE			EXP	-	
-	Maximum trace file size in kbytes			DWORD	NEW CONF	
-						
-	-	40	-	-	2/2	M

Description: For PROFIBUS/PROFINET only:
 0: Trace without file size limitation
 >0: Trace with file size limitation

13113	PROFIBUS_TRACE_START			EXP	-	
-	Activation of PROFIBUS/PROFINET trace			DWORD	Immediately	
-						
-	-	0	0	1	2/2	M

Description: For PROFIBUS/PROFINET only:
 0: Trace off
 1: Trace on
 MD13112 \$MN_PROFIBUS_TRACE_FILE_SIZE > 0: Trace is automatically disabled when the file size is reached.

13114	PROFIBUS_TRACE_START_EVENT			EXP	-	
-	Trigger conditions for PROFIBUS/PROFINET trace			UDWORD	NEW CONF	
-						
-	14	0, 0, 0, 0, 0, 0, 0, 0...	0x00000000	0x111fffff	2/2	M

Description: For PROFIBUS/PROFINET only:
 The trigger frequency is configured bit-by-bit
 Bits 0-15: 0x0001-0xffff: bit mask
 Bits 16-23: 0x01-0x14: process data number (a maximum of 20 words are permissible)
 Bits 24-27: 0x01: status change 0->1
 0x00: status change 1->0
 Bits 28-31: 0x10: send slot
 0x00: receive slot
 When MD13113 \$MN_PROFIBUS_TRACE_START=1 and MD13114
 \$MN_PROFIBUS_TRACE_START_EVENT=0x0 Recording starts immediately
 When MD13113 \$MN_PROFIBUS_TRACE_START=1 and MD13114
 \$MN_PROFIBUS_TRACE_START_EVENT=0x1 Recording starts on control power on
 When MD13113 \$MN_PROFIBUS_TRACE_START=1 and MD13114
 \$MN_PROFIBUS_TRACE_START_EVENT=0x2 Recording starts on loss of the sign of life

2.3 NC machine data

13120	CONTROL_UNIT_LOGIC_ADDRESS			N04, N10	-	
-	Logical address of SINAMICS CU			DWORD	PowerOn	
-						
840dsl-71	9	6500, 0, 0, 0, 0, 0, 0, 0...	0	16383	7/2	M
840dsl-72	13	6500, 0, 0, 0, 0, 0, 0, 0...	0	16383	7/2	M
840dsl-73	15	6500, 0, 0, 0, 0, 0, 0, 0...	0	16383	7/2	M

Description: For PROFIBUS/PROFINET, SINAMICS:
 Logical I/O address of a SINAMICS-CU (Control Unit) on the PROFIBUS/PROFINET.
 The cyclic DP communication with SINAMICS-CU is activated by taking over the associated slot address from the STEP7 project. The onboard I/Os cannot be accessed until after configuration.

13140	PROFIBUS_ALARM_ACCESS			N04, N10	-	
-	Alarm response of PROFIBUS/PROFINET drives on power up			DWORD	Immediately	
-						
-	-	1	0	2	2/7	M

Description: For PROFIBUS/PROFINET only:
 Specifies the time of activation for evaluation/transmission of PROFIBUS/PROFINET node alarms or warnings (fine diagnostics messages) on the NCK.
 Affects drive alarms or warnings 380500, 380501 (or alarms 200000ff etc. created from these in the HMI) as well as drive safety alarms 27900.
 Meaning of the MD values:
 0 = alarms/warnings are evaluated immediately
 1 = alarms/warnings are not evaluated
 2 = alarms are evaluated only after power up, i.e. as soon as HMI has set value 2 active again (NCK automatically resets the MD value to 1 at every power up; HMI must explicitly articulate its readiness for message processing by setting value 2)
 Note: the MD restricts the range or effectiveness of MD13150 \$MN_SINAMICS_ALARM_MASK
 Default: the display default behavior of the mentioned drive alarms changes with the introduction of this MD. Now the alarms are not transported and displayed by default.
 The previous default behavior can be restored with MD13140 \$MN_PROFIBUS_ALARM_ACCESS=0.

13150	SINAMICS_ALARM_MASK			N04, N05	-	
-	Activate fault and warning buffer output for Sinamics			UDWORD	Immediately	
-						
-	-	0x0909	0	0x7FFFFFFF	7/2	M

Description: For PROFIBUS/PROFINET only, especially SINAMICS:
 Relevant to SINAMICS diagnostics:
 Note: the effect of this MD may be hidden independently of the value of MD13140 \$MN_PROFIBUS_ALARM_ACCESS.

Mask for displaying the SINAMICS DOS fault and warning buffers

Bit set: Alarms in this DO group are output

Bit not set: Alarms in this DO group are not output

Bit Hex. Meaning

value

```
=====
0:    0x1    Output faults of the Control Units
1:    0x2    Reserved
2:    0x4    Output faults of the Drive Controls
3:    0x8    Output faults of the Line Modules
4:    0x10   Output faults of the Terminal Boards
5:    0x20   Output faults of the Terminal Modules
8:    0x100  Output warnings of the Control Units
9:    0x200  Output warnings of the Communication Objects
10:   0x400  Output warnings of the Drive Controls
11:   0x800  Output warnings of the Line Modules
12:   0x1000 Output warnings of the Terminal Boards
13:   0x2000 Output warnings of the Terminal Modules
```

13160	SINAMICS_MAX_SLAVE_ADDRESS			N04, N10	-	
-	Highest SINAMICS slave address			DWORD	PowerOn	
-						
-	4	0, 0, 0, 0	0	-	7/2	M

Description: Highest slave/device address supported per bus
 All slaves/devices with an address higher than the address set here are ignored by the NCK
 Value 0: No limitation

13200	MEAS_PROBE_LOW_ACTIVE			N10, N09	M5	
-	Polarity reversal of sensor			BOOLEAN	NEW CONF	
-						
-	2	FALSE, FALSE	0	-	7/2	M

Description: This MD defines the electrical polarity of each connected sensor.
 Value 0:
 (Default setting)
 Non-deflected state 0 V
 Deflected state 24 V
 Value 1:
 Non-deflected state 24 V
 Deflected state 0 V
 The programmed edges of the sensor are independent of the electrical polarity, and are to be regarded as purely mechanical. The programming of a positive edge always means the transition from the non-deflected into the deflected state. The programming of a negative edge always means the transition from the deflected into the non-deflected state.

13210	MEAS_TYPE			N10, N09	M5	
-	Meas. type with decentralized drives			BYTE	PowerOn	
-						
-	-	0	0	1	7/2	M

2.3 NC machine data

Description: For PROFIdrive only:
 This MD sets the measuring function of decentralized drives.
 The MD currently only functions for PROFIdrive drives.
 MEAS_TYPE = 0 defines:
 A probe is used that is connected centrally to the NC.
 However, as the encoders only provide actual position values in cycles, the actual measuring position is found by interpolation.
 MEAS_TYPE = 1 defines:
 The probe must be wired decentralized to ALL drives.
 The measuring functionality of the drive is then used,
 saving the actual encoder values in the hardware at the time of the measuring edge.
 This method is more accurate than that with MEAS_TYPE = 0, but it requires a more complex wiring and drives that support this measuring functionality (e.g. 611U).

13211	MEAS_CENTRAL_SOURCE			N10, N09	-	
-	Data source central measurement with PROFIBUS/PROFINET drives			BYTE	PowerOn	
-						
-	-	3	1	3	7/2	M

Description: For PROFIBUS/PROFINET only:
 Sets the method used to obtain the time stamps for central measurement with PROFIdrive drives.
 For MEAS_CENTRAL_SOURCE = 1, the following applies:
 NRK access operations are used in order to access the onboard measuring register.
 For this purpose, the appropriate hardware, which permits this, must be available, e.g. for 840Di with MCI-Extension Board.
 For MEAS_CENTRAL_SOURCE = 2, the following applies:
 The SINAMICS DO1 telegram is used (telegram types 391 and 395), and more specifically in the "Cyclic measurement" version without handshake.
 For this purpose, an integrated SINAMICS must be available, e.g. NCU 710.
 For measurement without handshake, two probes must be available in drive parameters p0680 index 0 and 1.
 For MEAS_CENTRAL_SOURCE = 3, the following applies:
 The SINAMICS DO1 telegram is used (telegram type 391), and more specifically in a version with handshake. This technique is fault-tolerant, however, it only permits a measurement edge every 4 PROFIBUS/PROFINET cycles, i.e. it is therefore significantly slower.
 For this purpose, an integrated SINAMICS must be available, e.g. NCU 710.
 This MD is only relevant, if MD13210 \$MN_MEAS_TYPE == 0.

13220	MEAS_PROBE_DELAY_TIME			N10, N09	FBA	
s	Delay time between probe deflection and recognition			DOUBLE	NEW CONF	
-						
-	2	0.0, 0.0	0	0.1	7/2	M

Description: For probes with, for example, radio transmission, the probe deflection can be detected in the NC only with delay.
 With this MD, the transmission link delay between the probe deflection and its detection is set in the control.
 The measured value is corrected internally by the control by the distance that corresponds to the traversing motion during this time before measuring (modeling).

As the modeling does not work with the expected accuracy at higher position control cycles, the delay time is limited independently of the input value to 31 position control cycles).

13230	MEAS_PROBE_SOURCE			N10, N09	-	
-	Probe simulation			BYTE	PowerOn	
-						
-	-	0	0	9	7/2	M

Description: Simulation of the probe only works when all axes are simulated.
Value = 0: the probe is triggered on the programmed end position.
Value = 1-8: the probe is triggered via digital output with the number=value.
Value = 9: reserved

13231	MEAS_PROBE_OFFSET			N10, N09	-	
mm/inch, degrees	Probe offset			DOUBLE	Immediately	
-						
-	-	0.1	-	-	7/7	U

Description: The switching position of the probe is offset by the value.
The offset is only active with the simulated probes and MD 13230
\$MN_MEAS_PROBE_SOURCE=0.

13300	PROFISAFE_IN_FILTER			N01, N10	-	
-	Useful F data filter IN			UDWORD	PowerOn	
-						
-	48	0xFFFFFFFF, 0xFFFFFFFF, 0xFFFFFFFF, 0xFFFFFFFF, 0xFFFFFFFF, 0xFE...	0x0	0xFFFFFFFF	7/2	M

Description: Filter between F user data and \$A_INSE variables
This machine data defines which bits are transferred from the F user data interface of the PROFIsafe module to the NCK for further processing.
The filtered F user data bits are compressed internally in the NCK to form a contiguous bit field.
Machine data MD10388 \$MN_PROFISAFE_IN_ASSIGN then also defines the \$A_INSE variables to which the filtered F user data bits are transferred.

Example:

Note:

Only 16 bits are shown for the sake of simplicity.

Parameterization:

\$MN_PROFISAFE_IN_FILTER = 1010100101000100

\$MN_PROFISAFE_IN_ASSIGN = 011006

n = 16 11 6 1
|x|x|x|x|x|1|1|1|0|0|1|x|x|x|x|

\$A_INSE[n], x = irrelevant

|0|0|0|0|0|0|0|0|0|0|1|1|1|0|0|1|

NCK-internal image of F user data

|1|0|1|0|1|0|0|1|0|0|1|0|0|0|1|0|0|

\$MN_PROFISAFE_IN_FILTER

|1|0|1|0|1|0|0|0|0|0|0|0|0|0|1|0|0|

2.3 NC machine data

Example value present at F user data interface of the PROFIsafe module

13301	PROFISAFE_OUT_FILTER			N01, N10	-	
-	Useful F data filter OUT			UDWORD	PowerOn	
-						
-	48	0xFFFFFFFF, 0xFFFFFFFF, 0xFFFFFFFF, 0xFFFFFFFF, 0xFFFFFFFF, 0xFF...	0x0	0xFFFFFFFF	7/2	M

Description:

Filter between \$A_OUTSE variables and F user data

This machine data defines to which F user data bits the \$A_OUTSE[n] variables concerned are transferred.

Machine data MD10389 \$MN_PROFISAFE_OUT_ASSIGN defines which \$A_OUTSE[n] variables are transferred to the F user data bits of the PROFIsafe module.

Example:

Note:

Only 16 bits are shown for the sake of simplicity.

Parameterization:

\$MN_PROFISAFE_OUT_FILTER = 1010100101000100

\$MN_PROFISAFE_OUT_ASSIGN = 011006

n = 16 11 6 1
|x|x|x|x|x|1|1|1|1|1|x|x|x|x|x|

Example value present in the \$A_OUTSE variables, x = irrelevant

|0|0|0|0|0|0|0|0|0|0|0|1|1|1|1|1|1|

NCK-internal image of F user data

|1|0|1|0|1|0|0|0|1|0|1|0|0|0|1|0|0|

\$MN_PROFISAFE_OUT_FILTER

|1|0|1|0|1|0|0|0|1|0|1|0|0|0|1|0|0|

F user data of the PROFIsafe module

13302	PROFISAFE_IN_ENABLE_MASK			N01, N10	-	
-	Enable mask for connections to PROFIsafe input modules.			UDWORD	PowerOn	
-						
-	2	0x0, 0x0	0x0, 0x0	0xFFFFFFFF, 0x0000FFFF	7/2	M

Description:

The enable mask is used to enable the machine data blocks for the connections to PROFIsafe input modules.

A machine data block comprises the following data:

- MD10386 \$MN_PROFISAFE_IN_ADDRESS[n]
- MD10388 \$MN_PROFISAFE_IN_ASSIGN[n]
- MD13300 \$MN_PROFISAFE_IN_FILTER[n]
- MD13305 \$MN_PROFISAFE_IN_SUBS[n]

Bit n = 0

The machine data block [n] is checked for consistency but not activated.

The PROFIsafe connection [n] or the slot [n] is not active.

Bit n = 1

The machine data block [n] is active.

The PROFIsafe connection [n] or the slot [n] is active.

Related to:

MD10095: \$MN_SAFE_MODE_MASK, Bit 1

MD13304: \$MN_PROFISAFE_IN_SUBS_ENAB_MASK

13303	PROFISAFE_OUT_ENABLE_MASK			N01, N10	-	
-	Enable mask for connections to PROFIsafe output modules.			UDWORD	PowerOn	
-						
-	2	0x0, 0x0	0x0, 0x0	0xFFFFFFFF, 0x0000FFFF	7/2	M

Description: The enable mask is used to enable the machine data blocks for the connections to PROFIsafe output modules.

A machine data block comprises the following data:

- MD10387 \$MN_PROFISAFE_OUT_ADDRESS[n]
- MD10389 \$MN_PROFISAFE_OUT_ASSIGN[n]
- MD13301 \$MN_PROFISAFE_OUT_FILTER[n]

Bit n = 0

The machine data block [n] is checked for consistency but not activated.

The PROFIsafe connection [n] or the slot [n] is not active.

Bit n = 1

The machine data block [n] is active.

The PROFIsafe connection [n] or the slot [n] is active.

Related to:

MD10095: \$MN_SAFE_MODE_MASK, Bit 1

13304	PROFISAFE_IN_SUBS_ENAB_MASK			N01, N10	-	
-	Activation of substitute value output for PROFIsafe input modules			UDWORD	PowerOn	
-						
-	2	0x0, 0x0	0x0, 0x0	0xFFFFFFFF, 0x0000FFFF	7/2	M

Description: The enable mask is used to enable substitute value output for connections to PROFIsafe input modules.

Bit n = 0

The PROFIsafe input module's process data is transferred to the SPL input data for the connection parameterized in machine data block [n].

The PROFIsafe connection [n] or the slot [n] is active.

Bit n = 1

The substitute values from MD13305 \$MN_PROFISAFE_IN_SUBS are transferred to the SPL input data for the connection parameterized in machine data block [n].

The PROFIsafe connection [n] or the slot [n] is passive.

Related to:

MD10095: \$MN_SAFE_MODE_MASK, Bit 1

MD13305: \$MN_PROFISAFE_IN_SUBS

13305	PROFISAFE_IN_SUBS			N01, N10	-	
-	Substitute values for passive connections to PROFIsafe input modules			UDWORD	PowerOn	
-						
-	48	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0x0	0xFFFFFFFF	7/2	M

Description: For passive connections to PROFIsafe input modules, the substitute values parameterized in the machine data are transferred to the SPL inputs (\$A_INSE) parameterized in MD10388 \$MN_PROFISAFE_IN_ASSIGN[n].

2.3 NC machine data

If the SPL inputs parameterized in MD10388 \$MN_PROFISAFE_IN_ASSIGN[n] overlap the SPL inputs of an active slot, the control will modify the passive slot's substitute values in order to prevent duplicate assignment of the SPL inputs. Here, the states of the signals from the active slots have priority.

Related to:

MD10095: \$MN_SAFE_MODE_MASK, bit 1

MD13304: \$MN_PROFISAFE_IN_SUBS_ENAB_MASK

13307	PROFISAFE_IPO_RESERVE			N01, N10	FBSI	
-	Number of IPO cycles without PROFIsafe calculations			DWORD	PowerOn	
SFCO						
-	-	0	0	50	7/1	M

Description:

The value specifies the number of IPO cycles for each PROFIsafe cycle, in which no PROFIsafe calculations should be made.

This machine data is only active, if machine data MD10095 \$MN_SAFE_MODE_MASK, bit 3 is set.

The number of IPO cycles must be selected less than the value in machine data MD10098 \$MN_PROFISAFE_IPO_TIME_RATIO.

13308	PROFISAFE_IN_NAME			N01, N10	-	
-	Name of the PROFIsafe input module			STRING	PowerOn	
-						
-	48	-	-	-	7/2	M

Description:

A symbolic name can be assigned to each PROFIsafe input module.

If a name has been assigned, this will be displayed in the alarm text instead of the PROFIsafe address.

13309	PROFISAFE_OUT_NAME			N01, N10	-	
-	Name of the PROFIsafe output module			STRING	PowerOn	
-						
-	48	-	-	-	7/2	M

Description:

A symbolic name can be assigned to each PROFIsafe output module.

If a name has been assigned, this will be displayed in the alarm text instead of the PROFIsafe address.

13310	SAFE_SPL_START_TIMEOUT			N01, N06	FBSI	
s	Delay in display of alarm 27097			DOUBLE	PowerOn	
-						
-	-	20.	1.	60.	7/2	M

Description:

After powerup of the control, alarm 27097 is displayed after the time if the SPL start is not carried out.

13312	SAFE_SPL_USER_DATA			N01	FBSI	
-	User data			UDWORD	PowerOn	
SFCO						
-	4	0x0, 0x0, 0x0, 0x0	0x0	0xFFFFFFFF	7/2	M

Description:

User data for storing user-specific information.

These data are monitored for changes by the data cross-check between NCK and PLC. Changes to these data are detected when included in the checksums, and reported by alarm 27071.

The data must agree with the corresponding PLC data (DB18 DBD256,260,264,268).
 Deviations between NCK and PLC trigger the programmed stop (Stop D or Stop E) and are displayed via alarm 27090.

13316	SAFE_GLOB_CFG_CHANGE_DATE			N01, N05	FBSI	
-	Date/time of last change of SI-NCK MD			STRING	PowerOn	
-						
-	7	-	-	-	ReadOnly	S

Description: Display data for safety functions:
 Date and time of the last configuration change to safety-related NCK machine data.
 Changes to the machine data included in the calculation of the checksums MD13318
 \$MN_SAFE_GLOB_ACT_CHECKSUM are recorded.

13318	SAFE_GLOB_ACT_CHECKSUM			N01, N05	FBSI	
-	Actual checksum NCK			UDWORD	PowerOn	
-						
-	4	0, 0, 0, 0	0	0xFFFFFFFF	ReadOnly	S

Description: Display data:
 This data contains the actual checksum calculated across the current values of the safety-related machine data after power-on or on RESET.
 Assignment of the field indices:
 Index 0: General safety parameterization, parameterization of the SPL-I/O link
 Index 1: SPL user data
 Index 2: Enable for I/O link (PROFIsafe and F_SEND/F_RECV)
 Index 3: PROFIsafe parameter from the S7 configuration

13319	SAFE_GLOB_DES_CHECKSUM			N01, N05	FBSI	
-	Desired (expected) checksum			UDWORD	PowerOn	
-						
-	4	0, 0, 0, 0	0	0xFFFFFFFF	7/1	M

Description: In this data, the set checksum stored at the time of the last machine acceptance overwrites the current values of the safety relevant machine data.
 Assignment of the field indices:
 Index 0: General safety parameterization, parameterization of the SPL-I/O link
 Index 1: SPL user data
 Index 2: Enable for I/O link (PROFIsafe and F_SEND/F_RECV)
 Index 3: PROFIsafe parameter from the S7 configuration

13320	SAFE_SRDP_IPO_TIME_RATIO			N01, N10	FBSI	
-	Factor F_DP communication cycle			DWORD	PowerOn	
SFCO						
-	-	10	1	65535	7/2	M

Description: Ratio between interpolator cycle and F_DP cycle, in which the F_DP communication is performed. In the resulting time interval the NCK triggers OB40 on the PLC in order to perform the F_DP communication.
 The value for the communication cycle resulting from this MD and the set IPO cycle must not exceed 250ms.

2.3 NC machine data

13322	INFO_SAFE_SRDP_CYCLE_TIME	N01, N10, N05	FBSI
s	Maximum F_DP communication cycle	DOUBLE	PowerOn
-			
-	-	0.0	-
-	-	-	ReadOnly
-	-	-	S

Description: Display data:

Displays the maximum time frame in which F_DP communication with the system coupling is performed that is operated on the PLC via OB40.

The value is obtained from the interpolation cycle and MD13320 \$MN_SAFE_SRDP_IPO_TIME_RATIO.

If the set communication cycle in cyclic operation is exceeded, this is also displayed here.

In the case of a parameterization error (communication cycle exceeds the maximum value of 250.0 ms), the maximum value that can be set is displayed.

13330	SAFE_SDP_ENABLE_MASK	N01, N10	FBSI
-	Enable screen F_SENDDP communication relationships	UDWORD	PowerOn
-			
-	-	0x0	0x0
-	-	0xFFFF	7/2
-	-	-	M

Description: Enable screen for the individual F_SENDDP communication links and their SPL connections

13331	SAFE_SDP_ID	N01, N10	FBSI
-	ID for F_SENDDP communication relationship	DWORD	PowerOn
-			
-	16	0, 0, 0, 0, 0, 0, 0, 0...	-32768
-	-	32767	7/2
-	-	-	M

Description: Any network unique value as ID for F_SENDDP communication relationship.

SIMATIC module parameter: DP_DP_ID

13332	SAFE_SDP_NAME	N01, N10	FBSI
-	Name of the F_SENDDP communication link	STRING	PowerOn
-			
-	16	-	-
-	-	-	7/2
-	-	-	M

Description: A name can be assigned to each F_SENDDP communication link.

If a name was assigned, this name will be displayed in the alarm text instead of DP_DP_ID.

13333	SAFE_SDP_CONNECTION_NR	N01, N10	FBSI
-	Number of the F_SENDDP SPL connection	BYTE	PowerOn
-			
-	16	0, 0, 0, 0, 0, 0, 0, 0...	0
-	-	16	7/2
-	-	-	M

Description: This machine data is used to set the number of the F_SENDDP SPL connection that is parameterized with this data record.

The number of the F_SENDDP SPL connection is also the index for access to the system variables of the user interface of this F_SENDDP SPL connection.

This applies to the following system variables:

- \$A_FSDP_ERR_REAC
- \$A_FSDP_ERROR
- \$A_FSDP_SUBS_ON
- \$A_FSDP_DIAG

Example:

MD13333 \$MN_SAFE_SDP_CONNECTION_NR[2] = 3 means that the control and status information of the F_SENDDP SPL connection that is parameterized via data record 2 can be found in the system variables with field index 3.

13334	SAFE_SDP_LADDR			N01, N10	FBSI	
-	Log. base address of the input/output data range F_SENDDP			DWORD	PowerOn	
-						
-	16	288, 288, 288, 288, 288, 288, 288, 288...	288	32767	7/2	M

Description: The logical base address of the input and output data range - parameterized in SIMATIC STEP 7 - through which this F_SENDDP connection communicates.
SIMATIC block parameter: LADDR

13335	SAFE_SDP_TIMEOUT			N01, N10	FBSI	
s	Monitoring time F_SENDDP			DOUBLE	PowerOn	
-						
-	16	0.5, 0.5, 0.5, 0.5, 0.5, 0.5, 0.5, 0.5...	0.0	60.0	7/2	M

Description: The monitoring time is the time in which F_SENDDP must have sent a new F telegram to F_RECVDP or in which F_RECVDP must have acknowledged a new F telegram. When the monitoring time is exceeded, F_RECVDP outputs replacement values to the SPL.
SIMATIC module parameter: TIMEOUT

13336	SAFE_SDP_ASSIGN			N01, N10	FBSI	
-	Output assignment \$A_OUTSE to F_SENDDP user data			DWORD	PowerOn	
-						
-	16	0, 0, 0, 0, 0, 0, 0, 0...	0	192192	7/2	M

Description: The SPL signals \$A_OUTSE to be transmitted into the F_SENDDP useful data can only be selected area by area.
The SPL area is specified in decimals in aaa bbb format
aaa = area limit 1, SPL signal \$A_OUTSE[aaa]
bbb = area limit 2, SPL signal \$A_OUTSE[bbb]
Example:
\$MN_SAFE_SDP_ASSIGN[0] = 001 004 or alternatively 004 001
The SPL signals \$A_OUTSE[1] to \$A_OUTSE[4] are transferred to the F_SENDDP user data selected in MD13337 \$MN_SAFE_SDP_FILTER[0].

13337	SAFE_SDP_FILTER			N01, N10	FBSI	
-	F user data filter between \$A_OUTSE and F_SENDDP			UDWORD	PowerOn	
-						
-	16	0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF...	0x0	0xFFFF	7/2	M

Description: The SPL signals selected via MD13336 \$MN_SAFE_SDP_ASSIGN are transmitted to the F_SENDDP user data signals in the order of the FILTER bits set to 1. The lowest-value SPL signal to the bit position of the F_SENDDP user data of the lowest-value filter bit set to 1, etc. for all SPL signals selected.
Bit x = 1: an SPL signal is transmitted to bit position x of the F_SENDDP user data.
Bit x = 0: no SPL signal is transmitted to bit position x of the F_SENDDP user data.

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13338	SAFE_SDP_ERR_REAC			N01, N10	FBSI	
-	Fault reaction F_SENDDP			DWORD	PowerOn	
-						
-	16	0, 0, 0, 0, 0, 0, 0, 0...	0	3	7/2	M

Description: In the case of a communication error the fault reaction defined here is triggered. This value is valid as long as no other value is specified from the SPL via system variable \$A_FRDP_ERR_REAC.

Meaning of the values:

- 0 = alarm 27350 + stop D/E
- 1 = alarm 27350
- 2 = alarm 27351 (displayed only; self-extinguishing)
- 3 = no system reaction

13340	SAFE_RDP_ENABLE_MASK			N01, N10	FBSI	
-	Enable screen F_RECVDP communication relationships			UDWORD	PowerOn	
-						
-	-	0x0	0x0	0xFFFF	7/2	M

Description: Enable screen for the individual F_RECVDP communication links and their SPL connections

13341	SAFE_RDP_ID			N01, N10	FBSI	
-	ID for F_RECVDP communication relationships			DWORD	PowerOn	
-						
-	16	0, 0, 0, 0, 0, 0, 0, 0...	-32768	32767	7/2	M

Description: Any network unique value as ID for F_RECVDP communication relationships.
SIMATIC module parameter: DP_DP_ID

13342	SAFE_RDP_NAME			N01, N10	FBSI	
-	Name of the F_RECVDP communication link			STRING	PowerOn	
-						
-	16	-	-	-	7/2	M

Description: A name can be assigned to each F_RECVDP communication link.
If a name was assigned, this name will be displayed in the alarm text instead of DP_DP_ID.

13343	SAFE_RDP_CONNECTION_NR			N01, N10	FBSI	
-	Number of the F_RECVDP-SPL connection			BYTE	PowerOn	
-						
-	16	0, 0, 0, 0, 0, 0, 0, 0...	0	16	7/2	M

Description: This machine data is used to set the number of the F_RECVDP SPL connection that is parameterized with this data record.
The number of the F_RECVDP SPL connection is also the index for access to the system variables of the user interface of this F_RECVDP SPL connection.

This applies to the following system variables:

- \$A_FRDP_SUBS
- \$A_FRDP_ERR_REAC
- \$A_FRDP_ERROR
- \$A_FRDP_SUBS_ON
- \$A_FRDP_ACK_REQ
- \$A_FRDP_DIAG

- \$A_FRDP_SENDDP

Example:

MD13343 \$MN_SAFE_RDP_CONNECTION_NR[2] = 3 means that the control and status information of the F_RECVDP SPL connection that is parameterized in data record 2 can be found in the system variables with field index 3.

13344	SAFE_RDP_LADDR			N01, N10	FBSI	
-	Log. base address of the input/output data range F_RECVDP			DWORD	PowerOn	
-						
-	16	288, 288, 288, 288, 288, 288, 288, 288...	288	32767	7/2	M

Description: The logical base address of the input and output data range - parameterized in SIMATIC STEP 7 - through which this F_RECVDP connection communicates.
SIMATIC block parameter: LADDR

13345	SAFE_RDP_TIMEOUT			N01, N10	FBSI	
s	Monitoring time F_RECVDP			DOUBLE	PowerOn	
-						
-	16	0.5, 0.5, 0.5, 0.5, 0.5, 0.5, 0.5, 0.5...	0.0	60.0	7/2	M

Description: The monitoring time is the time in which F_SENDDP must have sent a new F telegram to F_RECVDP or in which F_RECVDP must have acknowledged a new F telegram. When the monitoring time is exceeded, F_RECVDP outputs replacement values to the SPL.
SIMATIC module parameter: TIMEOUT

13346	SAFE_RDP_ASSIGN			N01, N10	FBSI	
-	Input assignment F_RECVDP user data to \$A_INSE			DWORD	PowerOn	
-						
-	16	0, 0, 0, 0, 0, 0, 0, 0...	0	192192	7/2	M

Description: The SPL signals \$A_INSE to be supplied from the F_RECVDP useful data can only be selected area by area.
The SPL area is specified in decimals in aaa bbb format
aaa = area limit 1, SPL signal \$A_INSE[aaa]
bbb = area limit 2, SPL signal \$A_INSE[bbb]
Example:
\$MN_SAFE_RDP_ASSIGN[0] = 001 004 or alternatively 004 001
The F_RECVDP user data selected in MD13347 \$MN_SAFE_RDP_FILTER[0] are transferred to the SPL signals \$A_INSE[1] to \$A_INSE[4].

13347	SAFE_RDP_FILTER			N01, N10	FBSI	
-	F user data filter between F_RECVDP and \$A_INSE			UDWORD	PowerOn	
-						
-	16	0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF...	0x0	0xFFFF	7/2	M

Description: The F_RECVDP user data signals the filter bits of which are set to 1 are transmitted to the SPL signals via MD13346 \$MN_SAFE_RDP_ASSIGN. The lowest-value F_RECVDP user data signal to the lowest-value selected SPL signal etc. for all F_RECVDP user data selected.
Bit x = 1: the F_RECVDP user data signal of bit position x is transmitted as SPL signal.

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Bit x = 0: the F_RECVDP user data signal of bit position x is not transmitted as SPL signal.

13348	SAFE_RDP_ERR_REAC			N01, N10	FBSI	
-	Fault reaction F_RECVDP			DWORD	PowerOn	
-						
-	16	0, 0, 0, 0, 0, 0, 0, 0...	0	3	7/2	M

Description: In the case of a communication error, the fault reaction defined here is triggered. This value is valid as long as no other value is specified from the SPL via system variable \$A_FRDP_ERR_REAC.

Meaning of the values:

- 0 = alarm 27350 + stop D/E
- 1 = alarm 27350
- 2 = alarm 27351 (displayed only; self-clearing)
- 3 = no system reaction

13349	SAFE_RDP_SUBS			N01, N10	FBSI	
-	Replacement values in case of error			UDWORD	PowerOn	
-						
-	16	0, 0, 0, 0, 0, 0, 0, 0...	0	0xFFFF	7/2	M

Description: In the case of a communication error, the replacement values defined here are activated in the system variables \$A_INSE assigned to this F_RECVDP-SPL connection. This value is valid as long as no other value is specified from the SPL via system variable \$A_FRDP_SUBS.

13370	SAFE_MODE			N01	FBSI	
-	Safety operating mode			UBYTE	PowerOn	
-						
-	-	0	0x00	0x03	7/2	M

Description: MD to make a distinction between the safety operating modes:

- 0 = Safety operating mode "SINUMERIK Safety Integrated (SPL)"
- 1 = Safety operating mode "SINUMERIK Safety Integrated (Drive Based)"
- 2 = Safety operating mode "SINUMERIK Safety Integrated plus (F-PLC) (without Drive Based)" - not supported
- 3 = Safety operating mode "SINUMERIK Safety Integrated plus (F-PLC)"

13372	SAFE_PS_DRIVE_LOGIC_ADDR			N01, N04	-	
-	Logical basis addresses, PROFIsafe drive			DWORD	PowerOn	
-						
-	31	1008, 992, 976, 960, 944, 928, 912, 896...	0	16383	7/2	M

Description: Logical basis addresses for PROFIsafe communication between the F-PLC and drive.

13374	SAFE_INFO_DRIVE_LOGIC_ADDR			N01, N04	-	
-	Logical basis addresses, SIC/SCC			DWORD	PowerOn	
-						
-	31	5800, 5816, 5832, 5848, 5864, 5880, 5896, 5912...	0	16383	7/2	M

Description: Logical base addresses for SIC/SCC communication between NCK and drive.

The standard values of the logical base addresses correspond to the values from the S7 default configuration.

13376	SAFE_INFO_TELEGRAM_TYPE			N01, N04	-	
-	SIC/SCC telegram type			DWORD	PowerOn	
-						
-	31	701, 701, 701, 701, 701, 701, 701, 701...	0	999	7/2	M

Description: Number of the SIC/SCC telegram type

14504	MAXNUM_USER_DATA_INT			N03	P3	
-	Number of user data (INT)			DWORD	PowerOn	
-						
-	-	0	0	256	7/2	M

Description: Number of NC/PLC user data of type INT

14506	MAXNUM_USER_DATA_HEX			N03	P3	
-	Number of user data (HEX)			DWORD	PowerOn	
-						
-	-	0	0	256	7/2	M

Description: Number of NC/PLC user data (HEX)

14508	MAXNUM_USER_DATA_FLOAT			N03	P3	
-	Number of user data (FLOAT)			DWORD	PowerOn	
-						
-	-	0	0	64	7/2	M

Description: Number of NC/PLC user data of type FLOAT

14510	USER_DATA_INT			N03	P3, "PLC-Maschinendaten", P4, "PLC-Maschinendaten"	
-	User data (INT)			DWORD	PowerOn	
-						
-	256	0, 0, 0, 0, 0, 0, 0, 0...	-32768	32767	7/2	I

Description: User data can be read from the DB20 (user data block) in the PLC user program.

14512	USER_DATA_HEX			N03	P3, "PLC-Maschinendaten", P4, "PLC-Maschinendaten"	
-	User data (HEX)			UDWORD	PowerOn	
-						
-	256	0, 0, 0, 0, 0, 0, 0, 0...	0	0x0FF	7/2	I

Description: User data can be read from the DB20 (user data block) in the PLC user program.

14514	USER_DATA_FLOAT			N03	P3, "PLC-Maschinendaten", P4, "PLC-Maschinendaten"	
-	User data (FLOAT)			DOUBLE	PowerOn	
-						
-	64	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	-3.40e38	3.40e38	7/2	I

Description: User data can be read from the DB20 (user data block) in the PLC user program.

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15700	LANG_SUB_NAME			N01	K1	
-	Name for substitution subroutine			STRING	PowerOn	
-						
-	-	-	-	-	7/2	M

Description: Name of the user program called on the basis of a substitution configured by MD30465 \$MA_AXIS_LANG_SUB_MASK.
The user program is called with the path configured by MD15702 \$MN_LANG_SUB_PATH.

15702	LANG_SUB_PATH			N01	K1	
-	Call path for substitution subroutine			BYTE	PowerOn	
-						
-	-	0	0	2	7/2	M

Description: Path with which the user program set by MD15700 \$MN_LANG_SUB_NAME is called on the basis of a substitution configured by MD30465 \$MA_AXIS_LANG_SUB_MASK:
0: /_N_CMA_DIR (default)
1: /_N_CUS_DIR
2: /_N_CST_DIR

15710	TCA_CYCLE_NAME			N09	K1, FBWsl	
-	Program name for replacement of the TCA command			STRING	PowerOn	
-						
-	-	-	-	-	7/2	M

Description: Program name for the replacement program when calling the TCA command.
If the TCA command is programmed in a part program block, then the subprogram defined in MD15710 \$MN_TCA_CYCLE_NAME is called at the end of the block. The programmed tool can be requested in the replacement program via the system variables \$C_TS_PROG / \$C_TS, the Duplo number via \$C_DUPLO_PROG / \$C_DUPLO and the toolholder/spindle number via \$C_THNO_PROG / \$C_THNO. The system variable \$C_TCA returns the value TRUE in the replacement program. Since the replacement takes place at the end of the block, the system variable \$P_SUB_STAT in the replacement program provides the value 2
If MD15710 \$MN_TCA_CYCLE_NAME contains an empty string, the replacement is deactivated (default).

16800	ROOT_KIN_ELEM_NAME			EXP, N01	K1	
-	Name of the root chain element			STRING	Reset	
-						
-	-	ROOT	-	-	7/2	M

Description: Specifies the name of the chain element, which, for a machine description using kinematic chains, is the only one that extends from the zero point of the global coordinate system (root chain element).

16900	COLLISION_EXT_FUNCTION_MASK			EXP	-	
-	Parameterization of external collision check			UDWORD	PowerOn	
-						
-	-	0	0	0x1	7/2	M

Description: Bit mask for parameterization of external collision check

16901	COLLISION_EXT_PREVIEW_TIME			EXP	-	
s	Preview time for external collision check			DOUBLE	PowerOn	
-						
-	-	0.0	0.000	100.0	7/2	M

Description: The time applies during operation provided that enough data is available for a prediction. When a movement is started, the movement preview starts at the current position, and returns predictions in the largest possible increments until the preview time is reached.

16902	COLLISION_EXT_PREVIEW_STEP			EXP	-	
s	Preview time step for external collision check			DOUBLE	PowerOn	
-						
-	-	0.0	0.000	100.0	7/2	M

Description: When a movement is started, the movement preview starts at the current position, and returns predictions in the configured increment until the preview time COLLISION_EXT_PREVIEW_TIME is reached.

16903	COLLISION_EXT_TIMEOUT			EXP	-	
s	Timeout for external collision check			DOUBLE	PowerOn	
-						
-	-	0.0	0.000	100.0	7/2	M

Description: Timeout for communication with an external system to avoid collisions.

17000	EXTENSIONS_OF_BIN_FILES			EXP	-	
-	Extensions of binary files			STRING	PowerOn	
-						
-	20	JPG, GIF, PNG, BMP, PDF, ICO, HTM, CLC	-	-	2/2	M

Description: Extensions of files which are saved in the binary format in the passive NCKs file system.

For these files, there are no restrictions regarding the content.

For ASCII content (e.g. HTM) any line length is possible; this is not permissible for NC programs (e.g. MPF, SPF and DEF).

Each extension must comprise precisely three uppercase letters.

17400	OEM_GLOBAL_INFO			A01, A11	-	
-	OEM version information			STRING	PowerOn	
-						
-	5	-	-	-	7/2	I

Description: A version information freely available to the user
(is indicated in the version screen)

Note: MD17400 \$MN_OEM_GLOBAL_INFO[0] is used with functions such as logbook, licensing, etc. to store the machine identity.

17500	MAXNUM_REPLACEMENT_TOOLS			N09	FBWsl	
-	Maximal number of tools in a tool group			DWORD	PowerOn	
-						
-	-	0	0	1500	7/2	M

Description: Only relevant if the tool management (TMMA) function or the tool monitoring function (TMMO) is active.

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Maximum number of tools which have the same value (tool name) for system parameter \$TC_TP2.

0: There is no monitoring, that is there can be any number of tools in a group.

1: There can only be exactly 1 tool with one specific tool name.

2: There can only be exactly 2 tools with one specific tool name, therefore there can be 1 replacement tool.

n: There can only be exactly n tools with one specific tool name, therefore there can be n-1 replacement tools.

Related to:

MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK,

MD20310 \$MC_TOOL_MANAGEMENT_MASK

17504	MAX_TOOLS_PER_MULTITOOL			N02, N09	-	
-	Multitool function. Maximum number of tool locations per multitool.			DWORD	PowerOn	
-						
-	-	6	2	72	1/1	M

Description: "Multiple tools in one magazine location" function (multitool). Maximum number of locations / tools per multitool.

17510	TOOL_UNLOAD_MASK			N09	FBWsl	
-	Behavior of tool data when unloading			UDWORD	PowerOn	
-						
-	-	0	0	0xF	7/2	M

Description: When unloading a tool, certain tool data can be set to store fixed values.

Bit no. Bit value HEX Meaning

0 0 Tool status 'active' remains unchanged.

1 0x1 Tool status 'active' is deleted (\$TC_TP8, Bit 0).

1 0 Tool status 'was in use' remains unchanged.

1 0x2 Tool status 'was in use' is deleted (\$TC_TP8, Bit 7).

2 0 Tool parameter \$TC_TP10 remains unchanged.

1 0x4 Tool parameter \$TC_TP10 is set to zero. That is, the tool replacement change strategy is reset.

3 0 Tool parameter \$TC_TP11 remains unchanged.

1 0x8 Tool parameter \$TC_TP11 is set to zero. That is, the assignment to the tool subgroup is resolved.

17515	TOOL_RESETMON_MASK			N09	-	
-	Tool data behavior with RESETMON			UDWORD	PowerOn	
-						
-	-	0x14	0	0x49F	7/2	M

Description: The 5th parameter of the RESETMON command defines which tool status is to be reset. If the 5th parameter is omitted, it is replaced by the value in this MD. With the PI service "_N_TRESMON", work is always done with this value.

In that case, the bits are always assigned as the bits in the tool status \$TC_TP8[x].

Bit no.: 0 Bit value: 0 hex value: -

Meaning: Tool status "active" remains unchanged

Bit no.: 0 Bit value: 1 hex value: 'H1'

Meaning: Tool status "active" is deleted

Bit no.: 1 Bit value: 0 hex value: -

Meaning: Tool status "released" remains unchanged

Bit no.: 1 Bit value: 1 hex value: 'H2'

Meaning: Tool status "released" is set
 Bit no.: 2 Bit value: 0 hex value: -
 Meaning: Tool status "locked" remains unchanged
 Bit no.: 2 Bit value: 1 hex value: 'H4'
 Meaning: Tool status "locked" is deleted, if this is permitted by the monitoring data and the 4th parameter is set correspondingly.
 Bit no.: 3 Bit value: 0 hex value: -
 Meaning: Tool status "measure" remains unchanged
 Bit no.: 3 Bit value: 1 hex value: 'H8'
 Meaning: Tool status "measure" is set.
 Bit no.: 4 Bit value: 0 hex value: -
 Meaning: Tool status "prewarning limit" remains unchanged
 Bit no.: 4 Bit value: 1 hex value: 'H10'
 Meaning: Tool status "prewarning limit" is deleted, if this is permitted by the monitoring data and the 4th parameter is set.
 Bit no.: 5 Not permitted (tool status "tool is being changed")
 Bit no.: 6 Not permitted (tool status "tool is fixed-location-coded")
 Bit no.: 7 Bit value: 0 hex value: -
 Meaning: Tool status "was in use" remains unchanged
 Bit no.: 7 Bit value: 1 hex value: 'H80'
 Meaning: Tool status "was in use" is deleted
 Bit no.: 8 Bit value: 0 Not permitted (tool status "is in retract")
 Bit no.: 9 Bit value: 0 hex value: -
 Meaning: Tool status "locked is ignored" remains unchanged
 Bit no.: 9 Bit value: 1 hex value: 'H200'
 Meaning: Tool status "locked is ignored" is deleted
 Bit no.: 10 Bit value: 0 hex value: -
 Meaning: Tool status "to unload" remains unchanged
 Bit no.: 10 Bit value: 1 hex value: 'H400'
 Meaning: Tool status "to unload" is deleted
 Bit no.: 11 Not permitted (tool status "to load")
 Bit no.: 12 Bit value: 0 Not permitted (tool status "master tool")
 Bit no.: 13 Not permitted (reserved)
 The default setting corresponds to the previous behavior.
 Impermissible bits are filtered and not displayed in the limit mask.
 Bits not defined here are ignored when writing the machine data.

17520	TOOL_DEFAULT_DATA_MASK			N09	FBWsl	
-	Create new tool: default settings			UDWORD	PowerOn	
-						
-	-	0	0	0x1F	7/2	M

Description: When defining a tool for the first time (bits 0, 1, 2) or the magazine locations (bit 3) for the first time, certain data of the tool can be set to fixed default values. Bit 4 can couple the magazine location status 'Overlapping allowed' ('H2000') to the value of the magazine location status 'disabled' ('H1'). This can prevent simple applications from dealing with data which do not necessarily have to be assigned individual values.

Bit no.: 0 Bit value: 0 Hex value: -
 Meaning: Default value of tool status (\$TC_TP8), bit1=0 ='not released'
 Bit no.: 0 Bit value: 1 Hex value: 'H1'

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Meaning: Default value of tool status (\$TC_TP8), bit1=1 ='released'

Bit no.: 1 Bit value: 0 Hex value: -

Meaning: Default value of tool status (\$TC_TP8), bit6=0 ='not fixed-location-coded'

Bit no.: 1 Bit value: 1 Hex value: 'H2'

Meaning: Default value of tool status (\$TC_TP8), bit6=1 ='fixed-location-coded'

Bit no.: 2 Bit value: 0 Hex value: -

Meaning: The tool is only accepted in the tool group when the explicit write command is used for the tool name. Only then can it be loaded via programming.

Bit no.: 2 Bit value: 1 Hex value: 'H4'

Meaning: The tool is automatically accepted in the tool group corresponding to the tool name when it is defined for the first time. The tool can then be changed using the default name ("t" = t-No.).

The term 'tool name' (\$TC_TP2) can be hidden from the user. (This only makes sense if you do not use replacement tools or if the tool name is not written explicitly, as this may give rise to data consistency problems.)

Bit no.: 3 Bit value: 0 Only with TMMG: Default value of location type (\$TC_TP7)=9999=not defined

Bit no.: 3 Bit value: 1 Hex value: 'H8'

Meaning: Only with TMMG: Default value of location type (\$TC_TP7) = 1 and consequently the default value of magazine location type (\$TC_MPP2)=1. This means that all magazine locations can accept all tools.

Bit no.: 4 Bit value: 0 Hex value: -

Meaning: Only with TMMG + active consider adjacent location: With SET/RESET of the magazine location status 'disabled', the magazine location status 'Overlapping allowed' remains unchanged.

Bit no.: 4 Bit value: 1 Hex value: 'H10'

Meaning: Only with TMMG + active consider adjacent location: With SET/RESET of the magazine location status 'disabled', the magazine location status 'Overlapping allowed' is automatically SET/RESET.

17530	TOOL_DATA_CHANGE_COUNTER			EXP, N01	-	
-	Mark tool data change for HMI			UDWORD	PowerOn	
-						
-	-	0x1F	0	0x1F	7/2	M

Description:

HMI display support. This data enables individual data to be explicitly taken into account or not taken into account in the OPI variables (block C/S) toolCounter, toolCounterC, toolCounterM.

Bit no. : 0 Bit value: 0 Hex value: -

Meaning: Changes to the values of the tool status (\$TC_TP8) are not taken into account in toolCounterC

Bit no. : 0 Bit value: 1 Hex value: 'H1'

Meaning: Changes to the values of the tool status (\$TC_TP8) are taken into account in toolCounterC

Bit no. : 1 Bit value: 0 Hex value: -

Meaning: Changes to the values of the remaining number of tools (\$TC_MOP4) are not taken into account in toolCounterC

Bit no. : 1 Bit value: 1 Hex value: 'H2'

Meaning: Changes to the values of the remaining number of tools (\$TC_MOP4) are taken into account in toolCounterC

Bit no. : 2 Bit value: 0 Hex value: -

Meaning: Changes to the values of the tool data are not taken into account in the tool data update service

Bit no. : 2 Bit value: 1 Hex value: 'H4'

Meaning: Changes to the values of the tool data are taken into account in the tool data update service

Bit no. : 3 Bit value: 0 Hex value: -

Meaning: Changes to the values of the magazine data are not taken into account in the tool data update service

Bit no. : 3 Bit value: 1 Hex value: 'H8'

Meaning: Changes to the values of the magazine data are taken into account in the tool data update service.

Bit no. : 4 Bit value: 0 Hex value: -

Meaning: Changes to the values of the ISO tool offset data are not taken into account in the tool data update service

Bit no. : 4 Bit value: 1 Hex value: 'H10' Meaning: Changes to the values of the ISO tool offset data are taken into account in the tool data update service

The statements "Changes to the values of the tool status" and "Changes to the values of the remaining number of tools" refer not only to value changes effected by internal processes in the NC but also to value changes produced by writing the corresponding system variables.

17540	TOOLTYPES_ALLOWED			N09	-	
-	Permitted tool types			UDWORD	PowerOn	
-						
-	-	0x3FF	0	0x3FF	7/2	M

Description: Definition of the tool types permitted in NCK (see \$TC_DP1) with the tool offset selection. That is, tools of any type may be loaded in the NCK; but only the tools types defined here may be defined in the offset defining tool. A bit value = 1 means that the named tool type range is permitted for the offset selection. A bit value = 0 means that the named tool type range is rejected with an offset-capable alarm in the case of an attempted offset selection of a cutting edge of this type. The special value = 0, 9999 for the tool type means "undefined". Tool offsets with this tool type value generally cannot be selected.

Bit no.: 0 value 0x1 means: Tool types 1 to 99 permitted

Bit no.: 1 value 0x2 means: Tool types 100 to 199 permitted (milling tools)

Bit no.: 2 value 0x4 means: Tool types 200 to 299 permitted (drilling tools)

Bit no.: 3 value 0x8 means: Tool types 300 to 399 permitted

Bit no.: 4 value 0x10 means: Tool types 400 to 499 permitted (grinding tools)

Bit no.: 5 value 0x20 means: Tool types 500 to 599 permitted (turning tools)

Bit no.: 6 value 0x40 means: Tool types 600 to 699 permitted

Bit no.: 7 value 0x80 means: Tool types 700 to 799 permitted

Bit no.: 8 value 0x100 means: Tool types 800 to 899 permitted

Bit no.: 9 value 0x200 means: Tool types 900 to 999 permitted

Related to:

MD18100 \$MN_MM_NUM_CUTTING_EDGES_IN_TOA

17600	DEPTH_OF_LOGFILE_OPT			EXP, N01	-	
-	Depth of log memory optimization in REORG			DWORD	Reset	
-						
-	-	5	0	300	3/3	U

Description: The depth of memory optimization in the REORG log file
(=search depth to determine if a parameter to be written is already included in the REORG log file).

The value of the machine data can be increased if alarm 15110 occurs during program execution and if this alarm is to be avoided.

2.3 NC machine data

(Alternatively, the size of the REORG log file can be increased with MD28000 \$MC_MM_REORG_LOG_FILE_MEM, provided that the operator has the access rights required. This procedure should generally be preferred.)

Value

0 = No optimization,

That is each write operation creates an input into the REORG log file. Writing a variable value is therefore very time-efficient, but requires more memory.

0 < n ≤ Maximum value

When a new variable value is written, the n previously entered write operations (but maximally up to the previous indicatable block) are checked to determine if the parameter now to be written has already been written in the past. If this is the case, a new entry is not made in the REORG log file.

If this is not the case, an entry is made. A variable value can therefore be written in a very memory-efficient way, but requires more time.

Example:

MD17600 \$MN_DEPTH_OF_LOGFILE_OPT is assumed to be 5 and the following would be a typical program sequence:

```
x10      ; Executable NC block
r1=1     ; The first write command since x10
          ; -> Save old value in log file. 1st entry
r2=1     ; Determine that r2 is not yet included
          ; -> Save old value in log file. 2nd entry
r3=1     ; Determine that r3 is not yet included
          ; -> Save old value in log file. 3rd entry
r4=1     ; Determine that r4 is not yet included
          ; -> Save old value in log file. 4th entry
r5=1     ; Determine that r5 is not yet included
          ; -> Save old value in log file. 5th entry
r6=1     ; Determine that r6 is not yet included
          ; -> Save old value in log file. 6th entry
r2=1     ; Determine that r2 is already included
          ; (5th oldest entry) -> no renewed saving
r3=1     ; Determine that r3 is already included
          ; (4th oldest entry) -> no renewed saving
r1=2     ; As MD17600 $MN_DEPTH_OF_LOGFILE_OPT = 5 it is not detected that
          ; r1 is already included
          ; (6th oldest entry) -> save old value in log file.
          ; 7th entry
x20      ; Executable NC block
r1=3     ; The first write command since x20
          ; -> Save old value in log file. 1st entry
r1=4     ; Determine that r1 is already included
          ; (Only one entry) -> no renewed saving
```

The setting of the MD is particularly useful if a small number of various parameters are written frequently (e.g. in a loop) and if alarm 15110 occurs for this reason.

17610	DEPTH_OF_LOGFILE_OPT_PF			EXP, N01	-	
-	Depth of the PowerFail log memory optimization			DWORD	Reset	
-						
-	3	100, 10, 30	0	1000	1/1	M

Description: Depth of the memory optimization in the PowerFail log file (=search depth, to find out

whether a parameter to be written is already included in the PowerFail log file).
 It is possible to increase the value of the machine data if
 alarm 15120 occurs during program processing and if you wish to avoid it.
 (Alternatively, you can increase the size of the PowerFail log file itself
 by means of MD18232 \$MN_MM_ACTFILESYS_LOG_FILE_MEM, if you have the necessary access
 right
 and if the required memory is available.

Value

0 = same effect as value 1.

Writing of a variable value is therefore very time-efficient at the
 cost of the required memory.

0 < n <= Maximum value

= Writing of a new variable value leads, prior to saving of the new
 variable value in the PowerFail log file, to the last n write
 operations which have been being checked to see whether
 the new parameter to be written has already been written once.
 If yes, the new value is not entered again in the PowerFail log
 file, but the old value is overwritten with the new one.
 If no, the new value is entered.
 At the cost of the required time, writing of a variable value
 can therefore be designed very memory-efficiently.

Changing of the data can shorten/increase the time requirement of the present
 application.

Changing of the data can fill the available log buffers faster/more slowly.

Frequent occurring of alarm 15120 -> Increase values for index=0,1,2.

The value indicating the index to be changed can be deducted from the parameter of
 alarm 15120:

if it is the value for MD18232 \$MN_MM_ACTFILESYS_LOG_FILE_MEM[0], then increase the
 value for index 0;

or increase MD18232 \$MN_MM_ACTFILESYS_LOG_FILE_MEM[0] itself.

Index Meaning

0 Search depth in preprocessing buffer

1 Search depth in buffer for data changes within the range of tool change

2 Search depth in buffer for data changes of main processing (especially
 synchronized actions)

17900	VDI_FUNCTION_MASK			EXP, N09	H1	
-	Setting to VDI signals			UDWORD	PowerOn	
-						
-	-	0x0	0	0x1	7/2	M

Description:

Settings for VDI signals:

Bit 0 == 0:

The VDI signals motion command + / motion command - are already issued if there is a
 travel request (default).

Bit 0 == 1:

The VDI signals motion command + / motion command - are issued only if the axis
 actually moves.

2.3 NC machine data

17950	IS_AUTOMATIC_MEM_RECONFIG			EXP, N02	-	
-	System: automatic memory reconfiguration			BOOLEAN	PowerOn	
-						
-	-	TRUE	-	-	3/1	M

Description: Value = 0 : If machine data that redefines the buffered memory is modified, then generally the alarm 4400 is output which indicates that the user data will be deleted the next the software is started.

Value = 1 : If machine data that redefines the buffered memory is modified, then generally the alarm 4400 is not output. This means the data is retained the next time the software is started.

The preassigned value is selected model-specifically and generally it must not be changed.

17951	AUTOMATIC_MEM_RECONFIG_FILE			EXP	-	
-	Path and file name for internal data backup			STRING	PowerOn	
-						
-	-	/siemens/sinumerik/ sys_cache/nck/ content.reconfig	-	-	ReadOnly	S

Description: File name with file path where the data backup file is stored if the persistent memory is reconfigured.

18030	HW_SERIAL_NUMBER			N05	-	
-	Hardware series number			STRING	PowerOn	
-						
-	1	-	-	-	ReadOnly	M

Description: During power on of the control, a unique hardware serial number is stored in this MD:

- For Powerline series modules this is the serial number of the NCU module
- For Solutionline series modules this is the serial number of the CF card, or the unique number of the MCI module in the case of PC-based systems

This data cannot be written.

18040	VERSION_INFO			N05	-	
-	Version and product information			STRING	PowerOn	
-						
-	9	-	-	-	ReadOnly	M

Description: Version and model information for the system software component NCK

```
[0]:'Software component name[SI version]' - value: "Numeric
Control NCK" (can be overwritten as from "trol NCK" with 'SIxxx'. 'SI' stands for
Safety Integrated, 'xxx' for the SI version)
[1]:'Version (and date of the NCK installation on the target system)'
[2]:'Date and time of the NCK program generation'
[3]:'Name of the model and submodel' - values: 808d-me42, ...
828d-me42, ... 840DSL731,... 840D732, ...
[4]:'Hardware type' - values for NCK
in NCU: IDC, SOC2, ... simulations NCK: PC (Windows), PC (Linux), ... HOST development
NCK: HOST development
[5]:'Product type' - values: machine tool,
simulation, simulation development
[6]:'Subscaling 1' - values: file name. different
variants of a model can have data (properties) deviating from those of the model.
```

```

[7]:'Subscaling 2' - values: file name. different
variants of a model can have data (properties) deviating from those of the model.
[8]:'Subscaling 3' - values: file name. different
variants of a model can have data (properties) deviating from those of the model.
Applies to indices 6,7,8: Prerequisite for a value input is that the file exists when
the NCK starts.
Example for 840dsl on NCU hardware:
[0]:"Numeric Control NCK" (without NC-based Safety Integrated)
[0]:"Numeric ControSI112" (with NC-based Safety Integrated)
[1]:"112.00.00 "
[2]:"22/02/16 09:28:03"
[3]:"840DSL731"
[4]:"SOC2"
[5]:"machine tool"
[6]:""
[7]:""
[8]:""
Example for '840d virtual commissioning' (a simulation product) on a Windows computer:
[0]:"Numeric Control NCK" (without Safety Integrated)
[1]:"112.00.00"
[2]:"31/01/16 08:58:43"
[3]:"840D732"
[4]:"PC (Windows)"
[5]:"simulation"
[6]:"840evoVC_addon"
[7]:""
[8]:""

```

18042	CC_VERSION_INFO			N05	-	
-	Compile cycle version			STRING	PowerOn	
-						
-	10	-	-	-	7/2	M

Description: Version identifiers of the compile cycles

18045	EES_MODE_INFO			N05	-	
-	Mode in which the EES function works.			BYTE	PowerOn	
-						
-	-	0	-	-	ReadOnly	M

Description: Mode in which the function "Execution from External Storage" works.

Bit0 (LSB) = 1

Local EES active (LOCAL_DRIVE of the NCU is available EES drive)

Bit1 = 1

Global EES is active (all available drives (USB, incl. local EES, if existing)

Bit2 = 1

A global part program memory has been set up on an external memory.

Within the scope of the search path, the search for programs starts in the directories MPF/SPF/Work (WCS) in the NCK, and then in the corresponding directories in an external memory.

See also:

OD19334 \$ON_SYSTEM_FUNCTION_MASK Bit 9

2.3 NC machine data

OD19730 \$ON_HMI_FUNCTION_MASK[0] Bit 5

18050	INFO_FREE_MEM_DYNAMIC			N01, N02, N05	S7	
-	Display data of the free volatile memory			DWORD	PowerOn	
-						
-	-	6291456	0	268435456	ReadOnly	S

Description:

The data is used for

- a) the manufacturer's presetting of the memory size [bytes] available to the user for each channel after cold restart.
- b) displaying the available volatile memory [bytes]

The data cannot be written.

The contents of the data state how much volatile memory is available per channel for increasing the volatile user data storage area via MD.

It is advisable to check whether the available memory is sufficient before increasing, for example, the number of LUDs, number of functional parameters, or the size of the IPO buffer.

If necessary, proceed step by step:

- increase by 1, note (old) value
- NCK startup (= 'warm start' or NCK reset), read off new value
- memory requirement = new value - old value

On the first NCK startup or cold restart of the control (=deletion of user data), MD18210 \$MN_MM_USER_MEM_DYNAMIC is set by the NCK software so that at least the preset value results for MD18050 \$MN_INFO_FREE_MEM_DYNAMIC.

That is, the value is automatically increased if the initial value of MD18210 \$MN_MM_USER_MEM_DYNAMIC is too low.

The following also applies to multichannel systems:

- The preset value applies to each possible channel. That is, if there are ten possible channels, MD18210 \$MN_MM_USER_MEM_DYNAMIC is set by the NCK SW so that at least the 'preset value* ten' results for MD18050 \$MN_INFO_FREE_MEM_DYNAMIC.
- On activation of a channel, MD18210 \$MN_MM_USER_MEM_DYNAMIC is increased if necessary so that the memory free at the time of activation continues to be free (provided that the memory structure permits this) after the channel has become active.
- The activation of the maximum possible number of axes is ensured by increasing the data MD18210 \$MN_MM_USER_MEM_DYNAMIC if necessary so that memory free at the time of activation continues to be free (provided that the memory structure permits this) after the axis has become active.

'If necessary' in the previous sentences means that the adjustment is automatic if the channel/axis could not be activated with the current values of MD18210 \$MN_MM_USER_MEM_DYNAMIC/\$MN_INFO_FREE_MEM_DYNAMIC.

18060	INFO_FREE_MEM_STATIC			N01, N02, N05	S7	
-	Display data of the free nonvolatile memory			DWORD	PowerOn	
-						
-	-	7340032	0	48234496	ReadOnly	S

Description:

The preassigned value specifies how many bytes, as a minimum, are free for the user when the NCK runs up with a 'cold restart'.

The contents of the data state how much nonvolatile memory is available during startup for configuration of the active and passive file system and other functions.

e.g. MD18082 \$MN_MM_NUM_TOOL

e.g. MD18150 \$MN_MM_GUD_VALUES_MEM

e.g. MD18352 \$MN_MM_U_FILE_MEM_SIZE

e.g. MD38000 \$MA_MM_ENC_COMP_MAX_POINTS)

On the first NCK power-up or cold restart of the control (=deletion of user data) MD18230 \$MN_MM_USER_MEM_BUFFERED is set by the NCK software so that at least the default value results for MD18060 \$MN_INFO_FREE_MEM_STATIC.

Machine data for configuration of functions that require nonvolatile memory (tools, GUDs, compensations, ...) can be increased until this memory has all been allocated.

18070	INFO_FREE_MEM_DPR			EXP, N01, N02, N05	S7	
-	Display data of free memory in DUAL PORT RAM			DWORD	PowerOn	
-						
-	-	0	-	-	ReadOnly	M

Description: Output of the available memory in the Dual Port RAM (Bytes).
The data cannot be written.

18074	MM_TOOL_MANAGEMENT_TRACE_SZ			N02, N09	/FBWsl/, "Description of Functions, Tool Management"	
-	Max. size of the tool management diagnostic ring buffers			DWORD	PowerOn	
-						
-	2	25, 25	4	500	7/2	M

Description: The number of entries in the tool management diagnostic ring buffers.
Index 0 = IPO trace buffer size.
Index 1 = Prep trace buffer size.
There are separate IPO trace buffers in each channel, and a Prep trace buffer in channel 1 only.
The buffers are allocated only if bit 0 (0x0001) is ON at warm start, in both MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK and per-channel MD20310 \$MC_TOOL_MANAGEMENT_MASK.
Trace data is written to the buffers when bit 13 (0x2000) is ON in per-channel MD20310 \$MC_TOOL_MANAGEMENT_MASK.

18075	MM_NUM_TOOLHOLDERS			N02, N09	/FBWsl/, "Description of Functions, Tool Management"	
-	Max. number of tool holders per TOA			DWORD	PowerOn	
-						
-	-	16	1	20	7/2	M

Description: Max. number of definable tool holders per TO range.
The address extension e of commands Te=t, Me=6 (*) is the number of the tool holder.
t=T number/tool name - depending on the function activated in the NCK.
(*) if: MD22550 \$MC_TOOL_CHANGE_MODE=1 and MD22560 \$MC_TOOL_CHANGE_M_CODE=6 applies
Normally the tool holder of milling machines is a spindle.
Also see MD20090 \$MC_SPIND_DEF_MASTER_SPIND.
For turning machines the tool holder normally is not a spindle axis.
Also see MD20124 \$MC_TOOL_MANAGEMENT_TOOLHOLDER.
In this case it should reasonably apply that MD18075 \$MN_MM_NUM_TOOLHOLDERS is larger or equal to MD20090 \$MC_SPIND_DEF_MASTER_SPIND/MD20124 \$MC_TOOL_MANAGEMENT_TOOLHOLDER.
If bit 0 = 1 in MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK and MD20310 \$MC_TOOL_MANAGEMENT_MASK is set (=magazine management (TOOLMAN))
it will apply for reasonable values that MD18075 \$MN_MM_NUM_TOOLHOLDERS is smaller or equal to MD18076 \$MN_MM_NUM_LOCS_WITH_DISTANCE.
A maximum of MD18075 \$MN_MM_NUM_TOOLHOLDERS intermediate memory locations of the type spindle
(\$TC_MPP1[9998,x]=2) can then be defined.
Example: TOOLMAN inactive

2.3 NC machine data

MD20090 \$MC_SPIND_DEF_MASTER_SPIND shall be =3, MD18075 \$MN_MM_NUM_TOOLHOLDERS shall be =3.

Then T1=t, T2=t, T3=t, T=t can be programmed.

Example: TOOLMAN active, milling machine with Me=6 as tool change command

MD18075 \$MN_MM_NUM_TOOLHOLDERS shall be = 14, MD18076

\$MN_MM_NUM_LOCS_WITH_DISTANCE=20,

10 channels shall be active, all channels have TOOLMAN active and have the same tool and magazine data

(=one TO range for all channels). MD20090 \$MC_SPIND_DEF_MASTER_SPIND=1,.....10 for the channels.

Then up to 14 locations of the kind 'tool holder'/'spindle' can be defined in the intermediate magazine memory.

Additional 6 grippers or others can be defined.

These 20 locations max. can be linked to magazines.

In the channels T1=t, ... T14=t and Tt, or M1=6,....M14=6 and M6 can be programmed.

The PLC version used can limit the maximum number of tool holders.

18076	MM_NUM_LOCS_WITH_DISTANCE			N02, N09	/FBWsl/, "Description of Functions, Tool Management"	
-	Max. number of magazine locations per TOA with remote connection			DWORD	PowerOn	
-						
-	-	32	1	128	7/2	M

Description:

This machine data is reasonable, if the magazine management function, TOOLMAN, is active

- See MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK, MD20310 \$MC_TOOL_MANAGEMENT_MASK; for each bit 0 = 1.

Max. number of magazine locations (spindles, load locations,...) per TOA, that can have a remote connection to a magazine, defined by \$TC_MDPx[n,m].

Example: TOOLMAN shall be active: MD18076 \$MN_MM_NUM_LOCS_WITH_DISTANCE shall be = 5 and MD18077 \$MN_MM_NUM_DIST_REL_PER_MAGLOC = 2.

Two TO units shall be defined with three tool holders/spindles and two load locations each.

Furthermore, two grippers each shall be defined in each TO unit.

This means that a total of 14 locations shall be defined in the intermediate memory magazine/load magazine for the distances and assignments.

4 magazines shall be defined for TO unit 1, 6 magazines for TO unit 2.

With the value set to MD18076 \$MN_MM_NUM_LOCS_WITH_DISTANCE = 5 each tool holder and each load location

of the two TO units with up to two magazines (MD18077 \$MN_MM_NUM_DIST_REL_PER_MAGLOC = 2) per remote relationship

can be connected; (see \$TC_MDP1 and \$TC_MDP2) and for each tool holder max. two more grippers

(MD18077 \$MN_MM_NUM_DIST_REL_PER_MAGLOC = 2) can be assigned; (see \$TC_MLSR).

One tool holder / one spindle location can subsequently have two tables - one distance table for magazines and

one assignment table for grippers and similar locations.

18077	MM_NUM_DIST_REL_PER_MAGLOC			N02, N09	/FBWsl/, "Description of Functions, Tool Management"	
-	Max. no. of magazines in the distance table of a magazine loc.			DWORD	PowerOn	
-						
-	-	64	0	64	7/2	M

Description: This machine data will only be active, if the magazine management, TOOLMAN function is active.

- See MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK, MD20310 \$MC_TOOL_MANAGEMENT_MASK.

Two sizes are defined with this magazine data:

- 1.) Max. number of magazines in the distance table of a magazine location (spindle, load location, ...)
- 2.) Max. number of locations (gripper, ...) in the connection table of a spindle/tool holder location.

Example: MD18077 \$MN_MM_NUM_DIST_REL_PER_MAGLOC shall be = 3.

Two TO units shall be defined with two tool holder/spindles each and one load location each.

Furthermore four grippers shall be defined in each TO unit.

4 magazines shall be defined for TO unit 1; 6 magazines shall be defined for TO unit 2.

Then, each tool holder can define max. three distances for the magazines (see \$TC_MDP2) and additionally a max. of three relationships to the grippers (\$TC_MLSR).

18078	MM_MAX_NUM_OF_HIERARCHIES			N02, N09	/FBWsl/, "Description of Functions, Tool Management"	
-	The maximum number of hierarchies for magazine location types			DWORD	PowerOn	
-						
-	-	8	0	32	7/2	M

Description: The machine data only has effect if the function 'tool magazine management', TMMG, is activated - see MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK, MD20310 \$MC_TOOL_MANAGEMENT_MASK.

The maximum number of hierarchies for magazine location types.

In variable \$TC_MPTH[n,m], the allowed range of n is from 0 to MD18078 '\$MN_MM_MAX_NUM_OF_HIERARCHIES - 1'.

(The maximum of index m is given by MD18079 \$MN_MM_MAX_HIERARCHY_ENTRIES.)

Value = 0 means that the function 'magazine location type hierchies' is not available.

18079	MM_MAX_HIERARCHY_ENTRIES			N02, N09	/FBWsl/, "Description of Functions, Tool Management"	
-	The max. number of entries in a mag. location type hierarchy.			DWORD	PowerOn	
-						
-	-	8	1	32	7/2	M

Description: The machine data is only effective if the function 'tool magazine management', TMMG, is activated - see MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK, MD20310 \$MC_TOOL_MANAGEMENT_MASK - and if MD18078 \$MN_MM_MAX_NUM_OF_HIERARCHIES is greater than zero.

The maximum number of entries in a magazine location type hierarchy.

The permissible range of the index m of system parameter \$TC_MPTH[n,m] is from 0 to 'MD18079 \$MN_MM_MAX_HIERARCHY_ENTRIES - 1'.

(The maximum of index n is given by MD18078 \$MN_MM_MAX_NUM_OF_HIERARCHIES.)

18080	MM_TOOL_MANAGEMENT_MASK			N02, N09	K1, W1	
-	Step-by-step memory reservation for tool management (SRAM)			UDWORD	PowerOn	
-						
-	-	0x2	0	0xFFFF	7/1	M

Description: Activating the TM memory with "0" means:

The set TM data does not take up any memory space, TM is not available.

2.3 NC machine data

Bit 0=1: Memory for TM-specific data is provided, the MDs which reserve memory space have to be set accordingly (MD18086 \$MN_MM_NUM_MAGAZINE_LOCATION, MD18084 \$MN_MM_NUM_MAGAZINE)

Bit 1=1: Memory for monitoring data (WZMO) is provided

Bit 2=1: Memory for user data (CC data) is provided

Bit 3=1: Memory to consider adjacent location is provided

Bit 4=1: Memory and function enable for PI service _N_TSEARC = "Complex search for tools in magazines" is provided.

Bit 5=1: Wear monitoring active

Bit 6=1: Wear grouping available

Bit 7=1: Reserve memory for adapters for magazine locations

Bit 8=1: Memory for application and/or setup offsets

Bit 9=1: Tools associated with a revolver no longer leave their revolver location on tool change (display).

Bit 10=1: The multitool function is available

(other MDs can be used to modify the configuration).

Bit 10=0: The multitool function is not available

(the functional scope configured with other MDs is ineffective).

This broken down approach to memory reservation means that memory usage can be optimized in line with the functions used.

Example:

Default memory reservation for TM:

MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK = 3 (bit 0 + 1=1) means that TM and tool monitoring data are provided

MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK = 1 means tool management without tool monitoring function data

18082	MM_NUM_TOOL			N02, N09	FBWsl, S7	
-	Number of tools the NCK can manage (SRAM)			DWORD	PowerOn	
-						
-	-	30	0	1500	7/2	M

Description:

The NC cannot manage more tools than the number entered in the MD. A tool has at least one cutting edge.

Buffered user memory is used.

The maximum possible number of tools is equal to the number of cutting edges. The MD must also be set when TOOLMAN is not used.

The buffered data are lost when the machine data is changed.

Related to:

MD18100 \$MN_MM_NUM_CUTTING_EDGES_IN_TOA

18083	MM_NUM_MULTITool			N02, N09	-	
-	Multitool function. Number of tools the NCK can manage.			DWORD	PowerOn	
-						
-	-	15	0	750	1/1	M

Description:

"Multiple tools in one magazine location" function (multitool). Number of multitools the NCK can manage.

18084	MM_NUM_MAGAZINE			N02, N09	FBWsl	
-	Number of magazines the NCK can manage (SRAM)			DWORD	PowerOn	
-						
-	-	4	0	64	7/2	M

Description: Tool management (TOOLMAN and TMMG) - only when MD TOOLMAN and option TOOLMAN are set:
 Number of magazines which the NCK can manage (active and background magazines).
 This MD reserves the buffered memory for the magazines.
 Important: One loading and one buffer magazine are set up in in the tool management for each TOA unit. These magazines have to be taken into account here.
 Value = 0 -The tool management cannot be activated because no data can be created.
 Related to:
 MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK
 MD20310 \$MC_TOOL_MANAGEMENT_MASK

18085	MM_NUM_MULTITOOLOCATIONS			N02, N09	-	
-	Multitool function: Number of multitool locations the NCK can manage.			DWORD	PowerOn	
-						
-	-	30	0	1500	1/1	M

Description: "Multiple tools in one magazine location" function (multitool). Number of multitool locations the NCK can manage.

18086	MM_NUM_MAGAZINE_LOCATION			N02, N09	FBWsl	
-	Number of magazine locations the NCK can manage (SRAM)			DWORD	PowerOn	
-						
840dsl-71	-	-	0	600	7/2	M
840dsl-72	-	-	0	600	7/2	M
840dsl-73	-	30	0	1500	7/2	M

Description: TMMG - only when MD TOOLMAN and TOOLMAN option are set:
 Number of magazine locations which the NCK can manage.
 This machine data reserves the buffered memory for the magazine locations.
 Important: The number of all buffers and loading points also has to be included in the calculation here.
 Value = 0: Tool management cannot be activated because no data can be created.
 Related to:
 MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK
 MD20310 \$MC_TOOL_MANAGEMENT_MASK

18088	MM_NUM_TOOL_CARRIER			N02, N09	W1	
-	Maximum number of definable tool holders			DWORD	PowerOn	
-						
-	-	0	0	600	7/2	M

Description: Maximum number of definable toolholders for orientable tools in the TO area. The value is divided by the number of active TO units. The integer result states how many toolholders can be defined for each TO unit. The data for defining a toolholder are set with the system variables \$TC_CARR1, ... \$TC_CARR14.
 The data are stored in battery-backed memory.
 Application example(s):
 -

18090	MM_NUM_CC_MAGAZINE_PARAM			N02, N09	FBWsl	
-	Number of OEM magazine data (SRAM)			DWORD	PowerOn	
-						
-	-	0	0	64	2/2	M

2.3 NC machine data

Description: Number of magazine data (of type Integer) which are available to the user or the compile cycle.

This machine data increases the buffered memory requirement by `sizeof(int)*max. number of magazines`.

Related to:

MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK

MD18084 \$MN_MM_NUM_MAGAZINE

18091	MM_TYPE_CC_MAGAZINE_PARAM			N02, N09	-	
-	Type of OEM magazine data (SRAM)			DWORD	PowerOn	
-						
-	64	3, 3, 3, 3, 3, 3, 3, 3...	1	6	2/2	M

Description: Individual types can be assigned to the parameters in this way. Array index n can take values from 0 to that of MD18090 \$MN_MM_NUM_CC_MAGAZINE_PARAM.

The possible values of the MD = 1, 2, 3, 4, 5 and 6 stand for the NC language types: BOOL, CHAR, INT, REAL, STRING and AXIS. The type FRAME cannot be defined here. The type STRING can have a max. length of 31 characters. Example:

MD18090 \$MN_MM_NUM_CC_MAGAZINE_PARAM=1

MD18091 \$MN_MM_TYPE_CC_MAGAZINE_PARAM=5

Parameter \$TC_MAPC1 = "UserMagazine" can then be programmed.

Buffered work memory is used. A value change may but need not necessarily lead to a reconfiguration of the buffered memory.

Related to:

MD18090 \$MN_MM_NUM_CC_MAGAZINE_PARAM

MD18084 \$MN_MM_NUM_MAGAZINE

18092	MM_NUM_CC_MAGLOC_PARAM			N02, N09	FBWsl	
-	Number of OEM magazine location data			DWORD	PowerOn	
-						
-	-	0	0	64	2/2	M

Description: Number of magazine location data parameters (of type Integer) which are available to the user or the compile cycle.

This machine data increases the buffered memory requirement by `sizeof(int)*max. number of magazines`.

Related to:

MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK

MD18086 \$MN_MM_NUM_MAGAZINE_LOCATION

18093	MM_TYPE_CC_MAGLOC_PARAM			N02, N09	-	
-	Type of OEM magazine location data (SRAM)			DWORD	PowerOn	
-						
-	64	3, 3, 3, 3, 3, 3, 3...	1	6	2/2	M

Description: Individual types can be assigned to the parameters in this way. The array index n can accept values from 0 to the value of MD18090 \$MN_MM_NUM_CC_MAGAZINE_PARAM.

The possible values of the MD = 1, 2, 3, 4 and 6 represent the NC language types

- 1 BOOL,
- 2 CHAR,
- 3 INT,
- 4 REAL and
- 6 AXIS

The type STRING is explicitly not possible here. The value 5 is treated like 2. The type FRAME cannot be defined here.

Example:

MD18090 \$MN_MM_NUM_CC_MAGAZINE_PARAM=1

MD18091 \$MN_MM_TYPE_CC_MAGAZINE_PARAM=2

Buffered user memory is used. A value change leads to reconfiguration of the buffered memory.

Related to:

MD18092 \$MN_MM_NUM_CC_MAGLOG_PARAM

18094	MM_NUM_CC_TDA_PARAM			N02, N09	H2	
-	Number of OEM tool data (SRAM)			DWORD	PowerOn	
-						
-	-	0	0	64	2/2	M

Description: Number of tool-specific data (of type Integer) which can be created per tool, and which are available to the user or the compile cycle.

This machine data increases the buffered memory requirement by sizeof(double)*max. number of tools.

Related to:

MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK

MD18082 \$MN_MM_NUM_TOOL

18095	MM_TYPE_CC_TDA_PARAM			N02, N09	-	
-	Type of OEM tool data (SRAM)			DWORD	PowerOn	
-						
-	64	4, 4, 4, 4, 4, 4, 4, 4...	1	6	2/2	M

Description: Individual types can be assigned to the parameters in this way. The array index n can accept values from 0 to the value of MD18094 \$MN_MM_NUM_CC_TDA_PARAM.

The possible values of the MD = 1, 2, 3, 4, 5 and 6 represent the NC language types

- 1 BOOL,
- 2 CHAR,
- 3 INT,
- 4 REAL,
- 5 STRING and
- 6 AXIS.

The type FRAME cannot be defined here. The type STRING can be up to 31 characters long.

Example:

MD18094 \$MN_MM_NUM_CC_TDA_PARAM=1

MD18095 \$MN_MM_TYPE_CC_TDA_PARAM=5

"UserTool" can then be programmed for parameter \$TC_TPC1.

Buffered user memory is used. A value change leads to reconfiguration of the buffered memory.

Related to:

MD18094 \$MN_MM_NUM_CC_TDA_PARAM

MD18082 \$MN_MM_NUM_TOOL

18096	MM_NUM_CC_TOA_PARAM			N02, N09	G2	
-	Number of data per tool edge for compile cycles (SRAM)			DWORD	PowerOn	
-						
-	-	0	0	64	2/2	M

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Description: Number of TOA data (of type Real) which can be created per tool, and which are available to the user or the compile cycle.

This MD increases the buffered memory requirement by `sizeof(double)*max. number of cutting edges`.

Related to:

MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK

MD18100 \$MN_MM_NUM_CUTTING_EDGES_IN_TOA

18097	MM_TYPE_CC_TOA_PARAM			N02, N09	-	
-	Type of OEM data per cutting edge (SRAM)			DWORD	PowerOn	
-						
-	64	4, 4, 4, 4, 4, 4, 4...	1	6	2/2	M

Description: Work may only be done with the default setting.

Individual types can be assigned to the parameters in this way.

The array index n can accept values from 0 to the value of MD18096 \$MN_MM_NUM_CC_TOA_PARAM.

The possible values of the MD = 1, 2, 3, 4 and 6 represent the NC language types

- 1 BOOL,
- 2 CHAR,
- 3 INT,
- 4 REAL and
- 6 AXIS.

The type STRING is explicitly not possible here. The value 5 is treated like value 2).

The type FRAME cannot be defined here.

Example:

MD18096 \$MN_MM_NUM_CC_TOA_PARAM=1

MD18097 \$MN_MM_TYPE_CC_TOA_PARAM=2

"A" can then be programmed for parameter \$TC_DPC1.

Buffered user memory is used. A value change leads to reconfiguration of the buffered memory.

Related to:

MD18096 \$MN_MM_NUM_CC_TOA_PARAM

MD18100 \$MN_MM_NUM_CUTTING_EDGES_IN_TOA

18098	MM_NUM_CC_MON_PARAM			N02, N09	FBWsl	
-	Number of monitoring data per tool for compile cycles			DWORD	PowerOn	
-						
-	-	0	0	64	2/2	M

Description: Number of monitoring data (of type Integer) which can be created per tool, and which are available to the user or the compile cycle.

This MD increases the buffered memory requirement by `sizeof(int)*max. number of cutting edges`.

Related to:

MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK

MD18100 \$MN_MM_NUM_CUTTING_EDGES_IN_TOA

18099	MM_TYPE_CC_MON_PARAM			N02, N09	FBWsl	
-	Type of OEM monitor data (SRAM)			DWORD	PowerOn	
-						
-	64	3, 3, 3, 3, 3, 3, 3...	1	6	2/2	M

Description:

Individual types can be assigned to the parameters in this way. The array index n can accept values from 0 to the value of MD18098 \$MN_MM_NUM_CC_MON_PARAM.

Possible values of the MD = 1, 2, 3, 4 and 6 represent the NC language types

- 1 BOOL,
- 2 CHAR,
- 3 INT,
- 4 REAL and
- 6 AXIS.

The FRAME type cannot be defined here.

(The type STRING is explicitly not possible here. The value 5 is treated like value 2.)

Example:

MD18098 \$MN_MM_NUM_CC_MON_PARAM=1

MD18099 \$MN_MM_TYPE_CC_MON_PARAM=2

"A" can then be programmed for the parameter \$TC_MOPCl.

Buffered user memory is used. A value change leads to reconfiguration of the buffered memory.

Related to:

MD18100 \$MN_MM_NUM_CUTTING_EDGES_IN_TOA

MD18098 \$MN_MM_NUM_CC_MON_PARAM

18100	MM_NUM_CUTTING_EDGES_IN_TOA			N02, N09	W1	
-	Number of tool offsets that the NCK can manage (SRAM)			DWORD	PowerOn	
-						
-	-	30	0	3000	7/2	M

Description:

.Defines the number of tool cutting edges. This machine data reserves approximately 250 bytes of battery-buffered memory per TOA block for each tool cutting edge, irrespective of the tool type

Tools with cutting edges of type 400-499 (= grinding tools) also occupy the location of a cutting edge.

Example:

Defining 10 grinding tools each of which has one cutting edge. Then at least:

MD18082 \$MN_MM_NUM_TOOL = 10

MD18100 \$MN_MM_NUM_CUTTING_EDGES_IN_TOA = 20

Also see MD18082 \$MN_MM_NUM_TOOL

Buffered user memory is used

Special cases:

The buffered data is lost if this machine data is altered!

18102	MM_TYPE_OF_CUTTING_EDGE			N02, N09	W1	
-	Type of D No. programming (SRAM)			DWORD	PowerOn	
-						
-	-	0	0	1	7/2	M

Description:

This MD activates the 'flat D number management'.

The default value is zero. This means that the NCK manages the T and D numbers.

The NCK only accepts a value > 0 if bit 0 is not set in MD18080

\$MN_MM_TOOL_MANAGEMENT_MASK. That means the tool management function cannot be active at the same time.

Value: Meaning

0: No 'flat D number management' active

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1: 'Flat D number' function is active

18104	MM_NUM_TOOL_ADAPTER			N02, N09	W1	
-	Tool adapters in TO area (SRAM)			DWORD	PowerOn	
-						
-	-	-1	-1	1500	7/2	M

Description:

Number of tool adapters in the TO area.

The function can only be used if there are magazine locations in the NCK.

The tool management function must be active.

Bit 7 (=0x80) also has to be set in MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK for the setting to become active.

Adapter data blocks and the cutting edge-specific basic/adaptor dimensions are mutually exclusive. This means that if adapter data are defined, then the parameters \$TC_DP21, \$TC_DP22, \$TC_DP23 and their values are available in the NCK.

-1:

An adapter is automatically assigned to each magazine location.

This means that internally the same number of adapters are provided as magazine locations are provided by MD18086 \$MN_MM_NUM_MAGAZINE_LOCATION.

0:

No adapter data definitions possible. The cutting edge-specific parameters \$TC_DP21, \$TC_DP22, \$TC_DP23 are available provided that adapters are used outside the active TMMG.

> 0:

-

Note: The setting >0 is currently not supported by HMI Operate.

See the machine data:

MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK,

MD20310 \$MC_TOOL_MANAGEMENT_MASK,

MD18084 \$MN_MM_NUM_MAGAZINE,

MD18086 \$MN_MM_NUM_MAGAZINE_LOCATION

18105	MM_MAX_CUTTING_EDGE_NO			N02, N09	W1	
-	Maximum value of D number			DWORD	PowerOn	
-						
-	-	9	1	32000	7/2	M

Description:

Maximum value of the D number.

This does not affect the maximum number of D numbers per cutting edge.

The monitoring of the D number assignment associated with this value is only active when the D numbers are redefined. This means that existing data sets are not subsequently checked if the MD is changed.

The following settings are advantageous:

MD18105 \$MN_MM_MAX_CUTTING_EDGE_NO is equal to

MD18106 \$MN_MM_MAX_CUTTING_EDGE_PER_TOOL.

If MD18105 \$MN_MM_MAX_CUTTING_EDGE_NO is selected > MD18106 \$MN_MM_MAX_CUTTING_EDGE_PER_TOOL, then the difference between offset number D and cutting-edge number CE should be known.

See also language commands CHKDNO, CHKDM, GETDNO, SETDNO, DZERO.

The machine data is not evaluated with the function "flat D number", and therefore has no significance there.

The MD can affect the memory requirement:

If the relation between the two, above-mentioned MDs changes from "less than or equal to" to "greater than" or vice versa, then this affects the non-buffered memory requirement.

Related to:

MD18106 \$MN_MM_MAX_CUTTING_EDGE_PER_TOOL

18106	MM_MAX_CUTTING_EDGE_PERTOOL			N02, N09	W1	
-	Maximum number of D numbers per tool			DWORD	PowerOn	
-						
-	-	9	1	12	7/2	M

Description:

Maximum number of cutting edges (D offsets) per tool (per T number).

This enables more safety to be achieved in the data definition. The value can be set to 1 if only tools with one cutting edge are used. This prevents more than one cutting edge being assigned to a tool in the data definition.

The following settings are advantageous: MD18105 \$MN_MM_MAX_CUTTING_EDGE_NO is equal to MD18106 \$MN_MM_MAX_CUTTING_EDGE_PER_TOOL. If MD18105 \$MN_MM_MAX_CUTTING_EDGE_NO is selected > MD18106 \$MN_MM_MAX_CUTTING_EDGE_PER_TOOL, then the difference between offset number D and cutting-edge number CE should be known.

See also language commands CHKDNO, CHKDM, GETDNO, SETDNO, DZERO.

The machine data is not evaluated with the function "flat D number", and therefore has no significance there.

The data can affect the memory requirement.

The MD can affect the memory requirement.

If the relation between the two, above-mentioned MDs changes from "less than or equal to" to "greater than" or vice versa, then this affects the non-buffered memory requirement.

Related to:

MD18105 \$MN_MM_MAX_CUTTING_EDGE_NO

18108	MM_NUM_SUMCORR			N02, N09	W1	
-	Resulting offsets in TO area (SRAM)			DWORD	PowerOn	
-						
-	-	-1	-1	9000	7/2	M

Description:

Total number of resulting offsets in the NCK.

The value = -1 means that the number of resulting offsets is equal to the number of cutting edges multiplied by the number of resulting offsets per cutting edge.

A value > 0 and < "number of cutting edges multiplied by the number of resulting offsets per cutting edge" means that a maximum "number of resulting offsets per cutting edge" can be defined per cutting edge but do not have to be. This means that buffered memory can be used economically. Only those cutting edges for which explicit data have been defined have a resulting offset data block.

Buffered memory is reserved. The memory requirement for a resulting offset doubles if "setup offset active" has also been configured, see MD18112 \$MN_MM_KIND_OF_SUMCORR.

See also:

MD18100 \$MN_MM_NUM_CUTTING_EDGES_IN_TOA,

MD18110 \$MN_MM_MAX_SUMCORR_PER_CUTTEDGE

18110	MM_MAX_SUMCORR_PER_CUTTEDGE				N02, N09	S7	
-	Max. number of additive offsets per edge (SRAM)				DWORD	PowerOn	
-							
-	-	1	1	6	7/2	M	

Description:

Maximum number of resulting offsets per cutting edge.

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If MD18108 \$MN_MM_NUM_SUMCORR > 0 then:
 The data is not memory defining, but is only used for monitoring.
 If MD18108 \$MN_MM_NUM_SUMCORR = -1 then:
 The data is memory defining.
 See also
 MD18108 \$MN_MM_NUM_SUMCORR,
 MD18100 \$MN_MM_NUM_CUTTING_EDGES_IN_TOA.

18112	MM_KIND_OF_SUMCORR			N02, N09	W1	
-	Properties of resulting offsets in TO area (SRAM)			UDWORD	PowerOn	
-						
-	-	0	0	0x1F	7/2	M

Description:

Properties of the resulting offsets in NCK.
 Bit 0=0 "Resulting offsets fine" are backed up when the tool data are backed up.
 Bit 0=1 "Resulting offsets fine" are backed up when the tool data are backed up.
 Bit 1=0 Set-up offsets are backed up when the tool data are backed up.
 Bit 1=1 Set-up offsets are not backed up when the tool data are backed up.
 Bit 2=0 If work is done with the function tool management (TOOLMAN) and/or tool monitoring (TMMO), existing "resulting offsets fine/setup offsets" are not affected when the tool status is set to "active".
 Bit 2 =1 Existing resulting offsets are set to zero when the tool status is set to "active".
 Bit 3=0 If work is done with the function "TOOLMAN" +"adapter", the "resulting offsets fine"/setup offsets are transformed.
 Bit 3=1 No transformation of the "resulting offsets fine"/setup offsets
 Bit 4=0 No set-up offset data sets
 Bit 4=1 Set-up offset data sets are additionally created. Whereby the resulting offset is composed of the sum of the set-up offset + "resulting offset fine"
 Changing the status of bits 0, 1, 2, 3 does not change the memory structure.
 Changing the status of bit 4 triggers restructuring of the buffered memory after the next PowerOn.
 See also
 MD18100 \$MN_MM_NUM_CUTTING_EDGES_IN_TOA
 MD18108 \$MN_MM_NUM_SUMCORR
 MD18110 \$MN_MM_MAX_SUMCORR_PER_CUTTEDGE
 MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK,
 MD20310 \$MC_TOOL_MANAGEMENT_MASK,
 MD18086 \$MN_MM_NUM_MAGAZINE_LOCATION,
 MD18104 \$MN_MM_NUM_TOOL_ADAPTER

18113	MM_NUM_DRS_GRINDING_PATHS			N02, N09	-	
-	Number of different path names for grinding tool dressing programs.			DWORD	PowerOn	
-						
-	-	10	0	1500	2/2	M

Description:

The number of different path names in the NCK that can be defined for the storage of the dressing programs of the grinding tools. See system parameter \$TC_TPG_DRSPATH. Grinding tools can only be defined if MD17540 \$MN_TOOLTYPES_ALLOWED has the bit value 'H90' set.
 Buffered memory is reserved if MD17540 \$MN_TOOLTYPES_ALLOWED has enabled the function.

18114	MM_ENABLE_TOOL_ORIENT				N02, N09	W1, F2	
-	Assign tool cutting edge orientation				DWORD	PowerOn	
-							
-	-	0	0	3	7/2	M	

Description: The function allows an orientation deviating from the default value to be assigned to each tool cutting edge.

Value = 0:
The tool orientation function is inactive.

Value = 1:
The system parameter \$TC_DPV[n, m] is assigned to each tool cutting edge D=m of the tool T=n, with the aid of which one of 6 possible tool orientations in positive or negative coordinate direction can be defined.

Value = 2:
Not only the system parameter \$TC_DPV[n, m] but also the additional three system parameters \$TC_DPV3[n, m], \$TC_DPV4[n, m] and \$TC_DPV5[n, m] are assigned to each tool cutting edge D=m of the tool T=n, with the aid of which any spatial tool orientation can be defined

T, D are the NC addresses T and D with which the tool change or the tool selection and the offset selection are programmed.

Value = 3:
Not only the system parameters \$TC_DPV[n, m] and \$TC_DPV3 - \$TC_DPV5 but also the additional three system parameters \$TC_DPVN3[n, m], \$TC_DPVN4[n, m] and \$TC_DPVN5[n, m] are assigned to each tool cutting edge D=m of the tool T=n, with the aid of which a vector (normal vector) can be defined that is preferably perpendicular to the tool orientation. The normal vector may be modified so that it lies in the plane formed by the orientation and the programmed normal vector but perpendicular to the orientation

The orientation and the possibly modified normal vector together define a complete orientation coordinate system. The machine data affects the requirement for battery-backed memory.

18116	MM_NUM_TOOL_ENV			N02, N09	W1	
-	Number of tool environments in the TO area (SRAM)			DWORD	PowerOn	
-						
-	-	0	0	600	7/2	M

Description: Total number of tool environments in the NCK.
Battery-backed memory is reserved.

18118	MM_NUM_GUD_MODULES			N02	S7	
-	Number of GUD files in active file system (SRAM)			DWORD	PowerOn	
-						
-	-	7	1	9	7/2	M

Description: A GUD block corresponds to a file in which user-defined data can be stored. 9 GUD blocks are available of which 3 are already assigned to specific users/applications.

UGUD_DEF_USER (block for user)
SGUD_DEF_USER (block for SIEMENS)
MGUD_DEF_USER (block for machine manufacturer)

Special cases:
The number of GUD modules is determined by the GUD module with the highest number entered.

Example:
If the following GUD modules are defined,

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UGUD

MGUD

GUD5

GUD8

then the machine data must be set to a value of 8, signifying a memory requirement of 8 x 120 bytes = 960 bytes.

It is therefore advisable to selected the "lowest" possible GUD module. If GUD modules UGUD and MGUD have not been assigned elsewhere, then they may be used for this purpose.

Related to:

MD18150 \$MN_MM_GUD_VALUES_MEM

(Memory space for user variables)

18120	MM_NUM_GUD_NAMES_NCK			N02	S7	
-	Number of global user variable names (SRAM)			DWORD	PowerOn	
-						
-	-	60	60	32000	7/2	M

Description:

Defines the number of user variables for NCK global user data (GUD). Approximately 80 bytes of memory per variable are reserved in the SRAM for the names of the variables. The additional memory required for the value of the variable depends on the data type of the variable. The number of available NCK global user data is exhausted on reaching the limit value set in MD18120 \$MN_MM_NUM_GUD_NAMES_NCK or MD18150 \$MN_MM_GUD_VALUES_MEM (memory space for user variables).

Buffered user memory is used.

Special cases:

The battery-backed data are lost if this machine data is altered.

Related to:

MD18150 \$MN_MM_GUD_VALUES_MEM

(Memory space for user variables)

18130	MM_NUM_GUD_NAMES_CHAN			N02	S7	
-	Number of channel-specific user variable names (SRAM)			DWORD	PowerOn	
-						
-	-	450	450	32000	7/2	M

Description:

Defines the number of user variable names for channel-specific global user data (GUD). Approximately 80 bytes of memory are reserved in the SRAM for each variable name. The additional memory required for the value of the variable is equal to the size of the data type of the variable multiplied by the number of channels. This means that each channel has its own memory available for the variable values. The number of available channel-specific global user data is exhausted on reaching the limit value set in MD18130 \$MN_MM_NUM_GUD_NAMES_CHAN or MD18150 \$MN_MM_GUD_VALUES_MEM (memory space for user variables).

The name created with the DEF statement is valid for all channels.

The memory requirement for the variable value is equal to the size of the data type multiplied by the number of channels.

Buffered user memory is used.

Special cases:

The battery-backed data are lost if this machine data is altered.

Related to:

MD18150 \$MN_MM_GUD_VALUES_MEM

(Memory space for user variables)

18150	MM_GUD_VALUES_MEM			N02	A2	
-	Memory location for global user variable values (SRAM)			DWORD	PowerOn	
-						
-	-	430	430	32000	7/2	M

Description: The specified value reserves memory space for the variable values of the global user data (GUD). The dimensioning of the memory depends to a large extent on the data types used for the variables.

Overview of the memory requirements of the data types:

Data type	Memory requirement
REAL	8 bytes
INT	4 bytes
BOOL	1 byte
CHAR	1 byte
STRING	1 byte per character, 100 characters permitted per string
AXIS	4 bytes
FRAME	up to 1KB depending on control model

The total memory required by a channel or axis-specific global user variable is the memory requirement of the variables multiplied by the number of channels or axes. The number of global user variables available is given when the limit defined in MD18120 \$MN_MM_NUM_GUD_NAMES_NCK, MD18130 \$MN_MM_NUM_GUD_NAMES_CHAN, MD18140 \$MN_MM_NUM_GUD_NAMES_AXIS or MD18150 \$MN_MM_GUD_VALUES_MEM is reached.

Buffered user memory is used.

Special cases:

The buffered data are lost if this machine data is altered!

Related to:

MD18118 \$MN_MM_NUM_GUD_MODULES

(Number of GUD blocks)

MD18120 \$MN_MM_NUM_GUD_NAMES_NCK

(Number of global user variables)

MD18130 \$MN_MM_NUM_GUD_NAMES_CHAN

(Number of channel-specific user variables)

18156	MM_NUM_R_PARAM_NCK			N01	K1	
-	Number of global R variables (SRAM)			DWORD	PowerOn	
-						
-	-	0	0	32535	7/2	M

Description: Defines the number of available global R-parameters in the NCK.

18160	MM_NUM_USER_MACROS			N02	S7	
-	Number of macros (DRAM)			DWORD	PowerOn	
-						
-	-	82	82	32000	7/2	M

Description: Defines the number of macros that can be stored in the files _N_SMAC_DEF, _N_MMACH_DEF und _N_UMACH_DEF. Each of these files which is opened occupies at least one kbyte memory space for the file code in the part program memory. Another kbyte of memory is reserved for the file when the one kbyte file code limit is exceeded.

The dynamic user memory is used. For the stated number of macros, approximately 375 bytes are reserved per macro for management tasks.

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18170	MM_NUM_MAX_FUNC_NAMES			N02	V2, A2	
-	Number of miscellaneous functions (cycles, DRAM)			DWORD	PowerOn	
-						
-	-	450	450	32000	7/2	M

Description:

The data limits the maximum number of special functions over and above the predefined functions (such as sine, cosine, etc.) which can be used in

- cycle programs
- compile cycle software.

The function names are entered in the global NCK dictionary and must not conflict with the names that already exist.

The SIEMENS cycle package contains special functions that are taken into account by the default setting of the MD.

The data are stored in unbuffered memory. Approximately 150 bytes are required for each special function for management purposes.

Related to:

MD18180 \$MN_MM_NUM_MAX_FUNC_PARAM
(Number. of additional parameters)

18180	MM_NUM_MAX_FUNC_PARAM			N02	V2	
-	Number of additional parameters for cycles according to MD 18170			DWORD	PowerOn	
-						
-	-	6750	6750	32000	7/2	M

Description:

Defines the maximum number of parameters required for the special functions in

- cycle programs
- compile cycle software.

50 parameters are required for the special functions of the SIEMENS cycle package, software version 1.

The data are stored in unbuffered memory. 72 bytes of memory are reserved for each parameter.

Related to:

MD18170 \$MN_MM_NUM_MAX_FUNC_NAMES
(Number of special functions)

18190	MM_NUM_PROTECT_AREA_NCK			N12, N02, N06, N09	A3	
-	Number of control-specific protection areas (SRAM)			DWORD	PowerOn	
-						
-	-	0	0	10	7/2	M

Description:

This machine data defines how many control-specific protection areas have been created.

Related to:

MD28200 \$MC_MM_NUM_PROTECT_AREA_CHAN (number of channel-specific protection areas)
MD28210 \$MC_MM_NUM_PROTECT_AREA_ACTIVE (number of simultaneously active protection areas)

References:

/FB/, A3, "Axis Monitoring, Protection Areas"

18192	MM_NUM_CC_MULTITool_PARAM			N02, N09	-	
-	Number of multitool-specific parameters \$TC_MTPCn per multitool.			DWORD	PowerOn	
-						
-	-	0	0	64	1/1	M

Description: Number of multitool-specific parameters \$TC_MTPCn which can be created per multitool and are available to the user or compile cycle.

18193	MM_TYPE_CC_MULTITool_PARAM			N02, N09	-	
-	Type of OEM multitool data			DWORD	PowerOn	
-						
-	64	4, 4, 4, 4, 4, 4, 4, 4...	1	6	1/1	M

Description: User or OEM data in tool management.
Type of multitool-location-specific Siemens user data \$TC_MTPCn configured with MD18192 \$MN_MM_NUM_CC_MULTITool_PARAM.
Each parameter can be assigned its own type. The permissible types are

Type	Value of the machine data
(See types of	
the NC language)	

BOOL	1
CHAR	2
INT	3
REAL	4
STRING	5 (permits identifiers up to 31 characters in length)
AXIS	6
FRAME	not defined

See also: MD18192 \$MN_MM_NUM_CC_MULTITool_PARAM and MD18083 \$MN_MM_NUM_MULTITool, MD18085 \$MN_MM_NUM_MULTITool_LOCATIONS
Buffered working memory is used. A value change leads to reconfiguration of the buffered memory.

18194	MM_NUM_CC_MTLOC_PARAM			N02, N09	-	
-	Number of multitool-loc.-spec. parameters \$TC_MTPPCn per multitool location			DWORD	PowerOn	
-						
-	-	0	0	64	1/1	M

Description: Number of multitool-location-specific parameters \$TC_MTPPCn which can be created per multitool location and are available to the user or compile cycle.

18195	MM_TYPE_CC_MTLOC_PARAM			N02, N09	-	
-	Type of OEM multitool location data			DWORD	PowerOn	
-						
-	64	4, 4, 4, 4, 4, 4, 4, 4...	1	6	1/1	M

Description: User or OEM data in tool management.
Type of multitool-location-specific Siemens user data \$TC_MTPPCn configured with MD18194 \$MN_MM_NUM_CC_MTLOC_PARAM.
Each parameter can be assigned its own type. The permissible types are

Type	Value of the machine data
(See types of	

2.3 NC machine data

the NC language)

```

-----
BOOL                1
CHAR                2
INT                 3
REAL               4

```

STRING is explicitly not possible here; the value 5 is treated as the value 2)

```

AXIS                6

```

```

FRAME              not defined

```

See also: MD18194 \$MD_MM_NUM_CC_MTLOC_PARAM and MD18083 \$MD_MM_NUM_MULTITOOL, MD18085 \$MD_MM_NUM_MULTITOOL_LOCATIONS

Buffered user memory is used. A change in value leads to reconfiguration of the buffered memory.

18200	MM_NUM_CCS_MAGAZINE_PARAM			N02, N09	FBWsl	
-	Number of Siemens OEM magazine data (SRAM)			DWORD	PowerOn	
-						
-	-	0	0	10	2/2	M

Description: Only when MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK, bit 0=1 ('H1') and bit 2=1 ('H4'), is set for TMMG (and option is set):

User or OEM data in the tool management (TMMG).

Number of Siemens OEM magazine data (standard format IN_Int).

See also: MD18090 \$MN_MM_NUM_CC_MAGAZINE_PARAM, MD18084 \$MN_MM_NUM_MAGAZINE

Buffered user memory is used

18201	MM_TYPE_CCS_MAGAZINE_PARAM			N02, N09	FBWsl	
-	Type of Siemens OEM magazine data (SRAM)			DWORD	PowerOn	
-						
-	10	3, 3, 3, 3, 3, 3, 3...	1	6	2/2	M

Description: Only when MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK, bit 0=1 ('H1') and bit 2=1 ('H4'), is set for TMMG (and option is set):

User or OEM data in the tool management.

Type of magazine-specific Siemens user data configured by MD18200

\$MN_MM_NUM_CCS_MAGAZINE_PARAM.

Each parameter can be assigned its own type. The permissible types are:

Type	Value of the machine data

(See types

of the NC language)

```

-----
BOOL                1
CHAR                2
INT                 3
REAL               4

```

STRING 5 (permits identifier up to 31 characters long)

```

AXIS                6

```

```

FRAME              not defined

```

See also: MD18200 \$MN_MM_NUM_CCS_MAGAZINE_PARAM, MD18084 \$MN_MM_NUM_MAGAZINE

Buffered user memory is used. A value change leads to reconfiguration of the buffered memory.

18202	MM_NUM_CCS_MAGLOC_PARAM			N02, N09	FBWsl	
-	No. of Siemens OEM magazine location data (SRAM)			DWORD	PowerOn	
-						
-	-	0	0	10	2/2	M

Description: Only when MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK, bit 0=1 ('H1') and bit 2=1 ('H4'), is set for TMMG (and option is set):
 User or OEM data in the tool management.
 Number of Siemens OEM magazine location data (standard format IN_Int).
 See also: MD18092 \$MN_MM_NUM_CC_MAGLOC_PARAM, MD18086 \$MN_MM_NUM_MAGAZINE_LOCATION
 Buffered working memory is used. A change in value leads to reconfiguration of the buffered memory.

18203	MM_TYPE_CCS_MAGLOC_PARAM			N02, N09	FBWsl	
-	Type of Siemens OEM magazine location data (SRAM)			DWORD	PowerOn	
-						
-	10	3, 3, 3, 3, 3, 3, 3, 3...	1	6	2/2	M

Description: Only when MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK, bit 0=1 ('H1') and bit 2=1 ('H4'), is set for TMMG (and option is set)
 User or OEM data in the tool management.
 Type of magazine-specific Siemens user data configured by MD18202 \$MN_MM_NUM_CCS_MAGLOC_PARAM.
 Each parameter can be assigned its own type. The permissible types are:
 Type Value of the machine data
 (See types of the NC language)

 BOOL 1
 CHAR 2
 INT 3
 REAL 4
 • (STRING is explicitly impossible here; value 5 is treated like value 2)
 AXIS 6
 FRAME not defined
 See also: MD18202 \$MN_MM_NUM_CCS_MAGLOC_PARAM, MM_NUM_MAGLOC
 Buffered user memory is used. A change in value leads to reconfiguration of the buffered memory.

18204	MM_NUM_CCS_TDA_PARAM			N02, N09	FBWsl	
-	Number of Siemens OEM tool data (SRAM)			DWORD	PowerOn	
-						
-	-	0	0	10	2/2	M

Description: Only when MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK, bit 2=1 ('H4'), is set:
 User or OEM data of the tools.
 Number of Siemens OEM TDA (=tool-specific) data (standard format Int).
 See also: MD18094 \$MN_MM_NUM_CC_TDA_PARAM, MD18082 \$MN_MM_NUM_TOOL
 Buffered user memory is used

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18205	MM_TYPE_CCS_TDA_PARAM			N02, N09	FBWsl	
-	Type of Siemens OEM tool data (SRAM)			DWORD	PowerOn	
-						
-	10	4, 4, 4, 4, 4, 4, 4, 4...	1	6	2/2	M

Description: Only when MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK, bit 2=1 ('H4'), is set:
 User or OEM data in the tool management.
 Type of tool-specific Siemens user data configured by MD18204 \$MN_MM_NUM_CCS_TDA_PARAM.
 Each parameter can be assigned its own type. The permissible types are

Type	Value of the machine data

(See types of the NC language)

```

-----
  BOOL                                1
  CHAR                                2
  INT                                 3
  REAL                                4
  STRING                             5 (permits identifiers up to 31 characters long)
  AXIS                                6
  FRAME                               not defined
  See also: MD18204 $MN_MM_NUM_CCS_TDA_PARAM, MD18082 $MN_MM_NUM_TOOL
  Buffered user memory is used. A change in value leads to reconfiguration of the
  buffered memory.
```

18206	MM_NUM_CCS_TOA_PARAM			N02, N09	FBWsl	
-	No. of Siemens OEM data per cutting edge (SRAM)			DWORD	PowerOn	
-						
-	-	0	0	10	2/2	M

Description: Only when MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK, bit 2=1 ('H4'), is set:
 User or OEM data of the tools.
 Number of Siemens OEM TOA data (standard format IN_Real).
 See also: MD18096 \$MN_MM_NUM_CC_TOA_PARAM, MD18100 \$MN_MM_NUM_CUTTING_EDGES_IN_TOA
 Buffered user memory is used

18207	MM_TYPE_CCS_TOA_PARAM			N02, N09	FBWsl	
-	Type of Siemens OEM data per cutting edge (SRAM)			DWORD	PowerOn	
-						
-	10	4, 4, 4, 4, 4, 4, 4, 4...	1	6	2/2	M

Description: Only when MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK, bit 2=1 ('H4'), is set:
 User or OEM data in the tool management.
 Type of cutting-edge-specific Siemens user data configured by MD18206 \$MN_MM_NUM_CCS_TOA_PARAM.
 Each parameter can be assigned its own type. The permissible types are

Type	Value of the machine data

(See types of the NC language)

```

-----
  BOOL                                1
  CHAR                                2
  INT                                 3
  REAL                                4
```

- (STRING is explicitly impossible here; value 5 is treated like value 2)
- AXIS 6
 FRAME not defined
 See also: MD18206 \$MN_MM_NUM_CCS_TOA_PARAM, MD18100 \$MN_MM_NUM_CUTTING_EDGES_IN_TOA
 Buffered user memory is used. A change in value leads to reconfiguration of the buffered memory.

18208	MM_NUM_CCS_MON_PARAM			N02, N09	FBWsl	
-	No. of Siemens OEM monitor data (SRAM)			DWORD	PowerOn	
-						
-	-	0	0	10	2/2	M

Description: Only when MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK, bit 0 = 1 or bit 1 = 1 and bit 2=1 ('H4'), is set:
 User or OEM data in the tool management.
 Number of Siemens OEM monitoring data; standard format IN_Int).
 See also: MD18098 \$MN_MM_NUM_CC_MON_PARAM, MD18100 \$MN_MM_NUM_CUTTING_EDGES_IN_TOA
 Buffered user memory is used

18209	MM_TYPE_CCS_MON_PARAM			N02, N09	FBWsl	
-	Type of Siemens OEM monitor data (SRAM)			DWORD	PowerOn	
-						
-	10	3, 3, 3, 3, 3, 3, 3, 3...	1	6	2/2	M

Description: Only when MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK, bit 0 = 1 or bit 1 = 1 and bit 2=1 ('H4'), is set:
 User or OEM data in the tool management.
 Type of monitoring-specific Siemens user data configured by MD18208 \$MN_MM_NUM_CCS_MON_PARAM.
 Each parameter can be assigned its own type. The permissible types are

Type	Value of the machine data

(See types of the NC language)

```

-----
BOOL          1
CHAR          2
INT           3
REAL          4

```

- (STRING is explicitly impossible here; value 5 is treated like value 2)
- AXIS 6
 FRAME not defined
 See also: MD18208 \$MN_MM_NUM_CCS_MON_PARAM, MD18100 \$MN_MM_NUM_CUTTING_EDGES_IN_TOA
 Buffered user memory is used. A change in value leads to reconfiguration of the buffered memory.

18210	MM_USER_MEM_DYNAMIC			EXP, N02	S7	
-	Volatile user memory [kB]			DWORD	PowerOn	
NDLD						
-	-	-	0	135072	ReadOnly	M

Description: The volatile memory in the NCK.
 MD18210 \$MN_MM_USER_MEM_DYNAMIC makes the size of the volatile memory available to the user visible.
 There are various types of user data in this memory area, for example.

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- Local user data
- Ipo block buffers
- User macros
- Diagnostics functions such as trace recording of times,.....
- Tool management trace
- Communication with 1-n HMIs; Value of n: See MD10134 \$MN_MM_NUM_MMC_UNITS.
- Reorg Log file (required for internal purposes of the NC program sequence)
- ...

Each additionally active channel occupies a substantial amount of memory. With channel activation, the value of the MD is automatically increased accordingly and the value of MD18050 \$MN_INFO_FREE_MEM_DYNAMIC is retained if possible.

Each activated axis requires part of this memory. With axis activation, the value of the MD is automatically increased accordingly and the value of MD18050 \$MN_INFO_FREE_MEM_DYNAMIC is retained if possible.

The possible values of MD18050 depend on the hardware and software configurations.

Information alarms 6030, 6035 can indicate that the desired total memory may not be available on the model or on the hardware. See also MD11415 \$MN_SUPPRESS_ALARM_MASK_2, bit 22

The value of NCK is automatically set after startup of the NCK without memory retention (cold restart). The value is then such that the free memory defined in MD18050 \$MN_INFO_FREE_MEM_DYNAMIC is available to the user. To enlarge this user memory further, MD19240 \$ON_USER_MEM_DYNAMIC must be increased.

(See the description of MD18050 \$MN_INFO_FREE_MEM_DYNAMIC).

The data in the volatile memory are lost when the NCK is switched off.

Related to:

The available dynamic memory can be taken from MD18050 \$MN_INFO_FREE_MEM_DYNAMIC (display data of the free dynamic memory).

18230	MM_USER_MEM_BUFFERED			N02	S7	
-	Buffered user memory			DWORD	PowerOn	
NDLD						
-	-	-	0	32768	ReadOnly	M

Description:

Nonvolatile user memory (in kB).

Various types of user data are stored in this memory area.

For example:

- NC part programs
- R variables
- Global user data (GUD)
- Definitions of the protection zones
- Correction tables EEC, CEC, QEC
- Tool / magazine data

...

This data is retained after control power-off.

(Provided the data backup (battery,...) is in good working order, i.e. the Init switch is correctly set on the control).

This means that they are available unchanged after restart.

Each additional active channel occupies some nonvolatile memory. With channel activation, the value of the MD is automatically increased accordingly; the value of MD18060 \$MN_INFO_FREE_MEM_STATIC is retained if possible.

To enlarge this user memory further, MD19250 \$ON_USER_MEM_BUFFERED must be increased.

The available values depend on the hardware and software configurations.

Information alarms 6030, 6035 can indicate that the desired total memory may not be available on the model or on the hardware. See also MD11415 \$MN_SUPPRESS_ALARM_MASK_2, bit 22

See also the meaning of MD18060 \$MN_INFO_FREE_MEM_STATIC

18232	MM_ACTFILESYS_LOG_FILE_MEM			N02	-	
-	System: logfile size in SRAM [KB]			DWORD	PowerOn	
-						
-	3	400, 50, 30	0	32000	2/2	M

Description: Buffered log file for buffered data of the active file system (in kbytes)

Systems with slow data buffering media store changed buffered data in the internal system SRAM. When the buffer is full, all data of the active file system are made persistent. The buffer backs up the data persistence of the last persistence operation until the next power fail. After a power fail (power failure or power OFF), data that had not yet been made persistent at the time of the power fail can be restored from this buffer.

The log file serves to minimize or totally avoid data loss in the event of power fail. 1000 entries require approximately 70 kB.

A value greater than 0 is only practicable if MD18231 \$MN_MM_USER_MEM_BUFFERED_TYPEOF[1] = 1.

A value equal to 0 means that the buffered data are not voltage loss safe if MD18231 \$MN_MM_USER_MEM_BUFFERED_TYPEOF[1] = 1 (typical for SINUMERIK solution line)

Example:

With MD18232 \$MN_MM_ACTFILESYS_LOG_FILE_MEM[2] = 0, data changes from synchronized actions can be excluded from the power fail data backup.

An improved time response of the synchronized actions would be advantageous. This should only be set if the buffered data that are changed by the synchronized action are not safety-related.

Index Meaning

0 Preprocessing buffer

1 Buffer for data changes within the range of the tool change and retract

2 Buffer for data changes of the main processing (synchronized actions)

See also MD17610 \$MN_DEPTH_OF_LOGFILE_OPT_PF, which can be used to optimize the behavior.

18233	IS_CONTINUOUS_DATA_SAVE_ON			EXP, N02	-	
-	System: Automatic saving of persistent data			BOOLEAN	PowerOn	
-						
-	3	TRUE, TRUE, TRUE	FALSE	TRUE	7/2	M

Description: The machine data is relevant only if MD18231 \$MN_MM_USER_MEM_BUFFERED_TYPEOF = 1.

Value = 0 : Continuous saving of persistent data on disk/flash/etc. is deactivated.

The dynamic response of the software on systems of the SolutionLine range can thus be improved.

Value = 1 : Continuous automatic saving of persistent data on disk/flash/etc. is active.

Index 0 = Reserved

Index 1 = Definition for the buffered data of the active file system (incl. machine data).

Index 2 = Definition for the buffered data of the passive file system (part programs, cycles, ...).

The default value should be changed only for diagnostic purposes or for optimizing the dynamic response.

The default value should be changed only if the system is operated in an environment,

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where no spontaneous shutdown of the system / spontaneous power failure occurs.
Otherwise, persistent data can be lost.

18234	MM_MEMORY_CONFIG_MASK	EXP, N02	-
-	Setting of backup of persistent data of the current file system	UDWORD	PowerOn
-			
-	-	0x00	0x00
		0x01	2/2
			M

Description: Bit 0 is defined for MD18231 \$MN_USER_MEM_BUFFERED_TYPEOF[1]=1. If the buffer size defined by MD18232 \$MN_MM_ACTFILESYS_LOG_FILE_MEM contains many data in the respective buffer, they are made persistent by the NCK software as follows:
Value = 0: synchronous data backup
Value = 1: asynchronous data backup
Asynchronous means not synchronized with the NCK sequence. Synchronous means that the preprocessing task in NCK is stopped for the time required for making the data persistent. Which setting is preferable depends on the hardware used and/or on the actual NCK application.

18235	MM_INCOA_MEM_SIZE	EXP	-
-	Size of the DRAM memory for INCOA applications [Kbyte]	DWORD	PowerOn
-			
-	-	20480	0
		25600	7/2
			M

Description: On cold restart of the control system, the default value of MD18235 \$MN_MM_INCOA_MEM_SIZE specifies the DRAM memory range that is available for INCOA applications in total.
This MD can only be read. With the diagnostics function "Read current actual value" the memory space actually occupied by the INCOA applications can be determined.

18237	MM_CYC_DATA_MEM_SIZE	EXP, N02	-
-	Cycle/display setting data in SRAM [kB]	DWORD	PowerOn
-			
-	-	0	0
		128	ReadOnly
			M

Description: Size of the buffered memory for 'Setting data for cycles and display' [kB]

18270	MM_NUM_SUBDIR_PER_DIR	N02	S7
-	Number of subdirectories (DRAM)	DWORD	PowerOn
-			
-	-	256	0
		-	ReadOnly
			M

Description: Defines the maximum number of subdirectories that can be created in a directory or subdirectory of the passive file system.
This value is for information only, and cannot be changed.
See also MD18280 \$MN_MM_NUM_FILES_PER_DIR (number of files per directory).

18280	MM_NUM_FILES_PER_DIR	N02	S7
-	Number of files per directory (DRAM)	DWORD	PowerOn
-			
-	-	512	0
		-	ReadOnly
			M

Description: Defines the maximum number of files that can be created in a directory or subdirectory of the passive file system.
This value is for information only, and cannot be changed.
See also MMD18270 \$MN_MM_NUM_SUBDIR_PER_DIR (number of subdirectories per directory).

18310	MM_NUM_DIR_IN_FILESYSTEM			N02	S7	
-	Number of directories in passive file system (SRAM)			DWORD	PowerOn	
-						
-	-	30	30	256	7/2	M

Description: The machine data limits the number of directories in the passive file system.

It can be used to reserve memory in the buffered user memory for the management of the directories. The directories and subdirectories of the passive file system set up by the system are included in this machine data. The memory required for the management of the directories can be calculated as follows:

Corresponds with:

MD18270 \$MN_MM_NUM_SUBDIR_PER_DIR

18320	MM_NUM_FILES_IN_FILESYSTEM			N02	S7	
-	Number of files in passive file system (persistent)			DWORD	PowerOn	
-						
-	-	750	64	1000	7/2	M

Description: Defines the number of files available in the part program memory. This machine data is used to reserve memory in persistent memory - approximately 320 bytes per file - for managing the file memory. Each file created requires a minimum of one kbyte of memory for the file code. If the one kbyte limit for the file code is exceeded another kbyte is reserved for the file.

Nonvolatile user memory is used.

Special cases:

The backed-up data are lost if this machine data is altered.

Related to:

MD18280 \$MN_MM_NUM_FILES_PER_DIR
(Number of files in directories)

18321	MM_NUM_SYSTEM_FILES_IN_FS			N02	-	
-	Number of system files			DWORD	PowerOn	
-						
-	1	500	500	1000	1/1	M

Description: Index 0: Number of temporary system files in the passive file system (see also MD18355 \$MN_MM_T_FILE_MEM_SIZE);

e.g.: system traces

18342	MM_CEC_MAX_POINTS			N01, N02	K3	
-	Max. number of interpolation points on sag compensation (SRAM)			DWORD	PowerOn	
-						
-	62	128, 128, 128, 128, 128, 128, 128, 128...	0	2000	7/2	M

Description: The MD defines the memory space available for the compensation tables.

When MD18342 \$MN_MM_CEC_MAX_POINTS = 0, no memory is set up for the table. The sag compensation function cannot then be used.

Caution!

If MD18342 \$MN_MM_CEC_MAX_POINTS[t] is changed, when the system is powered up, the buffered NC user memory is automatically reset. This deletes all user data in the buffered user memory (e.g. drive and HMI machine data, tool offsets, part programs etc.).

Related to:

SD41300 \$SN_CEC_TABLE_ENABLE[t]

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Evaluation of the sag compensation table (t) enabled.

References:

/FB/, S7, "Memory Configuration"

18352	MM_U_FILE_MEM_SIZE			EXP, N02	S7	
-	End user memory for part programs/cycles/files			DWORD	PowerOn	
-						
-	3	2560, 0, 0	0	15360	2/2	M

Description: The machine data is not available or not defined for PowerLine control models.
 End user memory for files in the passive file system (in kbyte).
 There are various types of user data in this memory area.
 E.g.: NC part programs, cycle programs of the end user, diagnostic files, ...
 The settable values depend on the hardware and software configurations.
 The settable size of the part program memory is, apart from the upper limit value, determined by the MD18230 \$MN_MM_USER_MEM_BUFFERED and can also be determined by a software option.
 Index 0 = Size of the battery-backed part program / cycle program memory
 Index 1 = Reserved
 Index 2 = Reserved

18353	MM_M_FILE_MEM_SIZE			EXP, N02	S7	
-	Memory capacity for machine manufacturer's cycles/files			DWORD	PowerOn	
-						
-	3	512, 0, 0	0	15360	1/1	M

Description: The machine data is not available or not defined for PowerLine control models.
 Memory for machine manufacturer files in the passive file system (in kbyte).
 The machine manufacturer's files are in this memory area of the passive file system.
 E.g.: cycle programs
 The settable values depend on the hardware and software configurations.
 The settable size of the memory is, apart from the upper limit value, determined by the MD18230 \$MN_MM_USER_MEM_BUFFERED.
 Index 0 = Minimum size of the battery-backed (persistent) part program / cycle program memory
 Index 1 = Reserved
 Index 2 = Reserved

18354	MM_S_FILE_MEM_SIZE			EXP, N02	-	
-	Size of the Siemens cycle program memory [0] Size of the volatile cycle program memory [1] Reserved [2] Size of the volatile memory for system files (NRK fault file, etc.)			DWORD	PowerOn	
-						
-	3	3072, 0, 30	0	3072	7/2	M

Description: Memory for the control manufacturer's files in the passive file system (in KB)
 The control manufacturer's files are in this memory area of the passive file system, e.g: cycle programs, system files
 The settable values depend on the hardware and software configurations.
 The settable size of the memory, apart from the upper limit value

for index = 0 is limited by the size of the available nonvolatile memory (see siehe MD18230\$MN_MM_USER_MEM_BUFFERED),

for Index = 2, is limited by the wize of the internally available buffered (SRAM) memory.

Index 0 = Size of the nonvolatile cycle program memory

Index 2 = Size of the non-volatile memory for system files in the SRAM. E.g. storage location of the NRK fault file.

18355	MM_T_FILE_MEM_SIZE	EXP, N02	-
-	Memory size for temporary files	DWORD	PowerOn
-			
-	-	4608	4608
		1048576	7/2
			M

Description: Memory for temporary files in the passive file system (in KB), e.g. compilations of cycles (preprocessing), cycles on CF, system traces

18357	MM_EES_FILE_MEM_SIZE	EXP, N02	-
-	Size of the buffer memory for EES	DWORD	PowerOn
-			
-	-	0	-
		-	ReadOnly
			S

Description: Size of the buffer memory for the "Execution from External Storage" function in the passive file system (in kB)

18360	MM_EXT_PROG_BUFFER_SIZE	N01	B1, K1
-	FIFO buffer size for processing from external source (DRAM)	DWORD	PowerOn
-			
-	-	50	30
		1000000	7/2
			M

Description: A FIFO buffer is needed on the NCK for each program level (main program or subprogram) that is processed externally (reload mode).
The size of the FIFO buffer is defined in kbyte by MD18360 \$MN_MM_EXT_PROG_BUFFER_SIZE. MD18360 \$MN_MM_EXT_PROG_NUM sets the number of FIFO buffers which are simultaneously available.

During startup, the memory size determined by multiplying MD18360 \$MN_MM_EXT_PROG_BUFFER_SIZE by MD18362 \$MN_MM_EXT_PROG_NUM is reserved in the DRAM. If the stated value exceeds the available memory space, alarm 4077 is output when writing the machine data.

References:

/PGA/Programming Guide Advanced, Section 2

18362	MM_EXT_PROG_NUM	N01	K1
-	Number of program levels which can be simultaneously processed	BYTE	PowerOn
-			
-	-	1	0
		13	7/2
			M

Description: Number of program levels that can simultaneously be in "Processing from external source" mode NCK-wide.

System resources are reserved for the HMI <-> NCK communication during "Processing from external source". Machine data MD18362\$MN_MM_EXT_PROG_NUM defines the number of possible program levels.

The memory space is reserved during power on by MD18360 \$MN_MM_EXT_PROG_BUFFER_SIZE * MD18362 \$MN_MM_EXT_PROG_NUM. If it is found during program execution that all system resources are occupied, this is reported by alarm 14600.

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18370	MM_PROTOD_NUM_FILES			N02	D1, OEM	
-	Max.no. of log files in passive file system			DWORD	PowerOn	
-						
-	10	2, 2, 0, 0, 0, 2, 2, 2...	2, 2, 0, 0, 0, 2, 2, 2...	10, 10, 10, 10, 10, 10, 10...	1/1	M

Description: Maximum number of log files in the passive file system.

The individual values involve the users of the logging function, which are assigned the following functions:

0: Reserved for system functions: simultaneous recording, simulation, synchronized actions analysis

1: Reserved for system functions: determining program runtimes, multi-step editor

2: Reserved for OEM applications

3: Reserved for OEM applications

4: Reserved for OEM applications

5: Reserved for system functions: trace

6: Reserved for system functions: trace

7: Reserved for system functions: trace

8: Reserved for system functions: trace

9: Reserved for system functions: action log

18371	MM_PROTOD_NUM_ETPD_STD_LIST			N02	D1, OEM	
-	Number of standard data lists ETPD.			DWORD	PowerOn	
-						
-	10	25, 6, 0, 0, 0, 25, 25, 25...	25, 6, 0, 0, 0, 25, 25, 25...	25, 25, 25, 25, 25, 25, 25...	1/1	M

Description: Number of standard data lists in the OPI module ETPD (user-specific).

The individual values involve the users of the logging function, which are assigned the following functions:

0: Reserved for system functions: simultaneous recording, simulation, synchronized action analysis

1: Reserved for system functions: determining program runtimes, multi-step editor

2: Reserved for OEM applications

3: Reserved for OEM applications

4: Reserved for OEM applications

5: Reserved for system functions: trace

6: Reserved for system functions: trace

7: Reserved for system functions: trace

8: Reserved for system functions: trace

9: Reserved for system functions: action log

18372	MM_PROTOD_NUM_ETPD_OEM_LIST			N02	D1, OEM	
-	Number of OEM data lists ETPD.			DWORD	PowerOn	
-						
-	10	0, 0, 0, 0, 0, 0, 0, 0...	0	20	1/1	M

Description: Number of OEM data lists in the OPI module ETPD (user-specific).

The individual values involve the users of the logging function, which are assigned the following functions:

0: Reserved for system functions: simultaneous recording, simulation, synchronized action analysis

1: Reserved for system functions: determining program runtimes, multi-step editor

- 2: Reserved for OEM applications
- 3: Reserved for OEM applications
- 4: Reserved for OEM applications
- 5: Reserved for system functions: trace
- 6: Reserved for system functions: trace
- 7: Reserved for system functions: trace
- 8: Reserved for system functions: trace
- 9: Reserved for system functions: action log

18373	MM_PROTOC_NUM_SERVO_DATA			N02	D1	
-	Number of servo data for log			DWORD	PowerOn	
-						
-	10	0, 0, 0, 0, 0, 10, 10, 10...	0	20	1/1	M

Description: Number of servo data, which must be recordable at the same time (user-specific).
The individual values involve the users of the logging function, which are assigned the following functions:

- 0: Reserved for system functions: simultaneous recording, simulation, synchronized action analysis
- 1: Reserved for system functions: determining program runtimes, multi-step editor
- 2: Reserved for OEM applications
- 3: Reserved for OEM applications
- 4: Reserved for OEM applications
- 5: Reserved for system functions: trace
- 6: Reserved for system functions: trace
- 7: Reserved for system functions: trace
- 8: Reserved for system functions: trace
- 9: Reserved for system functions: action log

18374	MM_PROTOC_FILE_BUFFER_SIZE			N02	-	
-	Size of log file buffer			DWORD	PowerOn	
-						
-	10	15000, 8000, 8000, 8000, 8000, 15000, 15000, 15000...	5000	1073741824	1/1	M

Description: Size of the data buffer between the IPO and preprocessing time levels of a log file [Bytes].
The individual values involve the users of the logging function, which are assigned the following functions:

- 0: Reserved for system functions: simultaneous recording, simulation, synchronized action analysis
- 1: Reserved for system functions: determining program runtimes, multi-step editor
- 2: Reserved for OEM applications
- 3: Reserved for OEM applications
- 4: Reserved for OEM applications
- 5: Reserved for system functions: trace
- 6: Reserved for system functions: trace
- 7: Reserved for system functions: trace
- 8: Reserved for system functions: trace
- 9: Reserved for system functions: action log

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18375	MM_PROTOK_SESS_ENAB_USER			N02	-	
-	Users enabled for sessions			BYTE	PowerOn	
-						
-	10	0, 0, 0, 0, 0, 1, 1, 1...	0	1	1/1	M

Description: Users that are available for session management

The individual values involve the users of the logging function, which are assigned the following functions:

- 0: Reserved for system functions: simultaneous recording, simulation, synchronized action analysis
- 1: Reserved for system functions: determining program runtimes, multi-step editor
- 2: Reserved for OEM applications
- 3: Reserved for OEM applications
- 4: Reserved for OEM applications
- 5: Reserved for system functions: trace
- 6: Reserved for system functions: trace
- 7: Reserved for system functions: trace
- 8: Reserved for system functions: trace
- 9: Reserved for system functions, action log

18390	MM_COM_COMPRESS_METHOD			EXP, N01, N02	-	
-	Supported compression methods.			UDWORD	PowerOn	
-						
-	-	0x01	0	0x7FFFFFFF	2/2	M

Description: Setting for the compression methods to be supported.

18391	TRACE_PATHNAME			EXP	-	
-	Path for trace generation			STRING	PowerOn	
NBUP						
-	-	-	-	-	1/1	M

Description: Path on which traces are saved.

The trace files are used for problem analysis by NCK development.

18392	TRACE_SAVE_OLD_FILE			EXP	-	
-	Old trace files are retained			BOOLEAN	PowerOn	
NBUP						
-	-	FALSE	0	-	1/1	M

Description: The old traces are no longer overwritten when new traces are created; instead, a version extension is added to the trace file name.

At the current time this function is executed only if files are saved on the host file system (see TRACE_PATHNAME).

The trace files are used for problem analysis by NCK development.

18400	MM_NUM_CURVE_TABS			N02, N09	M3	
-	Number of curve tables (SRAM)			DWORD	PowerOn	
-						
-	-	0	0	-	1/1	M

Description: Defines the maximum number of curve tables that can be stored in the SRAM of the entire system. A curve table consists of a number of curve segments.

Related to:

MD18402 \$MN_MM_NUM_CURVE_SEGMENTS

18402	MM_NUM_CURVE_SEGMENTS	N02, N09	M3, B3
-	Number of curve segments (SRAM)	DWORD	PowerOn
-			
-	-	0	0
-	-	-	1/1
-	-	-	M

Description: Defines the maximum number of curve segments that can be stored in the SRAM of the entire system. The curve segments are a component of a curve table.

Related to

MD18400 \$MN_MM_NUM_CURVE_TABS

18403	MM_NUM_CURVE_SEG_LIN	N02, N09	M3
-	Number of linear curve segments (SRAM)	DWORD	PowerOn
-			
-	-	0	0
-	-	-	1/1
-	-	-	M

Description: Number of linear curve segments in the SRAM available throughout the NCK.

A curve table may consist of "normal" curve segments and linear segments. The number of "normal" curve segments in the SRAM is defined by MD18402

\$MN_MM_NUM_CURVE_SEGMENTS, these curve segments can accommodate polynomials.

Linear curve segments can only accommodate straight lines.

These linear curve segments are stored in battery-backed memory.

18404	MM_NUM_CURVE_POLYNOMS	N02, N09	M3, B3
-	Number of curve table polynomials (SRAM)	DWORD	PowerOn
-			
-	-	0	0
-	-	-	1/1
-	-	-	M

Description: Defines the maximum total number of polynomials for curve tables that can be stored in the SRAM of the entire system. The polynomials are a component of a curve segment. A maximum of 3 polynomials are required for a curve segment. As a rule, only 2 polynomials are used for each curve segment.

Related to

MD18400 \$MN_MM_NUM_CURVE_TABS

MD18402 \$MN_MM_NUM_CURVE_SEGMENTS

18406	MM_NUM_CURVE_TABS_DRAM	N02, N09	M3
-	Number of curve tables (DRAM)	DWORD	PowerOn
-			
-	-	0	0
-	-	-	1/1
-	-	-	M

Description: Number of curve tables in the DRAM available throughout the NCK.

The curve tables are stored either in the buffer memory or in the dynamic memory.

This MD is used to set the number of curve tables in the dynamic memory (DRAM).

18408	MM_NUM_CURVE_SEGMENTS_DRAM	N02, N09	M3
-	Number of curve segments (DRAM)	DWORD	PowerOn
-			
-	-	0	0
-	-	-	1/1
-	-	-	M

Description: Number of polynomial curve segments in the DRAM available throughout the NCK.

The curve segments are stored either in the buffer memory or in the dynamic memory.

This MD is used to set the number of segments in the dynamic memory (DRAM).

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18409	MM_NUM_CURVE_SEG_LIN_DRAM	N02, N09	M3
-	Number of linear curve segments (DRAM)	DWORD	PowerOn
-			
-	-	0	0
-	-	-	1/1
-	-	-	M

Description: Number of linear curve segments in the DRAM available throughout the NCK.

A curve table may consist of "normal" curve segments and linear segments. The number of "normal" curve segments in the DRAM is defined by MD18408 \$MN_MM_NUM_CURVE_SEGMENTS_DRAM, these curve segments can accommodate polynomials. Linear curve segments can only accommodate straight lines.

The curve segments are stored either in the buffer memory or in the dynamic memory. This MD defines the number of curve segments in the dynamic memory (DRAM).

18410	MM_NUM_CURVE_POLYNOMS_DRAM	N02, N09	M3
-	Number of curve table polynomials (DRAM)	DWORD	PowerOn
-			
-	-	0	0
-	-	-	1/1
-	-	-	M

Description: Number of polynomials for curve tables in the DRAM available throughout the NCK.

The polynomials for curve tables are stored in the buffer memory or in the dynamic memory.

This MD is used to set the number of polynomials for curve tables in the dynamic memory (DRAM).

18450	MM_NUM_CP_MODULES	N02, N09	-
-	Max. number of CP modules	DWORD	PowerOn
-			
-	-	4	0
-	-	48	1/1
-	-	-	M

Description: Number of CP coupling modules available within the NCK

The MD defines the max. permissible number of CP couplings and reserves the required dynamic memory (DRAM).

18452	MM_NUM_CP_MODUL_LEAD	N02, N09	-
-	Maximum number of CP master values	DWORD	PowerOn
-			
-	-	4	0
-	-	99	1/1
-	-	-	M

Description: Number of NCK-wide available CP master values.

This MD defines the max. permissible number of CP master values and reserves the required dynamic memory (DRAM).

18600	MM_FRAME_FINE_TRANS	N02	K2, M5
-	Fine offset with FRAME (SRAM)	DWORD	PowerOn
-			
-	-	1	0
-	-	1	7/2
-	-	-	M

Description: 0: The fine offset cannot be entered or programmed.

Disabling fine offset saves a maximum of 10KB SRAM, (depending on MD28080 \$MC_MM_NUM_USER_FRAMES).

1: The fine offset is possible for settable frames, the basic frame and the programmable frame by operator input or via program.

18601	MM_NUM_GLOBAL_USER_FRAMES			N02	K2, M5	
-	Number of global predefined user frames (SRAM).			DWORD	PowerOn	
-						
-	-	0	0	100	7/2	M

Description: Number of global predefined user frames.
The value corresponds to the number of field elements for the predefined field \$P_UIFR[].
If the value of the data is greater than 0, then all settable fields are only global.
The MD28080 \$MC_MM_NUM_USER_FRAMES is then ignored.

18602	MM_NUM_GLOBAL_BASE_FRAMES			N02	K2, M5	
-	Number of global base frames (SRAM).			DWORD	PowerOn	
-						
-	-	0	0	16	7/2	M

Description: Number of NCU basic frames.
The value corresponds to the number for the predefined field \$P_NCBFR[].

18603	MM_NUM_GLOBAL_G_FRAMES			N02	K2, M5	
-	Number of global grinding frames (SRAM)			DWORD	PowerOn	
-						
-	-	0	0	100	7/2	M

Description: Number of global grinding frames.
The value corresponds to the number of field elements for the predefined field \$P_GFR[].
If the value of the data is greater than 0, all settable frames are only global.
MD28079 \$MC_MM_NUM_G_FRAMES is then ignored.

18660	MM_NUM_SYNACT_GUD_REAL			N02	-	
-	Number of configurable GUD variables of type REAL			DWORD	PowerOn	
-						
-	9	0, 0, 0, 0, 0, 0, 0, 0...	0	32767	7/2	M

Description: The MD18660 \$MN_MM_NUM_SYNACT_GUD_REAL[] can be used to extend individual GUD blocks by additional channel-specific parameter areas of type REAL. The GUD blocks are differentiated by the field index:
MD18660 \$MN_MM_NUM_SYNACT_GUD_REAL[0] = <value> -> extension of the SGUD block
MD18660 \$MN_MM_NUM_SYNACT_GUD_REAL[1] = <value> -> extension of the MGUD block
MD18660 \$MN_MM_NUM_SYNACT_GUD_REAL[2] = <value> -> extension of the UGUD block
MD18660 \$MN_MM_NUM_SYNACT_GUD_REAL[3] = <value> -> extension of the GUD4 block
MD18660 \$MN_MM_NUM_SYNACT_GUD_REAL[8] = <value> -> extension of the GUD9 block
In each case, fields with the following properties are created:
Data type REAL
Field size corresponding to <value> of the relevant machine data
Predefined names:
SYG_RS[] -> Synact parameter of type REAL in the SGUD block
SYG_RM[] -> Synact parameter of type REAL in the MGUD block
SYG_RU[] -> Synact parameter of type REAL in the UGUD block
SYG_R4[] -> Synact parameter of type REAL in the GUD4 block
....
SYG_R9[] -> Synact parameter of type REAL in the GUD9 block

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The parameters can be read and written both by the part program and also via synchronous actions.

18661	MM_NUM_SYNACT_GUD_INT			N02	-	
-	Number of configurable GUD variables of type integer			DWORD	PowerOn	
-						
-	9	0, 0, 0, 0, 0, 0, 0, 0...	0	32767	7/2	M

Description:

The MD18661 \$MN_MM_NUM_SYNACT_GUD_INT[] can be used to extend individual GUD blocks by additional channel-specific parameter areas of type INTEGER. The GUD blocks are differentiated by the field index:

MD18661 \$MN_MM_NUM_SYNACT_GUD_INT[0] = <value> -> extension of the SGUD block
MD18661 \$MN_MM_NUM_SYNACT_GUD_INT[1] = <value> -> extension of the MGUD block
MD18661 \$MN_MM_NUM_SYNACT_GUD_INT[2] = <value> -> extension of the UGUD block
MD18661 \$MN_MM_NUM_SYNACT_GUD_INT[3] = <value> -> extension of the GUD4 block
MD18661 \$MN_MM_NUM_SYNACT_GUD_INT[8] = <value> -> extension of the GUD9 block
In each case, fields with the following properties are created:

Data type BOOL

Field size corresponding to <value> of the relevant machine data

Predefined names:

SYG_IS[] -> Synact parameter of type INT in the SGUD block

SYG_IM[] -> Synact parameter of type INT in the MGUD block

SYG_IU[] -> Synact parameter of type INT in the UGUD block

SYG_I4[] -> Synact parameter of type INT in the GUD4 block

....

SYG_I9[] -> Synact parameter of type INT in the GUD9 block

The parameters can be read and written both by the part program and also via synchronous actions.

18662	MM_NUM_SYNACT_GUD_BOOL			N02	-	
-	Number of configurable GUD variables of type Boolean			DWORD	PowerOn	
-						
-	9	0, 0, 0, 0, 0, 0, 0, 0...	0	32767	7/2	M

Description:

The MD18662 \$MN_MM_NUM_SYNACT_GUD_BOOL[] can be used to extend individual GUD blocks by additional channel-specific parameter areas of type Boolean. The GUD blocks are differentiated by the field index:

MD18662 \$MN_MM_NUM_SYNACT_GUD_BOOL[0] = <value> -> extension of the SGUD block
MD18662 \$MN_MM_NUM_SYNACT_GUD_BOOL[1] = <value> -> extension of the MGUD block
MD18662 \$MN_MM_NUM_SYNACT_GUD_BOOL[2] = <value> -> extension of the UGUD block
MD18662 \$MN_MM_NUM_SYNACT_GUD_BOOL[3] = <value> -> extension of the GUD4 block
MD18662 \$MN_MM_NUM_SYNACT_GUD_BOOL[8] = <value> -> extension of the GUD9 block
In each case, fields with the following properties are created:

Data type BOOL

Field size corresponding to <value> of the relevant machine data

Predefined names:

SYG_BS[] -> Synact parameter of type Boolean in the SGUD block

SYG_BM[] -> Synact parameter of type Boolean in the MGUD block

SYG_BU[] -> Synact parameter of type Boolean in the UGUD block

SYG_B4[] -> Synact parameter of type Boolean in the GUD4 block

....

SYG_B9[] -> Synact parameter of type Boolean in the GUD9 block

The parameters can be read and written both by the part program and also via synchronous actions.

18663	MM_NUM_SYNACT_GUD_AXIS			N02	-	
-	Number of configurable GUD variables of type Axis			DWORD	PowerOn	
-						
-	9	0, 0, 0, 0, 0, 0, 0, 0...	0	32767	7/2	M

Description: The MD18663 \$MN_MM_NUM_SYNACT_GUD_AXIS[] can be used to extend individual GUD blocks by additional channel-specific parameter areas of type AXIS. The GUD blocks are differentiated by the field index:

```
MD18663 $MN_MM_NUM_SYNACT_GUD_AXIS[0] = <value> -> extension of the SGUD block
MD18663 $MN_MM_NUM_SYNACT_GUD_AXIS[1] = <value> -> extension of the MGUD block
MD18663 $MN_MM_NUM_SYNACT_GUD_AXIS[2] = <value> -> extension of the UGUD block
MD18663 $MN_MM_NUM_SYNACT_GUD_AXIS[3] = <value> -> extension of the GUD4 block
MD18663 $MN_MM_NUM_SYNACT_GUD_AXIS[8] = <value> -> extension of the GUD9 block
```

In each case, fields with the following properties are created:

Data type AXIS

Field size corresponding to <value> of the relevant machine data

Predefined names:

```
SYG_AS[ ] -> Synact parameter of type AXIS in the SGUD block
SYG_AM[ ] -> Synact parameter of type AXIS in the MGUD block
SYG_AU[ ] -> Synact parameter of type AXIS in the UGUD block
SYG_A4[ ] -> Synact parameter of type AXIS in the GUD4 block
....
SYG_A9[ ] -> Synact parameter of type AXIS in the GUD9 block
```

The parameters can be read and written both by the part program and also via synchronous actions.

18664	MM_NUM_SYNACT_GUD_CHAR			N02	-	
-	Configurable GUD variable of type Char			DWORD	PowerOn	
-						
-	9	0, 0, 0, 0, 0, 0, 0, 0...	0	32767	7/2	M

Description: The MD18664 \$MN_MM_NUM_SYNACT_GUD_CHAR[] can be used to extend individual GUD blocks by additional channel-specific parameter areas of type CHAR.

The GUD blocks are differentiated by the field index:

```
MD18664 $MN_MM_NUM_SYNACT_GUD_CHAR[0] = <value> -> extension of the SGUD block
MD18664 $MN_MM_NUM_SYNACT_GUD_CHAR[1] = <value> -> extension of the MGUD block
MD18664 $MN_MM_NUM_SYNACT_GUD_CHAR[2] = <value> -> extension of the UGUD block
MD18664 $MN_MM_NUM_SYNACT_GUD_CHAR[3] = <value> -> extension of the GUD4 block
MD18664 $MN_MM_NUM_SYNACT_GUD_CHAR[8] = <value> -> extension of the GUD9 block
```

In each case, fields with the following properties are created:

Data type CHAR

Field size corresponding to <value> of the relevant machine data

Predefined names:

```
SYG_CS[ ] -> Synact parameter of type CHAR in the SGUD block
SYG_CM[ ] -> Synact parameter of type CHAR in the MGUD block
SYG_CU[ ] -> Synact parameter of type CHAR in the UGUD block
SYG_C4[ ] -> Synact parameter of type CHAR in the GUD4 block
....
```

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SYG_C9[] -> Synact parameter of type CHAR in the GUD9 block
 The parameters can be read and written both by the part program
 and also via synchronous actions.

18665	MM_NUM_SYNACT_GUD_STRING	N02	-
-	Configurable GUD variable of type STRING	DWORD	PowerOn
-			
-	9	0, 0, 0, 0, 0, 0, 0, 0...	0
		25	7/2
			M

Description: The MD18665 \$MN_MM_NUM_SYNACT_GUD_STRING[] can be used to extend individual GUD blocks by additional channel-specific parameter areas of type STRING.
 The GUD blocks are differentiated by the field index:
 MD18665 \$MN_MM_NUM_SYNACT_GUD_STRING[0] = <value> -> extension of the SGUD block
 MD18665 \$MN_MM_NUM_SYNACT_GUD_STRING[1] = <value> -> extension of the MGUD block
 MD18665 \$MN_MM_NUM_SYNACT_GUD_STRING[2] = <value> -> extension of the UGUD block
 MD18665 \$MN_MM_NUM_SYNACT_GUD_STRING[3] = <value> -> extension of the GUD4 block
 MD18665 \$MN_MM_NUM_SYNACT_GUD_STRING[8] = <value> -> extension of the GUD9 block
 In each case, fields with the following properties are created:
 Data type STRING
 Field size corresponding to <value> of the relevant machine data
 The maximum length of a string is 31 characters.
 Predefined names:
 SYG_SS[] -> Synact parameter of type STRING in the SGUD block
 SYG_SM[] -> Synact parameter of type STRING in the MGUD block
 SYG_SU[] -> Synact parameter of type STRING in the UGUD block
 SYG_S4[] -> Synact parameter of type STRING in the GUD4 block

 SYG_S9[] -> Synact parameter of type STRING in the GUD9 block
 The parameters can be read and written both by the part program
 and also via synchronous actions.

18700	MM_SIZEOF_LINKVAR_DATA	N02	B3
-	Size of NCU-link variable memory	DWORD	PowerOn
LINK, -			
-	-	0	0
		1073741824	7/2
			M

Description: Number of bytes of the NCK link memory for the variables \$A_DLx.

18710	MM_NUM_AN_TIMER	N02	-
-	Number of global time variable for synchronized actions	DWORD	PowerOn
-			
-	-	0	0
		10000	7/2
			M

Description: Number of global time variables for motion-synchronous actions (DRAM)

18720	MM_SERVO_FIFO_SIZE	EXP, N01	B3
-	Setpoint value for buffer size between IPO and position control	DWORD	PowerOn
-			
-	-	2	2
		35	3/2
			M

Description: The machine data determines the size of the setpoint value buffer between interpolator and position control, and has a direct effect on the dynamic user memory requirement.

That is normally 2. If several NCUs are connected via NCU link for e.g. rotary indexing machines, the value should be set to 3 on all NCUs. This will balance the transmission rates of the setpoint values via the link.

In a master value application (e.g. line shaft), the value should be set to 4, but only on the NCU that generates the master value. For all the other NCUs, the preset value should be maintained at 2.

Note:

In control loops that are connected via interpolator, every increase of the value generates a further dead-time.

When the IPO cycles of the NCUs within an NCU group are set to different values, the link communication will only run in the slowest IPO cycle. The MD must be increased in the ratio of the NCU IPO cycle to the slowest IPO cycle in the NCU group, in order to achieve a synchronized output of the setpoint values on the drive interface. The formula for this is as follows:

$$\text{MM\_SERVO\_FIFO\_SIZE} = 2 * \text{IPO cycle ratio} + 1$$

Example:

In an IPO cycle ratio of 4:1, the value on the fast NCU should be set to 9 instead of 3. On the slow NCU, the value must be set to 3.

18730	MM_MAXNUM_ALARM_ACTIONS			N02	-	
-	Length of the alarm action list			DWORD	PowerOn	
-						
-	-	500	100	2000	1/1	M

Description: Maximum number of alarm actions that are retained. This is the length of the alarm action list.

18780	MM_NCU_LINK_MASK			N01	B3	
-	Activation of NCU-link communication			UDWORD	PowerOn	
-						
-	-	0	0	0x7	3/2	M

Description: Activating NCU link communication

Bit-coded activation data. That is the NCU link communication can be activated in various forms.

Bit-coded activation data:

Bit 0 = 0x1: Link communication is to be activated.

Bit 1 = 0x2: reserved

Bit 2 = 0x4: Extended search for link SDBs

SDBs are additionally searched for in the following directories:

-/user/sinumerik/sdb/...

-/oem/sinumerik/sdb/...

-/addon/sinumerik/sdb/...

As usual it is first searched in the user, oem, addon directories and then in the siemens directory

(See description FAST_IPO_LINK)

Irrelevant for:

Systems without link modules

Related to:

MD30560 \$MA_IS_LOCAL_LINK_AXIS,

MD12510 \$MN_NCU_LINKNO,

MD12520 \$MN_LINK_TERMINATION,

MD18782 \$MN_MM_LINK_NUM_OF_MODULES,

MD12540 \$MN_LINK_BAUDRATE_SWITCH,

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MD12550 \$MN_LINK_RETRY_CTR

18781	NCU_LINK_CONNECTIONS			N01	B3	
-	Number of internal link connections			DWORD	PowerOn	
LINK, -						
-	-	0	0	32	3/1	M

Description: Value = 0
The software calculates the internal link connections itself.
Value > 0
Number of internal link connections from each NCU to each other NCU.
These link connections do not accommodate the non-cyclic messages.
Each of these connections can transfer 240 bytes of raw data.
Non-cyclic messages occur with alarms, container switches and link variablen.

18782	MM_LINK_NUM_OF_MODULES			N01, N02	B3	
-	Number of NCU-link modules			DWORD	PowerOn	
-						
-	-	2	2	16	3/2	M

Description: LINK_NUM_OF_MODULES defines how many link modules can participate in the link communication.

18788	MM_CC_STATION_CHAN_MASK			N01	-	
-	Channel bit mask for allocating CC stations			UDWORD	PowerOn	
-						
-	3	1, 0, 0	0	0x7FFFFFFF	1/1	M

Description: Machine data for channel-specific creation of special additional software stations for compile cycles.
Enter a bit mask with the bits set for the channels, in which a compile cycle shall use the relevant station.
Meaning of the individual array elements:
MD18788 \$MN_MM_CC_STATION_CHAN_MASK[0]:
Creates a CC station at the end of the geometry preparation and prior to velocity planning in the preparation task. A compile cycle application can buffer the blocks there and manipulate their contents.
MD18788 \$MN_MM_CC_STATION_CHAN_MASK[1]:
Creates another CC-Station that is called directly after the first CC station (see above) and permits the internal block contents independently of this manipulation.
MD18788 \$MN_MM_CC_STATION_CHAN_MASK[2]:
Creates an additional CC station in the preparation task that is called directly prior to tool radius offset and allows manipulation of the internal block contents.

18790	MM_MAX_TRACE_LINK_POINTS			EXP, N02, N06	B3	
-	Trace data buffer size for NCU-Link			DWORD	PowerOn	
NBUP						
-	-	8	0	20000	2/2	M

Description: MM_MAX_TRACE_LINK_DATAPOINTS defines the size of an internal data buffer which contains the trace recordings for the NCU-link functionality.
The MD is only evaluated if bit 0 is set in MD18792 \$MN_MM_TRACE_LINK_DATA_FUNCTION.
Related to:
MD22708 \$MC_TRACE_SCOPE_MASK,
MD22714 \$MC_MM_TRACE_DATA_FUNCTION,

MD28180 \$MC_MM_MAX_TRACE_DATAPOINTS
MD22700 \$MC_TRACE_STARTTRACE_EVENT,
MD22702 \$MC_TRACE_STARTTRACE_STEP,
MD22704 \$MC_TRACE_STOPTRACE_EVENT,
MD22706 \$MC_TRACE_STOPTRACE_STEP,
MD22710 \$MC_TRACE_VARIABLE_NAME,
MD22712 \$MC_TRACE_VARIABLE_INDEX,
MD18792 \$MN_MM_TRACE_LINK_DATA_FUNCTION

18792	MM_TRACE_LINK_DATA_FUNCTION			EXP, N02, N06	B3	
-	Specifies the contents of the NCU-link-trace files			UDWORD	PowerOn	
NBUP						
-	-	0	0	0x7FFFFFFF	2/2	M

Description:

The NCK link sends and receives 32 buffers with a length of 240 bytes in each interpolation cycle.

These buffers are saved in a FIFO (first in-first out) memory of length MD18790 \$MN_MM_MAX_TRACE_LINK_POINTS and written to a file (ncsctr01.mpf for the 1st channel) if a "trigger event" occurs (e.g. Cancel Alarm button, see MD22704 \$MC_TRACE_STOPTRACE_EVENT and MD22700 \$MC_TRACE_STARTTRACE_EVENT).

The machine data should be interpreted as a bit mask and has the following meaning:

BIT0 = 1

Enables the NCU link trace file.

The others are only evaluated if this bit is set!

MD18790 \$MN_MM_MAX_TRACE_LINK_POINTS is only evaluated with this bit.

BIT1 = 1

The stored buffer content is analyzed according to its meaning and written to the file in plain text. This means setpoint transfer can be detected, for example, from the text items "desVal", actual value transfer from the identifiers "actVal" etc.

BIT1 = 0

The buffer content is displayed in HEX and is not analyzed.

BIT2 = 1

Only buffers that contain a sporadically occurring communication message (dynamic message) between the NCUs are recorded.

These include, for example, the following events:

- Set machine data
- Set link variables
- Alarms spanning NCUs
- Axis container rotation

BIT3 = 1

Every addition and deletion of a CLEARHIMSELF alarm transferred via LINK triggers the following action:

The internal receive tree is recorded before and after the action and the most recent values can be

found again in trace.

NOTICE: Very very time-consuming; please only use in an emergency.

18794	MM_TRACE_VDI_SIGNAL			EXP, N02, N06	-	
-	Trace specification of VDI signals			UDWORD	PowerOn	
NBUP						
-	-	0	0	0x7FFFFFFF	2/2	M

2.3 NC machine data

Description:

The NCK sends and receives PLC VDI signals. The Trace function stores the signals which have changed in each interpolation cycle in an FIFO memory (first in-first out) having a size of MM_MAX_TRACE_POINTS.

The FIFO is written to a file (for the 1st channel: ncsctr01.mpf) when a "trigger event" occurs (e.g. Cancel Alarm key, see MD22704 \$MC_TRACE_STOPTRACE_EVENT and MD22700 \$MC_TRACE_STARTTRACE_EVENT).

The machine data should be interpreted as bit mask. The corresponding VDI signals are recorded depending on which bit is set.

Bits 1.. 6 describe which axial VDI input signals are recorded in the trace (see .. TRACE_DATA_FUNCTION).

18800	MM_EXTERN_LANGUAGE			N01, N12	K1	
-	Activation of external NC languages			UDWORD	PowerOn	
-						
-	-	0x0000	0x0000	0x0001	7/2	M

Description:

The corresponding NC language must be activated to execute part programs of other control manufacturers. Only one external NC language can be selected. The range of instructions which is made available in each case is to be taken from the current documentation.

Bit 0 (LSB):

Execution of part programs ISO_2 or ISO_3.

See MD10880 \$MN_MM_EXTERN_CNC_SYSTEM for coding.

18860	MM_MAINTENANCE_MON			EXP, N01	W6	
-	Activation of maintenance data recording			BOOLEAN	PowerOn	
-						
-	-	FALSE	0	-	7/2	M

Description:

Maintenance data is recorded when this MD has the value TRUE.

The axial MD33060 \$MA_MAINTENANCE_DATA sets which data are to be recorded.

Details are to be found in the service documentation.

18866	MM_NUM_KIN_TRAFOS			N02, N09	W1	
-	Maximum number of transformations that can be defined by kinematic chains.			DWORD	PowerOn	
-						
-	-	0	0	200	7/2	M

Description:

This machine data defines the maximum number of transformations in the NCK that can be defined by kinematic chains.

It also defines the number of data sets (\$NT_...[1] to \$NT_...[\$MN_MM_NUM_KIN_TRAFOS] available for parameterizing these transformations. The data record with index 0 is locked.)

The kinematic transformations conventionally parameterized in machine data can exist irrespective of this.

18880	MM_MAXNUM_KIN_CHAIN_ELEM			EXP, N01	-	
-	Maximum number of elements in kinematic chains			DWORD	PowerOn	
-						
-	-	0	0	1000	7/2	M

Description:

Maximum number of links in kinematic chains. If this MD has the value 0 (default value) then no kinematic chains at all are possible.

18882	MM_MAXNUM_KIN_SWITCHES	EXP, N01	-
-	Maximum number of switches in the kinematic chains	DWORD	PowerOn
-			
-	-	1	1
-	-	200	7/2
-	-		M

Description: Maximum number of switches in the kinematic description of a machine.
This machine data is only evaluated if the machine data MD18880
\$MN_MM_MAXNUM_KIN_CHAIN_ELEM is not equal to zero.

18890	MM_MAXNUM_3D_PROT_AREAS	EXP, N01	-
-	Maximum number of 3D protection areas	DWORD	PowerOn
-			
-	-	0	0
-	-	200	7/2
-	-		M

Description: Maximum number of protection areas. This MD must not be equal to 0 in order to activate the function "collision avoidance".

18891	MM_MAXNUM_3D_WPFX_PROT_ELEM	EXP, N01	-
-	Maximum number of protection area elements for WORKPIECE and FIXTURE	DWORD	PowerOn
-			
-	-	0	0
-	-	500	7/2
-	-		M

Description: Maximum number of protection area elements for the automatic generation of protection areas with the language commands WORKPIECE and FIXTURE.

18892	MM_MAXNUM_3D_PROT_AREA_ELEM	EXP, N01	-
-	Max. number of protection zone elements	DWORD	PowerOn
-			
-	-	0	0
-	-	1000	7/2
-	-		M

Description: Maximum number of protection zone elements. If this MD is 0 (default value), no protection zones are possible.

18893	MM_MAXNUM_3D_T_PROT_ELEM	EXP, N01	-
-	Max. number of tool protection area elements	DWORD	PowerOn
-			
-	-	0	0
-	-	500	7/2
-	-		M

Description: Maximum number of protection area elements for automatic creation of tool protection areas.

18894	MM_MAXNUM_3D_FACETS_INTERN	EXP, N01	-
-	Max. number of protection zone facets for variable protection zones	DWORD	PowerOn
-			
-	-	0	0
-	-	5000	7/2
-	-		M

Description: Maximum number of facets permitted for all internally created protection zones.
Only applies if MAXNUM_3D_PROT_AREAS is greater than zero and bit 0 in
PROT_AREA_TOOL_MASK is set.
Typical values would then be 1000 for milling machines with a modeled tool, and 5000
for lathes with various tool types in a revolver.

2.3 NC machine data

18895	MM_MAXNUM_3D_FACETS			EXP, N01	-	
-	Max. number of protection area facets/primitives			DWORD	PowerOn	
-						
-	-	0	0	5000	7/2	M

Description: Maximum number of primitives and facets allowed for all protection areas.
Only applies if MAXNUM_3D_PROT_AREAS is greater than zero.

18896	MM_MAXNUM_3D_COLLISION			EXP, N01	-	
-	Max. number of the memory location for collision check			DWORD	PowerOn	
-						
-	-	-	0	50000	7/2	M

Description: Maximum size of a temporary memory area (in KB), which is required for the collision check of two protection zones.

If the contents of this machine data is 0, the required memory space is determined automatically from machine data MD18892 \$MN_MM_MAXNUM_3D_PROT_AREA_ELEM, MD18890 \$MN_MM_MAXNUM_3D_PROT_AREAS and MD18895 \$MN_MM_MAXNUM_3D_FACETS.

If the determined memory space is insufficient, it can be explicitly determined using this machine data.

18897	MM_MAXNUM_3D_INTERFACE_IN			EXP, N01	-	
-	Max. no. of interf. bits for pre-activation of protection zones			DWORD	PowerOn	
-						
-	-	16	0	64	7/2	M

Description: Defines how many input bits are available on the VDI interface for pre-activation of 3D protection zones.

It will influence the size of the memory space required for each NC block.

If this machine data has value n, a memory size of approximately $n * (n + 1) / 16$ bytes will be required per block.

This machine data will be evaluated and will cause reservation of memory space, only if MD18890 \$MN_MM_MAXNUM_3D_PROT_AREAS is unequal to 0.

18898	MM_MAXNUM_3D_COLL_PAIRS			EXP, N01	-	
-	Maximum number of 3D collision pairs			DWORD	PowerOn	
-						
-	-	0	0	100	7/2	M

Description: Maximum number of 3D collision pairs.

This machine data is only evaluated if MD18890 \$MN_MAX_NUM_3D_PROT_AREAS is not equal to zero.

If this machine data is zero and MD18890 \$MN_MAX_NUM_3D_PROT_AREAS is not equal to zero, memory space is automatically reserved for the maximum possible number of different 3D collision pairs ($\$MN\_MAX\_NUM\_3D\_PROT\_AREAS * (\$MN\_MAX\_NUM\_3D\_PROT\_AREAS - 1) / 2$).

If the content of this machine data is greater than the specified maximum value, then it is limited to this maximum value internally without an error message.

18899	PROT_AREA_TOOL_MASK			EXP	-	
-	Controls the creation of automatically created tool protection areas			DWORD	NEW CONF	
-						
-	-	0	-	-	7/3	U

Description: Controls the way tool protection areas are automatically created with collision detection active.

If bit 0 = 1, then in MD 18894 \$MN_MM_MAXNUM_3D_FACETS_INTERN memory space must be reserved.

This machine data is bit-coded.

Bit 0 (0x1) If no other data are available, create the tool protection area from the tool data (tool length and radius).

18930	COREFILE_NAME	EXP	-
-	Path for core file creation	STRING	PowerOn
NBUP			
-	-	-	-
		7/1	M

Description: File name with path name under which a core file is created in the case of a control crash.

The core file is used for problem analysis by NCK development.

A core file will be created, if a valid file name is entered in this MD.

18960	POS_DYN_MODE	N01	K1
-	Type of positioning axis dynamic response	BYTE	Reset
-			
-	-	0	0
		1	7/2
			M

Description: The machine data determines the accelerations and jerks which are applied in the case of positioning axis motion.

Value 0:

The acceleration is taken from the first field entry in MD32300 \$MA_MAX_AX_ACCEL (value for DYNORM).

With G75 and active jerk limitation (SOFT), the jerk is taken from the first field entry in MD32431 \$MA_MAX_AX_JERK (value for DYNORM); without jerk limitation (BRISK) it is infinite.

The following applies for all other positioning axis movements:

If MD32420 \$MA_JOG_AND_POS_JERK_ENABLE is true, the jerk is taken from MD32430 \$MA_JOG_AND_POS_MAX_JERK; otherwise it is infinite (BRISK behavior).

Value 1:

The acceleration is taken from the second field entry in MD32300 \$MA_MAX_AX_ACCEL (value for DYNPOS).

The jerk is taken from the second field entry in MD32431 \$MA_MAX_AX_JERK (value for DYNPOS).

For BRISK behavior, enter very high values here.

19010	SYSTEM_INFO	N01	-
-	System information	UBYTE	PowerOn
-			
-	4	0x6, 0xA4	0
		-	ReadOnly
			S

Description: System information

Current software identifiers

[0]: Class ID

[1]: Subsystem ID

[2]: Possibly export ID

[3]: Reserved

Class ID:

=====

5 (0x5) 828D

6 (0x6) 840D sl SW 4.4 and higher

2.3 NC machine data

```

7(0x7) 808D
15 (0xF) Simulation
Subsystem ID:
=====
The following applies to 808D:
1 (0x01) PPU14*. * M
2 (0x02) PPU14*. * T
3 (0x03) Reserved
4 (0x04) PPU16*. * M
5 (0x05) PPU16*. * T
6 (0x06) Reserved
The following applies to 828D:
1 (0x01) SW26*. * T
2 (0x02) SW26*. * M
3 (0x03) Reserved
4 (0x04) SW28*. * T
5 (0x05) SW28*. * M
6 (0x06) Reserved
7 (0x07) SW24*. * T
8 (0x08) SW24*. * M
9 (0x09) Reserved
10 (0x0A) SW28*. * T Adv.
11 (0x0B) SW28*. * M Adv.
81/1 (0x51) SW24*. * GC
81/2 (0x51) SW24*. * GS
83/1 (0x53) SW26*. * GC
83/2 (0x53) SW26*. * GS
85/1 (0x55) SW28*. * GC Adv.
85/2 (0x55) SW28*. * GS Adv.
The following applies to 840Dsl:
4 (0xA4) 31-3
5 (0xA5) 31-3e
Export ID:
=====
14 (0x0E) non-export-restricted system software
This data cannot be written.

```

19100	NUM_AXES_IN_SYSTEM			N01	-	
-	Additionally 1 axis/spindle			BYTE	PowerOn	
-						
-	-	3	0	8	3/3	1

Description:

Number of available axes (IPO functionality)

If more axes are activated by the channel-specific MD20070 \$MC_AXCONF_MACHAX_USED than are permitted in OD19100 \$ON_NUM_AXES_IN_SYSTEM and/or OD19102 \$ON_NUM_ADD_AXES_IN_SYSTEM, then a power-up alarm is triggered and the NC start is prevented.

Note:

Virtual and simulated axes (actual value sensing and setpoint output are simulated) are not taken into account when calculating the number of axes.

Corresponds with:

MD30132 \$MA_IS_VIRTUAL_AX

MD30130 \$MA_CTRLOUT_TYPE

MD30240 \$MA_ENC_TYPE

19102	NUM_ADD_AXES_IN_SYSTEM			N01	-	
-	Additional 1 positioning axis/auxiliary spindle			BYTE	PowerOn	
-						
840dsl-71	-	-	0	8	3/3	I
840dsl-72	-	0	0	31	3/3	I
840dsl-73	-	0	0	31	3/3	I

Description: Number of available positioning/auxiliary axes
 If more axes are activated by channel-specific MD \$MC_AXCONF_MACHAX_USED than permitted in OD19100 \$ON_NUM_AXES_IN_SYSTEM and/or OD19102 \$ON_NUM_ADD_AXES_IN_SYSTEM, a power-up alarm is triggered and the NC start is prevented.

19110	NUM_IPO_AXES			N01	-	
-	Multiple-axis interpolation (more than 4 axes)			BYTE	PowerOn	
-						
840dsl-71	-	-	0	8	3/3	I
840dsl-72	-	4	0	31	3/3	I
840dsl-73	-	4	0	31	3/3	I

Description: Number of simultaneously interpolating path axes
 If more interpolating axes are programmed than are permitted in OD19110 \$ON_NUM_IPO_AXES, a power-up alarm is output and the corresponding block is not executed.

19120	NUM_SAFE_AXES			N01, N06	-	
-	SI axis/spindle, add. 1 axis/spindle			BYTE	PowerOn	
-						
-	-	1	0	31	3/3	I

Description: Number of axes in which safety functions can be activated.

19121	NUM_DRIVEBASED_SAFE_AXES			N01, N06	-	
-	Safety Integrated plus /SI axis/spindle			BYTE	PowerOn	
-						
-	-	0	0	31	3/3	U

Description: Number of axes in which drive-based safety functions can be activated.

19122	NUM_SPL_IO			N01, N06	-	
-	SI, identifier for the number of ext. SPL_I/O			BYTE	PowerOn	
-						
-	-	-	0	2	3/3	I

Description: The number of external SPL I/Os can be selected with the value in the option data:
 = 0 : The SPL has no I/O.
 = 1 : The SPL has a maximum of 4/4 I/Os.
 = 2 : The SPL has a maximum of 64/64 I/Os.
 = 3 : The SPL has a maximum of 192/192 I/Os

2.3 NC machine data

19142	NUM_LEAD_LINK_AXES	N01	-
-	Number of supported lead-link axes	BYTE	PowerOn
-			
-	-	0	0
		32	3/3
			I

Description: Number of lead link axes supported by the software

19200	NUM_CHANNELS	N01	-
-	Additional 1 machining channel	BYTE	PowerOn
-			
840dsl-71	-	-	1
		4	3/3
			I
840dsl-72	-	1	1
		10	3/3
			I
840dsl-73	-	1	1
		10	3/3
			I

Description: Number of activatable channels

If more channels are activated by the global MD \$MN_ASSIGN_CHAN_TO_MODE_GROUP than are permitted in OD19200 \$ON_NUM_CHANNELS, then a power-up alarm is triggered which prevents the NC start.

19220	NUM_MODE_GROUPS	N01	-
-	Additional 1 operation mode modul (BAG)	BYTE	PowerOn
-			
-	-	1	1
		10	3/3
			I

Description: Number of mode groups

If more mode groups are activated by the global MD \$MN_ASSIGN_CHAN_TO_MODE_GROUP than are permitted in \$ON_MODE_GROUPS, then a power-up alarm is triggered which prevents the NC start.

19240	USER_MEM_DYNAMIC	N01, N02	-
-	Add. 4 Mbyte CNC user memory	BYTE	Immediately
-			
-	-	4	0
		6	3/3
			I

Description: Option data for enabling the expansion levels of the volatile user memory on the NC CPU.

The following applies:

Available memory = basic configuration + OD19240 \$ON_USER_MEM_DYNAMIC * 4MB

E.g. OD19240 \$ON_USER_MEM_DYNAMIC = 10: The memory size \$MN_MM_USER_MEM_DYNAMIC is increased by 10 * 4 MB = 40 MB.

OD19240 \$ON_USER_MEM_DYNAMIC therefore indicates the added part of the volatile user memory relative to the basic configuration.

19250	USER_MEM_BUFFERED	N01, N02	-
-	Add. 2 Mbyte CNC user memory	BYTE	Immediately
-			
-	-	-	0
		3	3/3
			I

Description: Option data for enabling the expansion levels of the nonvolatile user memory on the NC CPU.

Available memory = basic configuration + OD19250 \$ON_USER_MEM_BUFFERED * 2MB

OD19250 \$ON_USER_MEM_BUFFERED thus always indicates the part of the memory relative to the basic configuration.

19270	PLC_USER_MEM_SIZE			N01, N02, N03		-	
-	Add. 128 KB PLC user memory			BYTE		PowerOn	
-							
-	-	4	1	12	3/3	I	

Description: Option data for enabling the STEP 7 user memory on the PLC in 128kB steps

1 Minimal configuration

...

4 Basic configuration

5 GA + 128kB

6 GA + 256kB

7 GA + 384kB

... etc.

12 GA + 1MB (maximal configuration)

19280	PLC_C_USER_MEM_SIZE			N01, N02, N03		-	
-	Additional 64 KB for PLC C programming			BYTE		PowerOn	
-							
-	-	0	0	14	3/3	I	

Description: Option data for enabling the memory configuration stages for C programming on the PLC. (Incrementation: 64KB)

0 = No memory

1 = 64KB

..

14 = 896KB

19300	COMP_MASK			N01	-	
-	Compensation options			UDWORD	PowerOn	
-						
-	-	0	0x0	0x1FF	3/3	I

Description:

Reserved	TEMP	Temperature compensation axial
Reserved:	EEC	Leadscrew error compensation
Bit 2	CEC	Sag compensation
Reserved	QEC	Quadrant error compensation with neural network
Reserved	EGA	Electronic counterweight
Bit 5	BiEEC	Bidirectional leadscrew error compensation
Bit 6	FRICT	Friction compensation (integrated)
Bit 7	NOCO	Nodding compensation ADVANCED
Bit 8	NOCO	Nodding compensation ECO

19308	SINAMICS_FUNCTION_MASK			N01	-	
-	Drive options			UDWORD	PowerOn	
-						
-	-	0	0	0x7FFFFFFF	3/3	I

Description: Option data for enabling SINAMICS drive functions:

Bit 0 (LSB): Enable "'Advanced Position Control' (APC)" (drive parameter r108 bit 7)

2.3 NC machine data

19310	AXIS_FUNCTION_MASK	N01, N09	-
-	Axial options	UDWORD	PowerOn
-			
-	-	0	0x0
		0x7FFFFFFF	3/3
			1

Description: Option data for enabling axial functions:

Bit 0 (LSB): Enable "Gantry axes" (MD37100 \$MA_GANTRY_AXIS_TYPE)

Bit 1: Enable "Force Control" (MD37080 \$MA_FOC_ACTIVATION_MODE)

Bit 2: Enable "Position switching signals" (MD10450 \$MN_SW_CAM_ASSIGN_TAB)

-----: Reserved "Prog. acceleration" not an option since 10/2000

Bit 4: Enable "Master-Slave" (MD37250 \$MA_MS_ASSIGN_MASTER_SPEED_CMD MD37252 \$MA_MS_ASSIGN_MASTER_TORQUE_CTR)

Bit 5: Enable "Digital setpoint exchange"

The listed machine data are reset during power on and

alarm 8040 is output if the corresponding bit of the option data

is not set.

19320	TECHNO_FUNCTION_MASK	N01, N09	-
-	Technological options	UDWORD	PowerOn
-			
-	-	-	0x0
		0x7FFFFFFF	3/3
			1

Description: Option data for enabling technology-related functions

-----: (LSB): Reserved "Caliper function" (MD21220 \$MC_MULTFEED_ASSIGN_FASTIN) not an option since 10/2000

Bit 1: Enable "Adaptive Control (evaluation of internal drive variables)"

Bit 2: Enable "SINUMERIK HMI OA copy license WinCC flexible CE" (OP)

Bit 3: Enable "Oscillation functions" (MD43780 \$SA_OSCILL_IS_ACTIVE)

-----: Reserved "Tool management" (MD20310 \$MC_TOOL_MANAGEMENT_MASK)

Bit 5: Enable "Nibbling/punching" (MD26012 \$MC_PUNCHNIB_ACTIVATION)

Bit 6: Enable "Contour tunnel monitoring" (MD21050 \$MC_CONTOUR_TUNNEL_TOL)

-----: Reserved "F word interpolation" (FLIN/FCUB/FPO) not an option since 10/2000

-----: Reserved "Continuous Dressing" (FTOCON/FTOCOF) not an option since 10/2000

Bit 9: Enable "Tangential control" (TANON/TANGOF)

-----: Reserved "Synchronous spindle/Multi-edge turning" (COUPON/COUPOF)

Bit 11: Enable "Path velocity-dependent analog value output (\$AC_VACTB/\$AC_VACTW)"

-----: Reserved "Position offset as output of a synchronized action (2D)" (\$AA_OFF), not an option since 10/2000

-----: Reserved "Free contour input with stock removal against the contour" (ShopMill)

Bit 14: Enable "Measuring level 2" (MEASA, MEAWA, 1)

-----: Reserved "Tool measuring (ShopMill)" not an option since 07/2004

Bit 16: Enable "Contour pocket cycle with automatic residual material removal (ShopMill)"

Bit 17: Enable "Simultaneous recording (Realtime simulation of the current machining) (ShopMill/ShopTurn)" or "Simulation milling (HMI Embedded)"

Bit 18: Enable "Extended stop and retract" (MD37500 \$MA_ESR_REACTION)

-----: Reserved "Electronic gear (EGDEF)"

-----: Reserved "Teleservice HT6"

Bit 21: Enable "Fast retraction from the contour (LIFTFAST)"

Bit 22: Free
 Bit 23: Enable "Work plan programming with ShopMill/ShopTurn"
 Bit 24: Enable "Drive-autonomous generator operation" with SIMODRIVE (MD37500 \$MA_ESR_REACTION)
 -----: Reserved "Tool monitoring without active tool management" (MD18080 \$MC_TOOL_MANAGEMENT_MASK)
 -----: Reserved "Multiple clamping (ShopMill)"
 -----: Reserved "NCU link with various IPO and position-control cycles (see description of FAST_IPO_LINK and MD18780 \$MN_MM_NCU_LINK_MASK)
 Bit 28: Enable "Display volume model (ShopTurn)"
 Bit 29: Enable "Online override in tool direction" (\$AA_TOFF[], handwheel override in automatic in tool direction)
 Bit 30: Enable "Milling machining package (package/only place holder for collective option)"

19321	TECHNO_FUNCTION_MASK_1			N01, N09	-	
-	Technological options			UDWORD	PowerOn	
-						
-	-	0x00003040	0x00003040	0x7FFFFFFF	3/3	I

Description: Option data for enabling functions relating to technologies.

Bit 0: (LSB): Enable "Measuring cycles (MEACALC)"
 Bit 1: Enable "Contour handwheel"
 Bit 2: Enable "Generic coupling 'CP-BASIC'"
 Bit 3: Enable "Generic coupling 'CP-COMFORT'"
 Bit 4: Enable "Generic coupling 'CP-EXPERT'"
 Bit 5: Enable "Generic coupling 'CP-STATIC'"
 Bit 6: Enable "Replacement tools for TM"
 Bit 7: Enable "TM with multiple magazines"
 Bit 8: Enable "Monitoring for max. tool speed / acceleration"
 Bit 9: Enable "Advanced Surface"
 Bit 10: Enable "Machining package milling 3 axes (pkg/only placeholder for group option)"
 Bit 11: Enable "Machining package milling 5 axes (pkg/only placeholder for group option)"
 Bit 12: Enable "Siemens Cycles Base Technology"
 Bit 13: Freigabe "Siemens Cycles Advanced Technology"
 Bit 14: Enable "Balance cutting"
 Bit 15: Enable "SINUMERIK Grinding Advanced"
 Bit 16: Free
 Bit 17: Enable "Top Surface"
 Bit 18: Enable "Orientation offset static/dynamic"
 Bit 19: Free
 Bit 31: Reserved ""

19330	IPO_FUNCTION_MASK			N01, N09	-	
-	Interpolation			UDWORD	PowerOn	
-						
-	-	0	0x0	0x7FFFFFFF	1/1	I

Description: Option data for enabling interpolation-related functions

-----: (LSB): Reserved "REPOS per program (REPOSx without REPOSA)" not an option since 10/2000

2.3 NC machine data

Bit 1: Enable "Spline interpolation (xSPLINE)"
 Bit 2: Enable "Compressor 5-axis machining (COMPON/COMPCAD/COMPCURV) (solution line: incl. xSPLINE; as from NCK75 only xSPLINE because COMPx is GA)"
 Bit 3: Enable "Polynomial interpolation (POLY)"
 Bit 4: Enable "3D tool offset (CUT3Dx)"
 Bit 5: Reserved "Master value coupling and curve table interpolation (LEADON, CTAB)"
 -----: Reserved "Command axes and spindles"
 Bit 7: Enable "Involute interpolation"
 Bit 8: Enable "Compressor 3-axis machining (COMPON/COMPCAD/COMPCURV) (solution line: incl. xSPLINE); as from NCK75 only xSPLINE because COMPx is GA)"
 Bit 31: Reserved ""

19334	SYSTEM_FUNCTION_MASK			N01, N09	-	
-	System options			UDWORD	PowerOn	
-						
-	-	0x0	0x0	0x7FFFF7FF	3/3	I

Description:

-----: (LSB): Reserved "FlashFileSystem (FFS)" is not an option but standard.
 -----: Reserved "Execute from external (was 802D system)"
 -----: Reserved "Color display (was 802D system)"
 -----: Reserved "was 802D system"
 -----: Reserved "Cycles in DRAM"
 -----: Reserved "Modem (was 802D system)"
 Bit 6: Enable "Machine maintenance data (MachineMaintenance)"
 -----: Reserved "Direct keys/handwheel connection on MCP with PROFIBUS DP" (PL only)
 Bit 8: Enable "Cycle protection"
 Bit 9: Enable "Execution from External Memory (EES)"
 Bit 10: Enable "AST call from part program"
 Bit 11: Enable "CNC lock function"
 Bit 12: Enable "Additional 100 MB CNC user memory"
 Bit 13: Enable "AST add-on package"
 ...
 Bit 28: Reserved
 Bit 29: Reserved
 Bit 30: Reserved "Special function SBM"
 Bit 31: Reserved

19340	PROG_MASK			N01	-	
-	Program options			UBYTE	PowerOn	
-						
-	-	0	0x0	0x7F	3/3	I

Description:

Option data for enabling functions relating to program execution
 Bit 0 (LSB): Reserved, was "Program preprocessing"
 Bit 1: Enable "Technology cycles" and "Synchronized actions stage 2"
 Bit 2: Enable "Cross-mode actions (ASUB and SYNACT)"

19410	TRAFO_TYPE_MASK			N01, N02, N09	-	
-	Transformation options			UDWORD	PowerOn	
-						
-	-	-	0x0	0x7FFFE7F	3/3	I

Description: Enables the transformations
 An alarm is output if an attempt is made to activate a transformation whose associated option bit is not set.
 Unbuffered memory is required.
 Setting one of the option bits increases the memory requirement.
 Meaning of the set bits in OD19410 \$ON_TRAFO_TYPE_MASK:
 Bit 0 (LBS): TRAFO5 (5-axis transformation) permitted
 Bit 1 : TRANSMIT/TRACYL (Transmit/cylinder surface curves transformation) permitted
 Bit 2 : Reserved
 Bit 3 : TRAANG (Inclined axis transformation) permitted
 Bit 4 : Reserved Was (OEM transformations) permitted
 Bit 5 : Reserved Was (Concatenated transformations) permitted
 Bit 6 : TRAFO7 (7-axis transformation) permitted
 Bit 7 : TRANSMIT/TRACYL (Transmit/transformation of cylinder peripheral curves, without real Y axis) permitted
 Bit 8 : TRAANG (Inclined axis, fixed angles) permitted
 As at 10/11/94: Centerless grinding transformation is not an option

19500	SAFE_PLC_LOGIC			N01	-	
-	Safety Integrated plus /SI Logic			BOOLEAN	PowerOn	
-						
-	-	FALSE	-	-	3/3	I

Description: Basic option to operate an F-PLC.

19510	SAFE_FUNCTION_MASK			N01	-	
-	Safety Integrated functions			UDWORD	PowerOn	
-						
-	-	0	0x00	0x01	3/3	M

Description: Option data for enabling Safety Integrated functions
 Bit 0 = 0: Maximum of 3 FSEND and 3 FRECV connections available
 Bit 0 = 1: More than 3 FSEND and 3 FRECV connections available

19610	TECHNO_EXTENSION_MASK			N01	-	
-	Technological extensions			UDWORD	PowerOn	
-						
-	9	0, 0, 0, 0, 0, 0, 0, 0...	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0x7FFFFFFF, 0x7FFFFFFF, 0x7FFFFFFF, 0x7FFFFFFF, 0x7FFFFFFF, 0x7F...	3/3	I

Description: Option data for activating technology functions that have been brought in for the first time as reloadable compile cycles.
 \$ON_TECHNO_EXTENTION_MASK[0]

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Bit 0: = 0 Only those ELF files can be loaded which are licensed by a bit in ON_TECHNO_EXTENTION_MASK[1].

1 All ELF files can be loaded

Bit 16-32: reserved for use by OEM customers

\$ON_TECHNO_EXTENTION_MASK[1]

(ELF files marketed by Siemens)

19700	ELEC_TRANSFER			N01	-	
-	Electronic transfer			BOOLEAN	PowerOn	
-						
-	-	FALSE	0	-	3/3	I

Description: Option data for enabling "electronic transfer" functionality
 The 'individual options' required for this functionality are set,
 + One additional positioning axis
 + Gantry
 + Synchronized actions level 2
 + Position switching signals/cams
 + Polynomial interpolation
 + Master value coupling
 + Cross-mode actions (ASUB and SYNACT)
 + PROFIBUS
 and the function normally present as a basic function
 - Spindle (assignments are not possible in MD35000 \$MA_SPIND_ASSIGN_TO_MACHAX)
 - Tool offsets (G40/G41/G42 are not possible)
 is disabled.

19701	ELEC_TRANSFER_CP			N01	-	
-	Electronic transfer (CP)			BOOLEAN	PowerOn	
-						
-	-	FALSE	0	-	3/3	I

Description: Option data for enabling "electronic transfer with CP" functionality
 The 'individual options' required for this functionality are set,
 + One additional positioning axis
 + Gantry
 + Synchronized actions level 2
 + Position switching signals/cams
 + Polynomial interpolation
 + Generic coupling CP-Comfort
 + Cross-mode actions (ASUB and SYNACT)
 + PROFIBUS
 and the function normally present as a basic function
 - Spindle (assignments are not possible in MD35000 \$MA_SPIND_ASSIGN_TO_MACHAX)
 - Tool offsets (G40/G41/G42 are not possible)
 is disabled.

19709	PLASTIC			N01	-	
-	Plastic package IME			BOOLEAN	PowerOn	
-						
-	-	FALSE	0	-	3/3	I

Description: Option data for enabling the "SINUMERIK plastic package" functionality
 The 'individual options' required for this functionality are set:
 + 3 additional axes
 + Travel to fixed stop
 + Gantry
 + Synchronized actions level2
 + Master-slave for drives
 + Position switching signals/cams
 + Polynomial interpolation
 + Handling transformation package
 and the functions normally present as basic functions
 - Spindle (assignments are not possible in MD35000 \$MA_SPIND_ASSIGN_TO_MACHAX)
 - Tool offsets (G40/G41/G42 are not possible)
 are disabled.

19710	HANDLING			N01	-	
-	Handling package			BOOLEAN	PowerOn	
-						
-	-	FALSE	0	-	3/3	I

Description: Option data for enabling "handling" functionality
 The 'individual options' required for this functionality are set,
 + 3 additional positioning axis
 + 3 additional channels
 + Synchronized actions level 2
 + Handling transformation package
 + Cross-mode actions (ASUB and SYNACT)
 and the function normally present as a basic function
 - Spindle (assignments are not possible in MD35000 \$MA_SPIND_ASSIGN_TO_MACHAX)
 - Tool offsets (G40/G41/G42 are not possible)
 is disabled.

19730	HMI_FUNCTION_MASK			N01, N09	-	
-	Operating options			UDWORD	PowerOn	
-						
-	2	0x00000804, 0x0000EFFF	0x00000804, 0x0000EFFF	0x7FFFFFFF, 0x7FFFFFFF	3/3	I

Description: Option data for enabling HMI functions:
 Bit 0 (LSB): Enable "Additional languages"
 OD19730 \$ON_HMI_FUNCTION_MASK[0].0
 -----: Reserved "External HMI"
 OD19730 \$ON_HMI_FUNCTION_MASK[0].1
 Bit 2: Enable "Network drive management" OD19730 \$ON_HMI_FUNCTION_MASK[0].2
 Bit 3: Enable "Multi-channel step sequence programming" OD19730 \$ON_HMI_FUNCTION_MASK[0].3
 Bit 4: Enable "Manual machine" OD19730 \$ON_HMI_FUNCTION_MASK[0].4
 Bit 5: Enable "Add. 256 MB HMI user memory on NCU CF card" OD19730 \$ON_HMI_FUNCTION_MASK[0].5

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```

Bit 6:      Enable "Simulation milling (2D dynamic, 3D
static)"      OD19730 $ON_HMI_FUNCTION_MASK[0].6
-----:      Reserved "Measuring
cycles"      OD19730
$ON_HMI_FUNCTION_MASK[0].7
Bit 8:      Enable "SINUMERIK HMI copy license OA"
OD19730 $ON_HMI_FUNCTION_MASK[0].8
Bit 9:      Reserved "was Ethernet 802Dsl
pro"      OD19730 $ON_HMI_FUNCTION_MASK[0].
9
Bit 10:     Enable "ShopTurn/Mill HMI for 840Di sl incl. HMI
Advanced"      OD19730 $ON_HMI_FUNCTION_MASK[0].10
Bit 11:     Enable "Advanced operator
functions"      OD19730 $ON_HMI_FUNCTION_MASK[0].
11
Bit 12:     Enable "ShopMill/ShopTurn
StepGuide"      OD19730 $ON_HMI_FUNCTION_MASK[0].
12
Bit 13:     Enable "Measure kinematics"
OD19730 $ON_HMI_FUNCTION_MASK[0].13
Bit 14:     Enable "Trace (real-time simulation of curr. machining) MigA; for
ShopMill" OD19730 $ON_HMI_FUNCTION_MASK[0].14
Bit 15:     Enable "Trace (real-time simulation of curr. machining) MigA; for
ShopTurn" OD19730 $ON_HMI_FUNCTION_MASK[0].15
Bit 16:     Enable "3D simulation 1 (finished
part)"      OD19730 $ON_HMI_FUNCTION_MASK[0].16
Bit 17:     Enable "3D simulation 2 (finished part and working
area)      OD19730 $ON_HMI_FUNCTION_MASK[0].17
Bit 18:     Enable "Manual machine plus"
OD19730 $ON_HMI_FUNCTION_MASK[0].18
Bit 19:     Enable "SINUMERIK HMI sl copy license OA
programming"      OD19730 $ON_HMI_FUNCTION_MASK[0].19
-----:      Reserved AP61 "SINUMERIK HMI sl copy license OA
project"      OD19730 $ON_HMI_FUNCTION_MASK[0].20
-----:      Reserved AP62 "SINUMERIK HMI sl copy license OA upgrade
programming"      OD19730 $ON_HMI_FUNCTION_MASK[0].21
-----:      Reserved AP63 "SINUMERIK HMI sl copy license OA upgrade
configuration"      OD19730 $ON_HMI_FUNCTION_MASK[0].22
Bit 23:     Enable "SINUMERIK HMI sl Runtime OA Easy
Screen"      OD19730 $ON_HMI_FUNCTION_MASK[0].23
Bit 24:     Enable "Operation without SINUMERIK
OP"      OD19730 $ON_HMI_FUNCTION_MASK[0].24
-----:      Reserved "SINUMERIK *802* Ladder Editor"
OD19730 $ON_HMI_FUNCTION_MASK[0].25
Bit 26:     Enable "CCG Compiler (cam loop)"
OD19730 $ON_HMI_FUNCTION_MASK[0].26
Bit 27:     Enable "CCG-SINUMERIK Operate Runtime OA Solution
Partner"      OD19730 $ON_HMI_FUNCTION_MASK[0].27
Bit 28:     Enable "SINUMERIK HMI sl Runtime
OA .net"      OD19730 $ON_HMI_FUNCTION_MASK[0].28
Bit 29:     Enable "Access MyMachine /OPC UA"
OD19730 $ON_HMI_FUNCTION_MASK[0].29
Bit 30:     Reserved "SINUMERIK Operate /NCU (S00 - reserved on account of SW4.6)"
OD19730 $ON_HMI_FUNCTION_MASK[0].30
ADD ON

```

Bit 0: host"	Enable "MC information system RCS	OD19730 \$ON_HMI_FUNCTION_MASK[1].0
Bit 1: @event"	Enable "MC information system RCS	OD19730 \$ON_HMI_FUNCTION_MASK[1].1
Bit 2: machine"	Enable "MC information system TPM	OD19730 \$ON_HMI_FUNCTION_MASK[1].2
Bit 3: client)"	Enable "MC information system TDI IFC (interface	OD19730 \$ON_HMI_FUNCTION_MASK[1].3
Bit 4: overview"	Enable "MC information system TDI	OD19730 \$ON_HMI_FUNCTION_MASK[1].4
Bit 5: handling"	Enable "MC information system TDI tool	OD19730 \$ON_HMI_FUNCTION_MASK[1].5
Bit 6: PLANNING"	Enable "MC information system TDI	OD19730 \$ON_HMI_FUNCTION_MASK[1].6
Bit 7: machine"	Enable "MC information system TDI	OD19730 \$ON_HMI_FUNCTION_MASK[1].7
Bit 8: generation"	Enable "MC information system TDI tool plan	OD19730 \$ON_HMI_FUNCTION_MASK[1].8
Bit 9: machine"	Enable "MC information system DNC	OD19730 \$ON_HMI_FUNCTION_MASK[1].9
Bit 10: client)"	Enable "MC information system DNC IFC (interface	OD19730 \$ON_HMI_FUNCTION_MASK[1].10
Bit 11: machine"	Enable "MC information system MDI	OD19730 \$ON_HMI_FUNCTION_MASK[1].11
Bit 12: client)"	Enable "MC information system MDI IFC (interface	OD19730 \$ON_HMI_FUNCTION_MASK[1].12
Bit 13: client)"	Enable "MC information system PMT IFC (interface	OD19730 \$ON_HMI_FUNCTION_MASK[1].13
Bit 14: client)"	Enable "MC information system PDA IFC (interface	OD19730 \$ON_HMI_FUNCTION_MASK[1].14
Bit 15: client)"	Enable "MC information system TPM IFC (interface	OD19730 \$ON_HMI_FUNCTION_MASK[1].15
Bit 16: OD19730 \$ON_HMI_FUNCTION_MASK[1].16	Enable "TRANSLINE 2000 HMI PRO s1"	
Bit 17: agent"	Enable "MC information system ADDM	OD19730 \$ON_HMI_FUNCTION_MASK[1].17
Bit 18: SINUMERIK"	Enable "MC information system RPC	OD19730 \$ON_HMI_FUNCTION_MASK[1].18
Bit 19: statistic"	Enable "MC information system TDI	OD19730 \$ON_HMI_FUNCTION_MASK[1].19
Bit 20: connection"	Enable "MC information system TDI ident	OD19730 \$ON_HMI_FUNCTION_MASK[1].20
Bit 21: OD19730 \$ON_HMI_FUNCTION_MASK[1].21	Enable "Electronic key system (EKS)"	
-----: OD19730 \$ON_HMI_FUNCTION_MASK[1].22	Reserved	
Bit 23: Monitor)"	Enable "Integrated spindle monitor (S-	OD19730 \$ON_HMI_FUNCTION_MASK[1].23
Bit 24: OD19730 \$ON_HMI_FUNCTION_MASK[1].24	Enable "DXF reader"	
Bit 25: Editor")	Unused (was "SINUMERIK 828 Ladder	OD19730 \$ON_HMI_FUNCTION_MASK[1].
25		
Bit 26: OD19730 \$ON_HMI_FUNCTION_MASK[1].26	Enable "SINUMERIK extended touch"	

```
OD19730 $ON HMI FUNCTION MASK[1].
```

Description:	Option data for enabling HMI functions:
Bit 0 (LSB):	SINUMERIK Operate /NCU.
Bit 1:	SINUMERIK Operate /PCU
Bit 2:	SINUMERIK Operate /PC
Bit 3:	SINUMERIK basic PCU software /IPC

Description:	Option data

Description:	Option data

Description:	Functional scope of collision avoidance
Bit 0 (LSB):	collision avoidance (machine, tool)
Bit 1:	Basic collision avoidance (machine)
Bit 2:	Advanced collision avoidance (machine, workpiece)

2.3.2 Channel-specific machine data

Description:	The channel name can be defined in this MD. The channel name is only used for the display on the HMI.

20050	AXCONF_GEOAX_ASSIGN_TAB			C01, C10	TE7, TE8, M1, R2, K1, K2	
-	Assignment of geometry axis to channel axis			BYTE	PowerOn	
-						
-	3	1, 2, 3, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0...	0	20	7/2	M

Description:

This MD is used to specify which channel axis the geometry axis is assigned to. Each geometry axis must be assigned to a specific channel. If a geometry axis is not assigned to a channel axis, then this geometry axis is not available, and cannot be programmed (with the name defined under MD20060 \$MC_AXCONF_GEOAX_NAME_TAB).

For example: Turning machine without transformation:

MD20050 \$MC_AXCONF_GEOAX_ASSIGN_TAB[0] = 1 ; 1st geometry axis = 1st channel axis

MD20050 \$MC_AXCONF_GEOAX_ASSIGN_TAB[1] = 0 ; 2nd geometry axis not defined

MD20050 \$MC_AXCONF_GEOAX_ASSIGN_TAB[2] = 2 ; 3rd geometry axis = 2nd channel axis

The assignment made here is valid if no transformation is active. With active transformation n, the transformation-specific assignment table MD24...

\$MC_TRAFO_GEOAX_ASSIGN_TAB... becomes active.

20060	AXCONF_GEOAX_NAME_TAB			C01, C11, C10	F2, V2, M1, K2	
-	Geometry axis name in channel			STRING	PowerOn	
-						
-	3	X, Y, Z, X, Y, Z, X, Y, Z, X, Y, Z, X, Y, Z, X, Y, Z, X, Y, Z, X...	-	-	7/2	M

Description:

This MD is used to enter the names of the geometry axes separately for each channel. Geometry axes can be programmed in the part program using the names specified here.

Special cases:

- The geometry axis name entered must not conflict with the designations and assignments of the machine and channel axis names or other identifiers.
Names for Euler angles (MD10620 \$MN_EULER_ANGLE_NAME_TAB),
Names for direction vectors (MD10640 \$MN_DIR_VECTOR_NAME_TAB),
Names for intermediate circle point coordinates for CIP (MD10660 \$MN_INTERMEDIATE_POINT_NAME_TAB) and the
Names for interpolation parameters (MD10650 \$MN_IPO_PARAM_NAME_TAB) coincide.
- The geometry axis name entered must not include any of the following reserved address letters:

- D Tool offset (D function)	- E Reserved
- F Feedrate (F function)	- G Path condition
- H Auxiliary function (H function)	- L Subroutine call
- M Miscellaneous function (M function)	- N Subblock
- P Subroutine number of passes	- R Arithmetic parameters
- S Spindle speed (S function)	- T Tool (T function)
- The name must not include any keywords (e.g. DEF, SPOS etc.) or pre-defined identifiers (e.g. ASPLINE, SOFT).
- The use of an axis identifier consisting of a valid address letter (A, B, C, I, J, K, Q, U, V, W, X, Y, Z) followed by an optional numerical extension (1-99) gives slightly better block change times than a general identifier.
- Identical names may be given to geometry axes assigned to different channels.

Related to:

MD10000 \$MN_AXCONF_MACHAX_NAME_TAB

(machine axis name [axis no.])

MD20080 \$MC_AXCONF_CHANAX_NAME_TAB

(channel axis name in the channel [channel axis no.])

2.3 NC machine data

20070	AXCONF_MACHAX_USED			C01, C10	TE3, B3, K5, M1, K1, K2, P3 pl, P3 sl, S1	
-	Machine axis number valid in channel			BYTE	PowerOn	
-						
-	20	1, 2, 3, 0, 0	0	31	7/2	M

Description:

This MD is used to specify the machine axis which the channel axis/special axis is assigned to. Each channel axis has to be assigned to a specific channel. A machine axis that has not been assigned to a channel is inactive, i.e. the axis control is not computed, the axis is not shown on the screen, and it cannot be programmed in any channel.

From software version 5, a machine axis need not be assigned to a channel axis for reasons of uniform configuration. The MD for the machine axis is set to 0 in this case. At the same time, MD11640 \$MN_ENABLE_CHAN_AX_GAP must be set to 1 (channel axis gaps are permitted).

From software version 5, the machine data MD20070 \$MC_AXCONF_MACHAX_USED does not directly refer to the machine axes created with MD10000 \$MN_AXCONF_MACHAX_NAME_TAB, but to the logical machine axis map which is defined with MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB.

MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB refers:

- directly to a local machine axis on the NCU,
- to a machine axis of another NCU in the NCU grouping or
- indirectly to an axis container with local or remote machine axes.

If the default values AX1, AX2, ..., AX31 are entered with MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB, then the NCK behaves in the same way as up to software version 4, this means that machine data MD20070 \$MC_AXCONF_MACHAX_USED refers to the corresponding local machine axis.

Special cases:

- Each geometry axis must be assigned to a channel axis and a machine axis so that it can be programmed.
- If a machine axis is assigned to several channels by means of MD20070 \$MC_AXCONF_MACHAX_USED, then the number of the channel from which the axis is to be programmed must be entered in MD30550 \$MA_AXCONF_ASSIGN_MASTER_CHAN.
- Up to software version 4, the list of entries must not contain any gaps (as from software version 5 - see above). In contrast, the assignment of the machine axes used may contain gaps.

For example:

Permissible:

```
AXCONF_MACHAX_USED [0] = 3; 3rd MA is the 1st axis in the channel
AXCONF_MACHAX_USED [1] = 1; 1st MA is the 2nd axis in the channel
AXCONF_MACHAX_USED [2] = 5; 5th MA is the 3rd axis in the channel
AXCONF_MACHAX_USED [3] = 0
```

Error for software version 4, permissible for version 5:

```
AXCONF_MACHAX_USED [0] = 1; 1st MA is the 1st axis in the channel
AXCONF_MACHAX_USED [1] = 2; 2nd MA is the 2nd axis in the channel
AXCONF_MACHAX_USED [2] = 0; gap in the list ...
AXCONF_MACHAX_USED [3] = 3; ... of the channel axes
```

Axis identifiers must be defined in the corresponding list places of AXCONF_CHANAX_NAME_TAB for the axes activated in the channel.

Related to:

```
MD30550 $MA_AXCONF_ASSIGN_MASTER_CHAN
MD20080 $MC_AXCONF_CHANAX_NAME_TAB
MD10002 $MN_AXCONF_LOGIC_MACHAX_TAB
```

MD11640 \$MN_ENABLE_CHAN_AX_GAP

Reference:

Description of Functions B3.

20080	AXCONF_CHANAX_NAME_TAB			C01, C11, C10	F2, V2, M1, K2, V1	
-	Channel axis name in channel			STRING	PowerOn	
-						
-	20	X, Y, Z, A, B, C, U, V, X11, Y11,, X, Y, Z, A, B, ...	-	-	7/2	M

Description:

The name of the channel axis/special axis is entered in this MD. Normally the first three channel axes are assigned by the three assigned geometry axes

(see also MD20050 \$MC_AXCONF_GEOAX_ASSIGN_TAB)

The remaining channel axes are also called special axes. The channel axis/special axis on the screen in the WCS (workpiece coordinate system) is always displayed with the name entered in this MD.

Special cases:

- The specified channel axis name/special axis name must not conflict with the designation and assignment of the machine and geometry axis names or other identifiers.
Names for Euler angles (MD10620 \$MN_EULER_ANGLE_NAME_TAB),
Names for direction vectors (MD10640 \$MN_DIR_VECTOR_NAME_TAB),
Names for intermediate circle point coordinates for CIP (MD10660 \$MN_INTERMEDIATE_POINT_NAME_TAB)
and the names for interpolation parameters (MD10650 \$MN_IPO_PARAM_NAME_TAB) overlap.
- The channel axis name entered must not include any of the following reserved address letters:

- D Tool offset (D function)	- E Reserved
- F Feedrate (F function)	- G Path condition
- H Auxiliary function (H function)	- L Subroutine call
- M Miscellaneous function (M function)	- N Subblock
- P Subroutine number of passes	- R Arithmetic parameters
- S Spindle speed (S function)	- T Tool (T function)
- The name must not include any keywords (e.g. DEF, SPOS etc.) or pre-defined identifiers (e.g. ASPLINE, SOFT).
- The use of an axis identifier consisting of a valid address letter (A, B, C, I, J, K, Q, U, V, W, X, Y, Z) followed by an optional numerical extension (1-99) gives slightly better block change times than a general identifier.
- No special names need be entered in this MD for channel axes to which geometry axes are assigned (normally the first three channel axes).

Axis identifiers that are not allowed are rejected with an alarm during runup.

20082	AXCONF_CHANAX_DEFAULT_NAME			C01, C11, C10	-	
-	Default axis name for axis variables in the channel			STRING	PowerOn	
-						
-	-	-	-	-	7/2	M

Description:

Variables or parameters of type Axis which have not been initialized are initialized with a default axis identifier. The identifier can be configured via the machine data MD20082 \$MC_AXCONF_CHANAX_DEFAULT_NAME. If this machine data is set with an empty string, the 1st geometry axis is used, as previously.

MD20082 \$MC_AXCONF_CHANAX_DEFAULT_NAME can be set by default with all available, valid axis identifiers. The value of this machine data should generally always correspond to a value of \$MD20060 \$MC_AXCONF_GEOAX_NAME_TAB, MD20080 \$MC_AXCONF_CHANAX_NAME_TAB or MD10000 \$MN_AXCONF_MACHAX_NAME_TAB.

2.3 NC machine data

If an invalid axis name is entered as a value or if this name has been changed, for example, in MD20080 \$MC_AXCONF_CHANAX_NAME_TAB but not in MD20082 \$MC_AXCONF_CHANAX_DEFAULT_NAME, then this is indicated with alarm 4041 channel %1 block %2 axis identifier %3 is invalid".

Only valid axis identifiers, empty string and "NO_AXIS" may be entered in MD20082 \$MC_AXCONF_CHANAX_DEFAULT_NAME. "NO_AXIS" is used to indicate a non-initialized axis variable, empty string means previous behavior, i.e. each variable is initialized with the 1st geometry axis.

20090	SPIND_DEF_MASTER_SPIND			C01, C03	H2, K1, K2, P3 pl, P3 sl, S1, W1	
-	Initial setting of master spindle in channel			BYTE	PowerOn	
-						
-	-	1, 1, 1, 1, 1, 1, 1, 1...	1	20	7/2	M

Description:

Definition of the default setting for the master spindle (in the channel).

The number of the spindle is entered.

A number of functions are linked to the master spindle, which are not possible with any other spindle.

Note:

The language command SETMS(n) can declare the spindle number as the master spindle.

The spindle defined in this MD is declared once again as the master spindle with SETMS.

The spindle defined in this MD is also declared as the master spindle at program end and program cancelation.

20092	SPIND_ASSIGN_TAB_ENABLE			C01, C03, C10	S1	
-	Enable/disable the spindle converter.			BYTE	Reset	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	1	7/7	U

Description:

Value 0:

The spindle converter function is deactivated. The contents of SD42800 \$SC_SPIND_ASSIGN_TAB[...] are not evaluated.

Value 1:

The spindle converter is activated. Conversion from logical to physical spindle takes place. For more information, see SD42800 \$SC_SPIND_ASSIGN_TAB.

Note:

The spindle converter is deactivated after "Delete SRAM" (service switch in position "1").

Related to:

SD42800 \$SC_SPIND_ASSIGN_TAB

20094	SPIND_RIGID_TAPPING_M_NR			C01, C03, C10	H2, K1, S1	
-	M function for switching into controlled axis mode			DWORD	PowerOn	
-						
-	-	70, 70, 70, 70, 70, 70, 70, 70...	-	-	7/2	M

Description:

This machine data defines the M auxiliary function number with which the spindle is switched into axis mode.

The M number defined in the machine data replaces M70 in Siemens mode.

Note:

On the VDI interface, M70 is always output with the corresponding address extension to indicate the switch to axis mode.

Restrictions: Refer to machine data MD10715 \$MN_M_NO_FCT_CYCLE

Related to:

MD10714 \$MN_M_NO_FCT_EOP,
MD10715 \$MN_M_NO_FCT_CYCLE,
MD20094 \$MC_SPIND_RIGID_TAPPING_M_NR,
MD22254 \$MC_AUXFU_ASSOC_M0_VALUE
MD10814 \$MN_EXTERN_M_NO_MAC_CYCLE,
MD10804 \$MN_EXTERN_M_NO_SET_INT
MD10806 \$MN_EXTERN_M_NO_DISABLE_INT,
MD10800 \$MN_EXTERN_CHAN_SYNC_M_NO_MIN,
MD10802 \$MN_EXTERN_CHAN_SYNC_M_NO_MAX
MD20095 \$MC_EXTERN_RIGID_TAPPING_M_NR
\$MD26008 \$MC_NIBBLE_PUNCH_CODE

20095	EXTERN_RIGId_TAPPING_M_NR			C01, C11, C03, C10	H2, K1	
-	M function for switching to controlled axis mode(external mode)			DWORD	PowerOn	
-						
-	-	29, 29, 29, 29, 29, 29, 29, 29...	-	-	7/2	M

Description:

This machine data defines the M function number with which the switchover to controlled spindle/axis mode is to be carried out.

The M number defined in the machine data replaces M29 in external language mode.

Pre-defined M numbers, such as M00,M1,M2,M3, etc., are not allowed as M numbers.

Restrictions: See machine data MD10715 \$MN_M_NO_FCT_CYCLE

Related to:

MD10714 \$MN_M_NO_FCT_EOP,
MD10715 \$MN_M_NO_FCT_CYCLE,
MD20094 \$MC_SPIND_RIGID_TAPPING_M_NR,
MD22254 \$MC_AUXFU_ASSOC_M0_VALUE
MD10814 \$MN_EXTERN_M_NO_MAC_CYCLE,
MD10804 \$MN_EXTERN_M_NO_SET_INT
MD10806 \$MN_EXTERN_M_NO_DISABLE_INT,
MD10800 \$MN_EXTERN_CHAN_SYNC_M_NO_MIN,
MD10802 \$MN_EXTERN_CHAN_SYNC_M_NO_MAX
MD20095 \$MC_EXTERN_RIGID_TAPPING_M_NR
MD26008 \$MC_NIBBLE_PUNCH_CODE

20096	T_M_ADDRESS_EXT_IS_SPINO			C01, C04, C09	H2, W1	
-	Meaning of address extension at T, M tool change			BOOLEAN	PowerOn	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/2	M

Description:

This MD is only significant if the functions 'Tool management'/'flat D numbers' are inactive.

FALSE

The contents of the address extensions of the NC addresses T and M 'tool change command number' are not evaluated by the NCK. The PLC decides on the significance of the programmed extension.

TRUE

2.3 NC machine data

The address extensions of the NC addresses T and M 'tool change command number' - 'tool change command number'=TOOL_CHANGE_M_CODE with 6 as the default value - are interpreted as spindle numbers.

NCK treats the extension in the same way as the active functions 'tool management' and 'flat D number management'.

That is, the programmed D number always refers to the T number of the programmed main spindle number.

See also:

MD20090 \$MC_SPIND_DEF_MASTER_SPIND,

MD22550 \$MC_TOOL_CHANGE_MODE,

MD22560 \$MC_TOOL_CHANGE_M_CODE

20098	DISPLAY_AXIS			EXP, C01	-	
-	Display axis on HMI			UDWORD	Immediately	
-						
-	20	0x7FFFFFFF, 0x7FFFFFFF, 0x7FFFFFFF, 0x7FFFFFFF, 0x7FFFFFFF,, 0x7 ...	0	0x7FFFFFFF	7/2	M

Description:

Identifies whether the axis will be displayed by the HMI as a machine, geometry, or auxiliary axis.

This data is only evaluated by the HMI.

Bit 0 to 15: Machine (MCS)

Bit 0= 1 Machine - display machine axis in the actual value windows

0 Machine - hide machine axis in the actual value windows

Bit 1= 1 Machine - display machine axis in the reference point window

0 Machine - hide machine axis in the reference point window

Bit 2= 1 Machine - display machine axis in preset/scratch/parameter work offset windows

0 Machine - hide machine axis in preset/scratch/parameter work offset windows

Bit 3= 1 Machine - display machine axis in the handwheel selection window

0 Machine - hide machine axis in the handwheel selection window

(Bit 4) Not assigned

Bit 5= 1 Display spindle in the T,F,S window

0 Hide spindle in the T,F,S window

Bit 16 to 31: Work (WCS)

Bit 16= 1 Work - display geometry axis in the actual value windows

0 Work - hide geometry axis in the actual value windows

(Bit 17) Not assigned

Bit 18= 1 Work - display geometry axis in parameter work offset window

0 Work - hide geometry axis in parameter work offset window

Bit 19= 1 Work - display geometry axis in the handwheel selection window

0 Work - hide geometry axis in the handwheel selection window

Bit 20= 1 Work - display position axis in the position/straight line windows

0 Work - hide position axis in the position/straight line windows

(Bit 21) Not assigned

20100	DIAMETER_AX_DEF			C01, C10	H1, M5, P1, V1, W1	
-	Geometry axis with transverse axis function			STRING	PowerOn	
-						
-	-	-	-	-	7/2	M

Description:

This MD is used to define a geometry axis as a transverse axis. Only one transverse axis can be defined here for each channel.

Further transverse axes for axis-specific diameter programming can be activated via MD30460 \$MA_BASE_FUNCTION_MASK, bit 2.

The axis identifier of an active geometry axis that has been defined in the channel-specific MD20050 \$MC_AXCONF_GEOAX_ASSIGN_TAB[n]

or MD24120 \$MC_TRAFO_AX_GEOAX_ASSIGN_TAB_1[n] (from SW 4) and

MD20060 \$MC_AXCONF_GEOAX_NAME_TAB[n] must be specified.

If space characters are entered or if an axis identifier is specified for an axis which is not defined as a geometry axis, this leads to the following alarms:

- during runup, to alarm 4032 "Channel %1 wrong identifier for transverse axis in %2", if the "Diameter programming" function (DIAMON) or constant cutting speed G96/G961/G962 is the switch-on setting.
- when the "Diameter programming (DIAMON)" function is activated, to alarm 16510 "Channel %1 block %2 No transverse axis available for diameter programming", if no axis has been permitted via DIAMCHANA[AX] for channel-specific diameter programming.
- when G96/G961/G962 has been programmed, to alarm 10870 "Channel %1 block %2 No transverse axis defined as reference axis for G96/G961/G962", if no geometry axis has been defined as the reference axis for G96/G961/G962 by the instruction SCC[ax].

Related to:

MD20050 \$MC_AXCONF_GEOAX_ASSIGN_TAB[n]

MD20060 \$MC_AXCONF_GEOAX_NAME_TAB[n]

MD24120 \$MC_TRAFO_AX_GEOAX_ASSIGN_TAB_1[n]

MD30460 \$MA_BASE_FUNCTION_MASK

20105	PROG_EVENT_IGN_REFP_LOCK			N01	K1, Z1	
-	Start Prog-Events despite non-referenced axes.			UDWORD	PowerOn	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0	0x3F	7/2	M

Description:

The behavior of event-driven program calls (prog-events) regarding non-referenced axes can be set.

Bit 0 = 1 :

Prog-event ignores non-referenced axes after part program start

Bit 1 = 1 :

Prog-event after part program end ignores non-referenced axes

Bit 2 = 1 :

Prog-event after operator panel reset ignores non-referenced axes

Bit 3 = 1 :

Prog-event after power-up ignores non-referenced axes

Bit 4 = 1 :

Prog-event after 1st start after search ignores non-referenced axes

Bit 5 = 1 :

Reserved

Corresponds with:

MD20106 \$MC_PROG_EVENT_IGN_SINGLEBLOCK

MD20107 \$MC_PROG_EVENT_IGN_INHIBIT

MD20108 \$MC_PROG_EVENT_MASK

MD20192 \$MC_PROG_EVENT_IGN_PROG_STATE

MD20193 \$MC_PROG_EVENT_IGN_STOP

The machine data MD20105 \$MC_PROG_EVENT_IGN_REFP_LOCK and MD20115

\$MC_IGNORE_REFP_LOCK_ASUP replace bit 1 from MD11602 \$MN_ASUP_START_MASK.

2.3 NC machine data

If MD20700 \$MC_REFP_NC_START_LOCK is equal to 0, the setting in MD20105 \$MC_PROG_EVENT_IGN_REFP_LOCK is ignored, and non-referenced axes are always ignored.

20106	PROG_EVENT_IGN_SINGLEBLOCK			N01	K1, Z1	
-	Prog-Events ignore single block			UDWORD	PowerOn	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0	0x3F	7/2	M

Description: Event-driven program calls (Prog-Events) can be set regarding their single-block response.

Bit 0 = 1 :

Prog-Event after start-of-part-program causes block change without restart

Bit 1 = 1 :

Prog-Event after end-of-part-program causes block change without restart

Bit 2 = 1 :

Prog-Event after OP reset causes block change without restart

Bit 3 = 1 :

Prog-Event after ramp-up causes block change without restart

Bit 4 = 1 :

Prog-Event after 1st start after search causes block change without restart

Bit 5 = 1 :

Safety Prog-Event during ramp-up causes block change without restart

Corresponds to:

MD20105 \$MC_PROG_EVENT_IGN_REFP_LOCK

MD20107 \$MC_PROG_EVENT_IGN_INHIBIT

MD20108 \$MC_PROG_EVENT_MASK

MD20192 \$MC_PROG_EVENT_IGN_PROG_STATE

MD20193 \$MC_PROG_EVENT_IGN_STOP

20107	PROG_EVENT_IGN_INHIBIT			N01	K1, Z1	
-	Prog-Events ignore read-in disable			UDWORD	PowerOn	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0	0x3F	7/2	M

Description: Event-driven programm calls (Prog-Events) can be set regarding their read-in disable response.

Bit 0 = 1 :

Prog-Event after start-of-part-program causes block change despite read-in disable

Bit 1 = 1 :

Prog-Event after end-of-part-program causes block change despite read-in disable

Bit 2 = 1 :

Prog-Event after OP reset causes block change despite read-in disable

Bit 3 = 1 :

Prog-Event after ramp-up causes block change despite read-in disable

Bit 4 = 1 :

Prog-Event after 1st start after search run causes block change despite read-in disable

Bit 5 = 1 :

Safety-Prog-Event during ramp-up causes block change despite read-in disable

Corresponds to:

MD20105 \$MC_PROG_EVENT_IGN_REFP_LOCK

MD20106 \$MC_PROG_EVENT_IGN_SINGLEBLOCK

MD20108 \$MC_PROG_EVENT_MASK

MD20192 \$MC_PROG_EVENT_IGN_PROG_STATE

MD20193 \$MC_PROG_EVENT_IGN_STOP

20108	PROG_EVENT_MASK			N01	TE3, K1	
-	Setting of event-driven programm calls			UDWORD	PowerOn	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0	0x3F	7/2	M

Description:

Parameterization of the events with which the user program set with MD11620 \$MN_PROG_EVENT_NAME (default: _N_PROG_EVENT_SPF) is implicitly called.

Parameterization of the events causing the safety program _N_SAFE_SPF to be called implicitly:

Bit 0 = 1 : Start of part program

Bit 1 = 1 : End of part program

Bit 2 = 1 : Operator panel reset

Bit 3 = 1 : Ramp-up

Bit 4 = 1 : Reserved

Bit 5 = 1 : Safety program booting

The user program is called via the following search path:

1. /_N_CUS_DIR/_N_PROG_EVENT_SPF

2. /_N_CMA_DIR/_N_PROG_EVENT_SPF

3. /_N_CST_DIR/_N_PROG_EVENT_SPF

The safety program has to be available in the following location:

1. /_N_CST_DIR/_N_SAFE_SPF

Furthermore, MD11450 \$MN_SEARCH_RUN_MODE bit 1 also causes the user program set with MD11620 \$MN_PROG_EVENT_NAME to be started up automatically after the action blocks, regardless of the settings in this machine data.

Related to:

MD20105 \$MC_PROG_EVENT_IGN_REFP_LOCK

MD20106 \$MC_PROG_EVENT_IGN_SINGLEBLOCK

MD20107 \$MC_PROG_EVENT_IGN_INHIBIT

MD20192 \$MC_PROG_EVENT_IGN_PROG_STATE

MD20193 \$MC_PROG_EVENT_IGN_STOP

Note:

The Siemens cycle package includes the cycle /_N_CST_DIR/_N_PROG_EVENT_SPF, that should be used by default to process the event-driven program calls. It contains subroutine calls for the particular manufacturer and end user applications (For details see the documentation "Standard cycle PROG-EVENT.SPF").

20109	PROG_EVENT_MASK_PROPERTIES			N01	K1	
-	Properties of Prog-Events			UDWORD	PowerOn	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0	0x1	7/2	M

Description:

Parameterization of additional properties of the event-controlled program calls (in short, Prog-Event), that is, the MD20108 \$MC_PROG_EVENT_MASK is further parameterized.

Bit 0 = 1 :

An ASUB started from channel status RESET does not result in a Prog-Event.

2.3 NC machine data

20110	RESET_MODE_MASK			C11, C03	F2, K6, M3, TE4, W5, B3, K5, M1, G2, K1, K2, P1, S1, W1, 2.4, 2.7	
-	Definition of basic control settings after reset/PP end			UDWORD	Reset	
-						
-	-	0x1, 0x1, 0x1, 0x1, 0x1, 0x1, 0x1, 0x1...	0	0x17FFFF	7/2	M

Description:

Definition of the initial setting of the control after ramp-up and at reset/end-of-part-program with regard to the G codes (in particular the active plane and the settable work offset), tool length offset and transformation by setting the following bits:

Bit 0: Reset mode

Bit 1: Suppress aux. funct. output on tool selection

Bit 2: Select reset response after power-on (e.g. tool offset)

Bit 3: Select reset response after end of test mode with regard to active tool offsets.

Bit 4: Reserved

Bit 5: Reserved

Bit 6: Reset response "Active tool length offset"

Bit 7: Reset response "Active kinematic transformation"

Bit 8: Reset response "Coupled-motion axes"

Bit 9: Reset response "Tangential correction"

Bit 10: Reset response "Synchronous spindle"

Bit 11: Reset response "Revolutional feedrate"

Bit 12: Reset response "Geo axis replacement"

Bit 13: Reset response "Master value coupling"

Bit 14: Reset response "Basis frame"

Bit 15: Reset response "Electronic gearbox"

Bit 16: Reset response "Master spindle"

Bit 17: Reset response "Master toolholder"

Bit 18: Reset response "Reference axis for G96/G961/G962"

Bit 19: Reserved "Adjustable software limit switch ineffective"

Bit 20: Reset response "\$P_USEKT"

Bits 4 to 11, 16 and 17 are only evaluated for bit 0 = 1.

Meaning of the individual bits:

Bit 0 (LSB) = 0: corresponds to the behavior of SW release 1, is only recommended for test mode

Initial setting after ramp-up:

- G codes according to MD20150 \$MC_GCODE_RESET_VALUES
- Tool length offset not active
- Transformation not active
- No coupled-motion axis groupings active
- No tangential correction active
- No axial revolutional feedrate active
- Path revolutional feedrate with master spindle (default))

Initial setting after reset or end of part program:

The current settings are retained.

When next part program is started, the following initial setting is effective:

- G codes according to MD20150 \$MC_GCODE_RESET_VALUES
- Tool length offset not active

- Transformation not active
- No coupled-motion axis groupings active
- No tangential correction active
- No master value coupling active
- No axial revolutionary feedrate active
- Path revolutionary feedrate with master spindle (default)

Bit 0 (LSB) = 1: Standard value for Powerline and Solutionline systems

Initial setting after startup:

- G codes acc. to MD20150 \$MC_GCODE_RESET_VALUES
- Tool length offset active acc. to MD20120 \$MC_TOOL_RESET_VALUE, MD20130 \$MC_CUTTING_EDGE_RESET_VALUE, and MD20132 \$MC_SUMCORR_RESET_VALUE
- Transformation active acc. to MD20140 \$MC_TRAFO_RESET_VALUE
- Geometry axis replacement acc. to MD20118 \$MC_GEOAX_CHANGE_RESET
- No coupled-motion axis groupings active
- No tangential correction active

Initial setting after reset or end of part program:

Depending on MD20152 \$MC_GCODE_RESET_MODE, the current settings are retained for the G groups or the initial settings stored in MD20150 \$MC_GCODE_RESET_VALUES are set.

Initial setting after reset or end of part program

Depending on MD20110 \$MC_RESET_MODE_MASK bits 6 to 7, for

- Tool length offset
- Transformation

either the current settings are retained or the initial settings saved in the MDs are set.

Depending on bits 8 and 9, the current settings of coupled-motion axes or tangentially corrected axes are either deactivated or retained.

Configured synchronous spindle coupling:

The coupling is deselected depending on the setting in MD21330 \$MC_COUPLE_RESET_MODE_1.

Non-configured synchronous spindle coupling:

Depending on bit 10, the coupling is either deactivated or retained.

Depending on bit 14, the basic frame is either retained or deselected.

Bit 1 = 0:

Auxiliary function output (D,T,M) at the PLC for tool selection corresponding to machine data

MD20120 \$MC_TOOL_RESET_VALUE

MD20130 \$MC_CUTTING_EDGE_RESET_VALUE

MD20121 \$MC_TOOL_PRESEL_RESET_VALUE

MD22550 \$MC_TOOL_CHANGE_MODE

When magazine management is active, T, M are not output as auxiliary functions.

The function uses its own communication to output T, M to the PLC, for example.

Bit 1 = 1:

Suppress aux. funct. output to PLC on tool selection.

If tool management or magazine management is active, T, M are never output as auxiliary functions.

Bit 2 = 0:

If tool or magazine management is not active:

- No tool offset active after power-on. Active and programmed T depend on the subsequent settings of the machine data (bits 0, 6).

If tool or magazine management is active:

- No meaning.

2.3 NC machine data

Bit 2 = 1:

If tool or magazine management is not active:

- If bits 0 and 6 both = 1 (0x41), the tool offset of the last tool active in the NCK is active after the first reset after power-on.

(The value of the programmed tool depends on the value of machine data MD20121 \$MC_TOOL_PRESEL_RESET_VALUE.)

Notice: The NCK does not know the conditions at the machine.

For active tool or magazine management:

- No meaning

Bit 3 = 0:

With and without active tool management:

- End of test mode: "Retain current setting for active tool length offset" (bits 0 and 6 set) refers to the program that was active before test mode was activated.

Bit 3 = 1:

Relevant only if tool management is not active:

- End of test mode: "Retain current setting for active tool length offset" (bits 0 and 6 set) refers to the program that was active when test mode ended. (If tool management is active, the tool on the spindle is generally the active tool. Exception only for MD20270 \$MC_CUTTING_EDGE_DEFAULT = -2.)

Bit 4 = 0: Reserved

Bit 4 = 1: Reserved

Bit 5 = 0: Reserved

Bit 5 = 1: Reserved

Bit 6 = 0:

Initial setting for active tool length offset after reset/end of part program acc. to MD20120 \$MC_TOOL_RESET_VALUE, MD20130 \$MC_CUTTING_EDGE_RESET_VALUE, MD20123 \$MC_USEKT_RESET_VALUE and MD20132 \$MC_SUMCORR_RESET_VALUE.

If MD22550 \$MC_TOOL_CHANGE_MODE = 1, the tool specified in MD20121 \$MC_TOOL_PRESEL_RESET_VALUE is additionally preselected.

If tool or magazine management is active, MD20122 \$MC_TOOL_RESET_NAME is used instead of data MD20120 \$MC_TOOL_RESET_VALUE.

Bit 6 = 1:

The current setting for active tool length offset is retained after reset/end of part program.

If tool or magazine management is active, the tool currently on the master spindle (generally = master toolholder) is selected.

If the tool on the master spindle is disabled, the "disabled" status is ignored.

Please note that after a program ends or is terminated, either the most recent value for master spindle or master toolholder programmed in the program, or the value set in MD20090 \$MC_SPIND_DEF_MASTER_SPIND or MD20124 \$MC_TOOL_MANAGEMENT_TOOLHOLDER defines the master spindle or master toolholder.

(The selection is made in bit 16 or bit 17.)

For MD20270 \$MC_CUTTING_EDGE_DEFAULT = -2, the following applies specifically:

If a tool has been loaded into the spindle, but a new offset D has not yet been programmed, the previous tool is still active in the NCK.

If machining is canceled in this status (e.g. with the Reset key), the offset is defined with the smallest D number of the master spindle tool.

Bit 7 = 0:

Initial setting for active transformation after reset/end of part program according to MD20140 \$MC_TRAFO_RESET_VALUE.

Bit 7 = 1:

The current setting for active transformation is retained after reset/end of part program.

Bit 8 = 0:
Coupled-motion axis groups are ungrouped at reset/end of part program.

Bit 8 = 1:
Coupled-motion axis groups remain active after reset/end of part program.

Bit 9 = 0:
Tangential correction is deactivated at reset/end of part program.

Bit 9 = 1:
Tangential correction remains active after reset/end of part program.

Bit 10 = 0:
Non-configured synchronous spindle coupling is deactivated at reset/end of part program.

Bit 10 = 1:
Non-configured synchronous spindle coupling remains active after reset/end of part program.

Bit 11 = 0:
At reset/end of part program, the setting data SD43300 \$SA_ASSIGN_FEED_PER_REV_SOURCE is reset to 0 for all non-active axes/spindles, i.e. traversing at revolutional feedrate is canceled and the setting for path and synchronous axes is reset to the master spindle (default).

Bit 11 = 1:
The current setting for revolutional feedrate is retained after reset/end of part program. At the start of the part program, the setting data SD43300 \$SA_ASSIGN_FEED_PER_REV_SOURCE is reset to 0 for all non-active axes/spindles, i.e. traversing at revolutional feedrate is canceled and the setting for path and synchronous axes is reset to the master spindle (default).

Bit 12 = 0:
If machine data MD20118 \$MC_GEOAX_CHANGE_RESET is set, a changed geometry axis assignment is canceled at reset/end of part program. The initial setting for the geometry axis assignment defined in the machine data becomes active.

Bit 12 = 1:
A changed geometry axis assignment remains active after reset/end of part program.

Bit 13 = 0:
Master value couplings are canceled at reset/end of part program.

Bit 13 = 1:
Master value couplings remain active after reset/end of part program.

Bit 14 = 0:
The basic frame is deselected.

Bit 14 = 1:
The current setting of the basic frame is retained.

Bit 15 = 0:
Active electronic gearboxes remain active at reset/end of part program.

Bit 15 = 1:
Active electronic gearboxes are canceled at reset/end of part program.

Bit 16 = 0:
Initial setting for the master spindle according to MD20090 \$MC_SPIND_DEF_MASTER_SPIND.

Bit 16 = 1:
The current setting of the master spindle (SETMS) is retained.
For MD20124 \$MC_TOOL_MANAGEMENT_TOOLHOLDER = 0, this bit also influences the behavior of bit 6.

Bit 17 = 0:
Initial setting for the master toolholder according to MD20124 \$MC_TOOL_MANAGEMENT_TOOLHOLDER.

2.3 NC machine data

Bit 17 = 1:

The current setting of the master toolholder (SETMTH) is retained.

(Bit17 is only relevant for active tool or magazine management MD20124

\$MC_TOOL_MANAGEMENT_TOOLHOLDER > 0. Otherwise, the setting is valid for master spindle bit 16, for active tool or magazine management. This bit also influences the behavior of bit6.)

Bit 18 = 0:

Reference axis for G96/G961/G962 acc. to MD 20100: \$MC_DIAMETER_AX_DEF.

When using SCC for your own spindle reset, bit 18 = 1 is recommended (see also MD 20112 \$MC_START_MODE_MASK, bit 18).

Bit 18 = 1:

Reference axis for G96/G961/G962 is retained.

Bit 19: Reserved!

Bit 19= 0:

The two adjustable software limit switches are deleted after reset and are no longer effective.

Bit 19 = 1:

The two adjustable software limit switches remain active after reset.

Bit 20: Reset response for \$P_USEKT (use kind of tool)

Bit 20= 0:

After the RESET, \$P_USEKT is set to \$MC_USEKT_RESET_VALUE (default=0).

Bit 20 = 1:

On RESET, \$P_USEKT is retained.

Related to:

MD20120 \$MC_TOOL_RESET_VALUE

MD20130 \$MC_CUTTING_EDGE_RESET_VALUE

MD20150 \$MC_GCODE_RESET_VALUES

MD20152 \$MC_GCODE_RESET_MODE

MD20140 \$MC_TRAFO_RESET_VALUE

MD20112 \$MC_START_MODE_MASK

MD20121 \$MC_TOOL_PRESEL_RESET_VALUE

MD20118 \$MC_GEOAX_CHANGE_RESET

MD20123 \$MC_USEKT_RESET_VALUE

20112	START_MODE_MASK			C03	K6, M3, K5, M1, K1, K2, P1, S1, W1	
-	Definition of basic setting of control after part program start			UDWORD	Reset	
-						
-	-	0x400, 0x400, 0x400, 0x400, 0x400, 0x400, 0x400...	0	0x7FFFF	7/2	M

Description:

The initial setting of the control at the start of the part program with respect to G codes (in particular, current plane and settable work offset), tool length offset, transformation, and axis couplings is defined by setting the following bits:

Bit 0: Start mode

Bit 1: Suppress aux. funct. output on tool selection

Bit 2: Not assigned, but reserved (see corresponding bit in RESET_MODE_MASK)

Bit 3: Not assigned, but reserved (see corresponding bit in RESET_MODE_MASK)

Bit 4: Start response for G code "Current plane"

Bit 5: Start response for G code "Settable work offset"

Bit 6: Start response for "Active tool length offset"

Bit 7: Start response for "Active kinematic transformation"
 Bit 8: Start response for "Coupled-motion axes"
 Bit 9: Start response for "Tangential correction"
 Bit 10: Start response for "Synchronous spindle"
 Bit 11: Not assigned, but reserved (see corresponding bit in RESET_MODE_MASK)
 Bit 12: Start response for "Geo axis replacement"
 Bit 13: Start response for "Master value coupling"
 Bit 14: Not assigned, but reserved (see corresponding bit in RESET_MODE_MASK)
 Bit 15: Not assigned, but reserved (see corresponding bit in RESET_MODE_MASK)
 Bit 16: Start response for "Master spindle"
 Bit 17: Start response for "Master toolholder"
 Bit 18: Start response for "Reference axis for G96/G961/G962"
 Bit 19: Reserved "Adjustable software limit switch ineffective"
 Bit 20: Reserved "\$P_USEKT reset response"

Meaning of individual bits:

Bit 0 = 0:

The bits 8 (TRAIL), 10 (COUP), bit 13 (LEAD) and bit 15 (EG) are evaluated on part program start and event-driven program calls of the Progevent ASUB

Bit 0 = 1:

The bits 8 (TRAIL), 10 (COUP), bit 13 (LEAD) and bit 15 EG) are evaluated only on part program start

Bit 1 = 0:

Auxiliary function output (D, T, M, DL) to PLC on tool selection according to the following MDs: MD20120 \$MC_TOOL_RESET_VALUE, MD20130 \$MC_CUTTING_EDGE_RESET_VALUE, MD20121 \$MC_TOOL_PRESEL_RESET_VALUE, and MD22550 \$MC_TOOL_CHANGE_MODE.

Note:

If tool or magazine management is active, only auxiliary functions D and DL are output.

Bit 1 = 1:

Suppress auxiliary function output to PLC on tool selection.

Bit 1 is not relevant if tool or magazine management is active.

Bit 2 : Reserved (reset response after power-on)

Bit 3 : Reserved (end of test mode)

Bit 4 = 0:

The current setting for G code "current plane" is retained.

Bit 4 = 1:

Initial setting for G code "current plane" according to MD20150 \$MC_GCODE_RESET_VALUES

Bit 5 = 0:

The current setting for G code "settable work offset" is retained.

Bit 5 = 1:

Initial setting for G code "settable work offset" according to MD20150 \$MC_GCODE_RESET_VALUES

Bit 6 = 0:

The current setting for active tool length offset is retained.

If tool or magazine management is active, the tool currently on the active toolholder (spindle) is always selected.

If the tool that is currently on the spindle is disabled, it is automatically replaced by a suitable replacement tool.

If such a replacement tool does not exist, an alarm is output.

Bit 6 = 1:

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Initial setting for active tool length offset according to MD20120 \$MC_TOOL_RESET_VALUE, MD20130 \$MC_CUTTING_EDGE_RESET_VALUE, MD20123 \$MC_USEKT_RESET_VALUE, and MD20132 \$MC_SUMCORR_RESET_VALUE.

If MD22550 \$MC_TOOL_CHANGE_MODE = 1, the tool selected via MD20121 \$MC_TOOL_PRESEL_RESET_VALUE is preselected in addition.

If tool or magazine management is active, MD20120 \$MC_TOOL_RESET_NAME is used instead of MD20122 \$MC_TOOL_RESET_VALUE.

Bit 7 = 0:
The current setting for the active transformation is retained.

Bit 7 = 1:
Initial setting for active transformation after reset/end of part program according to MD20140 \$MC_TRAFO_RESET_VALUE

Bit 8 = 0:
Coupled-motion axis groupings remain active.

Bit 8 = 1:
Coupled-motion axis groupings are deactivated.

Bit 9 = 0:
Tangential correction remains active.

Bit 9 = 1:
Tangential correction is deactivated.

Bit 10 = 0:
Non-configured synchronous spindle coupling remains active.

Bit 10 = 1:
Non-configured synchronous spindle coupling is deactivated.

Bit 11 : Reserved (revolutional feedrate)

Bit 12 = 0:
A changed geometry axis assignment remains active when the part program starts.

Bit 12 = 1:
If machine data MD20118 \$MC_GEOAX_CHANGE_RESET is set, a changed geometry axis assignment is deleted when the part program starts.

Bit 13 = 0:
Master value couplings remain active.

Bit 13 = 1:
Master value couplings are deactivated.

Bit 14 : Reserved (basic frame)

Bit 15 = 0:
Active electronic gearboxes remain active.

Bit 15 = 1:
Active electronic gearboxes are deactivated.

Bit 16 = 0:
The current setting of the master spindle (SETMS) is retained.

Bit 16 = 1:
Initial setting for the master spindle according to MD20090 \$MC_SPIND_DEF_MASTER_SPIND

Bit 17 = 0:
The current setting of the master toolholder (SETMTH) is retained (relevant only if tool or magazine management is active)

Bit 17 = 1:
Only if MD20124 \$MC_TOOL_MANAGEMENT_TOOLHOLDER > 0: Initial setting for the master toolholder according to MD20124 \$MC_TOOL_MANAGEMENT_TOOLHOLDER.
Otherwise, the setting for the master spindle applies.

Bit 18 = 0:

Reference axis for G96/G961/G962 according to MD20100 \$MC_DIAMETER_AX_DEF.

When using SCC with its own spindle reset, setting bit 18 = 1 is recommended (see also MD20110: \$MC_RESET_MODE_MASK, bit 18).

Bit 18 = 1:

Reference axis for G96/G961/G962 is retained.

Related to:

MD20120 \$MC_TOOL_RESET_VALUE

MD20130 \$MC_CUTTING_EDGE_RESET_VALUE

MD20150 \$MC_GCODE_RESET_VALUES

MD20152 \$MC_GCODE_RESET_MODE

MD20140 \$MC_TRAFO_RESET_VALUE

MD20110 \$MC_RESET_MODE_MASK

MD20121 \$MC_TOOL_PRESEL_RESET_VALUE

MD20118 \$MC_GEOAX_CHANGE_RESET

20114	MODESWITCH_MASK			C03	K1	
-	Interruption MDI by mode change			UDWORD	Reset	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0	0xFFFF	7/2	M

Description:

After program interruption in MDI mode (e.g. in order to carry out a measurement on the workpiece and to correct the tool wear values or after tool breakage) the tool can be manually withdrawn from the contour by changing into JOG mode.

In this case, the control stores the coordinates of the position of the interruption and indicates the path differences traversed by the axes in JOG mode as "Repos offset". When MDI mode is selected again, the axis is repositioned on the contour. This response can be canceled by means of this machine data.

Bit 0 (LSB) = 0:

When MDI (JOG, JOGREF, JOGREPOS, MDIREF and MDIREPOS) are deselected in stopped status, the system ASUB Repos is selected.

Bit 0 (LSB) = 1:

When MDI (JOG, JOGREF, JOGREPOS, MDIREF and MDIREPOS) are deselected in stopped status, the system ASUB Repos is not selected.

Bit 1 (LSB) = 0:

If the NCK stops at a part program block in the program execution in which repositioning is not possible, alarm 16916 is generated if an attempt is made to switch to manual mode.

Bit 1 (LSB) = 1:

If the NCK stops at a part program block in the program execution in which repositioning is not possible, no alarm is generated if an attempt is made to switch to manual mode.

20115	IGNORE_REFP_LOCK_ASUP			C01	K1, Z1	
-	Process interrupt program despite non-referenced axes			UDWORD	NEW CONF	
-						
-	-	0x200, 0x200, 0x200, 0x200, 0x200, 0x200, 0x200, 0x200...	0	0x7FFFFFFF	7/2	M

Description:

Despite non-referenced axes, the assigned ASUB with the set bit is processed for the interrupt.

Bit 0 = 1: Enable interrupt 1 (user interrupt)

Bit 1 = 1: Enable interrupt 2 (user interrupt)

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...

Bit 7 = 1: Enable interrupt 8 (user interrupt)

Bit 8 = 1: Enable interrupt 9 (system interrupt, reserved)

Bit 9 = 1: Enable interrupt 10 (system interrupt, reserved)

Bit 10 = 1: Enable interrupt 11 (system interrupt, reserved)

...

Bit 31 = 1: Enable interrupt 32 (system interrupt, reserved)

Notice

System interrupts can start system ASUBs with traversing motions

Notes

1. Replace following machine data MD11602 \$MN_ASUP_START_MASK, bit1.
 - MD20105 \$MC_PROG_EVENT_IGN_REFP_LOCK
 - MD20115 \$MC_IGNORE_REFP_LOCK_ASUP
2. If MD20700 \$MC_REFP_NC_START_LOCK == 0, the setting in MD20105 \$MC_PROG_EVENT_IGN_REFP_LOCK will be ignored, and non-referenced axes will be ignored.

Related to:

MD11602 \$MN_ASUP_START_MASK

MD20116 \$MC_IGNORE_INHIBIT_ASUP

MD20117 \$MC_IGNORE_SINGLEBLOCK_ASUP

MD20191 \$MC_IGN_PROG_STATE_ASUP

MD20194 \$MC_IGNORE_NONCSTART_ASUP

20116	IGNORE_INHIBIT_ASUP			C01	K1, Z1	
-	Execute interrupt program despite read-in disable			UDWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	0x7FFFFFFF	7/2	M

Description: The assigned ASUB with the set bit is executed in spite of read-in disable being set.

Bit 0 = 1: Enable interrupt 1 (user interrupt)

Bit 1 = 1: Enable interrupt 2 (user interrupt)

...

Bit 7 = 1: Enable interrupt 8 (user interrupt)

Bit 8 = 1: Enable interrupt 9 (system interrupt, reserved)

Bit 9 = 1: Enable interrupt 10 (system interrupt, reserved)

Bit 10 = 1: Enable interrupt 11 (system interrupt, reserved)

..

Bit 31 = 1: Enable interrupt 32 (system interrupt, reserved)

NOTICE:

System ASUBs started by system interrupts may contain traversing motions.

Related to:

MD11602 \$MN_ASUP_START_MASK

MD20115 \$MC_IGNORE_REFP_LOCK_ASUP

MD20117 \$MC_IGNORE_SINGLEBLOCK_ASUP

MD20191 \$MC_IGN_PROG_STATE_ASUP

MD20194 \$MC_IGNORE_NONCSTART_ASUP

20117	IGNORE_SINGLEBLOCK_ASUP			C01	K1, Z1	
-	Execute interrupt program completely despite single block			UDWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	0x7FFFFFFF	7/2	M

Description: In spite of the set single-block processing mode, the assigned ASUB with the set bit is executed for the interrupt.

Bit 0 = 1: Enable interrupt 1 (user interrupt)

Bit 1 = 1: Enable interrupt 2 (user interrupt)

...

Bit 7 = 1: Enable interrupt 8 (user interrupt)

Bit 8 = 1: Enable interrupt 9 (system interrupt, reserved)

Bit 9 = 1: Enable interrupt 10 (system interrupt, reserved)

Bit 10 = 1: Enable interrupt 11 (system interrupt, reserved)

...

Bit 31 = 1: Enable interrupt 32 (system interrupt, reserved)

NOTICE:

System-ASUBs started by system interrupts may contain traversing motions.

Note:

The machine data is only active with single block SBL1.

Related to:

MD11602 \$MN_ASUP_START_MASK

MD20115 \$MC_IGNORE_REFP_LOCK_ASUP

MD20116 \$MC_IGNORE_INHIBIT_ASUP

MD20191 \$MC_IGN_PROG_STATE_ASUP

MD20194 \$MC_IGNORE_NONCSTART_ASUP

20118	GEOAX_CHANGE_RESET			C03	M1, K1, Z1	
-	Enable automatic geometry axis change			BOOLEAN	Reset	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/2	M

Description: 0: The current configuration of the geometry axes remains unchanged on reset and part program start. With this setting, the response is identical to that with older software versions without geometry axis replacement.

1: The configuration of the geometry axes remains unchanged on reset or part program end, depending on MD20110 \$MC_RESET_MODE_MASK and, on part program start, depending on MD20112 \$MC_START_MODE_MASK, or is switched to the initial state defined by MD20050 \$MC_AXCONF_GEOAX_ASSIGN_TAB.

Related to:

MD20050 \$MC_AXCONF_GEOAX_ASSIGN_TAB

MD20110 \$MC_RESET_MODE_MASK

MD20112 \$MC_START_MODE_MASK

20120	TOOL_RESET_VALUE			C03	K1, W1	
-	Tool with length compens. during runup (reset/part program end).			DWORD	Reset	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	32000	7/2	M

Description: Definition of the tool for which tool length compensation is selected during runup or on reset or part program end as a function of MD20110 \$MC_RESET_MODE_MASK, and on part program start as a function of MD20112 \$MC_START_MODE_MASK

Related to:

MD20110 \$MC_RESET_MODE_MASK

MD20112 \$MC_START_MODE_MASK

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20121	TOOL_PRESEL_RESET_VALUE			C03	K1, W1	
-	Preselected tool on RESET			DWORD	Reset	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	32000	7/2	M

Description: Definition of the preselected tool in MD20310 \$MC_TOOL_MANAGEMENT_MASK=1.
A tool is selected after runup, or on reset or part program end as a function of MD20110 \$MC_RESET_MODE_MASK, and on part program start as a function of MD20112 \$MC_START_MODE_MASK.
This MD is valid only without tool management.
Related to:
MD20110 \$MC_RESET_MODE_MASK
MD20112 \$MC_START_MODE_MASK

20122	TOOL_RESET_NAME			C03	-	
-	Active tool at RESET/START with tool management			STRING	Reset	
-						
-	-	-	-	-	7/2	M

Description: This MD is used only with active tool management.
Definition of the tool for which tool length compensation is selected during runup or on reset or part program end as a function of MD20110 \$MC_RESET_MODE_MASK, and on part program start as a function of MD20112 \$MC_START_MODE_MASK.
Related to:
MD20110 \$MC_RESET_MODE_MASK,
MD20112 \$MC_START_MODE_MASK
MD20124 \$MC_TOOL_MANAGEMENT_TOOLHOLDER
MD20130 \$MC_CUTTING_EDGE_RESET_VALUE

20123	USEKT_RESET_VALUE			C03	-	
-	Preselected value of \$P_USEKT on RESET			DWORD	Reset	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	0xF	7/2	M

Description: The system variable \$P_USEKT is set with the value of this MD:

- after run-up:
As a function of MD20112 \$MC_START_MODE_MASK
- after RESET or part program end:
As a function of MD20110 \$MC_RESET_MODE_MASK

Related to:
MD20110 \$MC_RESET_MODE_MASK
MD20112 \$MC_START_MODE_MASK

20124	TOOL_MANAGEMENT_TOOLHOLDER			C03	H2, K1	
-	Tool holder number			DWORD	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	20	7/2	M

Description: This MD is only relevant with tool management active.
The TM must know on which tool holder a tool has to be loaded.
The data is only evaluated if the value is greater than zero.
Then, the numbers \$TC_MPP5 are no longer regarded as spindle numbers but as tool holder numbers.

The automatic address extension of T and M=6 is then the value of this machine data, and no longer the value of MD20090 \$MC_SPIND_DEF_MASTER_SPIND.

The MD defines the master tool holder number to which a tool preparation or a tool change refers.

Reference is also made to this value for the determination of the tool on the tool holder for the setting 'retain old offset' of MD20110 \$MC_RESET_MODE_MASK.

If a machine has several tool holders but no defined master spindle, then the MD serves as a default value for determining the tool holder on which the tool is to be loaded during a tool change (reset, start, T='identifier', M6).

When defining the magazine locations of internal magazines (see documentation for TM), locations of the type 'SPINDLE' - \$TC_MPP1=2 = spindle location can be given a 'location kind index' (\$TC_MPP5). This assigns the location to a specific tool holder.

The tool holder with the number n can be declared the master tool holder with the language command SETMTH(n). That is, the offsets of a tool, which is loaded in a provisional buffer storage location of the type 'SPINDLE', correct the tool path with the value \$TC_MPP5=n.

Tool changes on 'SPINDLE' locations with \$TC_MPP5 unequal to the number of the master tool holder do not influence the path.

The tool holder defined in the MD is again declared as the master tool holder with SETMTH.

Related to:

MD20110 \$MC_RESET_MODE_MASK,

MD20112 \$MC_START_MODE_MASK

MD20122 \$MC_TOOL_RESET_NAME

MD20130 \$MC_CUTTING_EDGE_RESET_VALUE

References:

Description of Functions: Coordinate Systems (K2)

20125	CUTMOD_ERR	C08	-
-	Error handling for function CUTMOD	UDWORD	Immediately
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 0x7FFFFFFF 7/7 U

Description:

When function CUTMOD becomes active (through explicit call or tool selection), various error conditions may occur. For any of these error conditions it is possible to use this machine data to set whether the error shall trigger an alarm and, if so, whether such an alarm shall only be displayed (warning) or whether the interpretation of the part program shall be canceled.

Two machine data bits are assigned to each error condition (also see the description of alarm 14162).

The 2nd bit, which can be used in the case of an error to set that the part program interpretation should be interrupted, is only effective, if the associated 1st bit (display) of an alarm is also set.

Bit Hex. Meaning

Value

0	0x1	Display error "Invalid cutting direction."
1	0x2	Program stop after error "Invalid cutting direction".
2	0x4	Display error "Undefined cutting edge angle".
3	0x8	Program stop after error "Undefined cutting edge angle".
4	0x10	Display error "Invalid clearance angle."
5	0x20	Program stop after error "Invalid clearance angle".
6	0x40	Display error "Invalid holder angle".
7	0x80	Program stop after error "Invalid holder angle".

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8	0x100	Display error "Invalid insert angle".
9	0x200	Program stop after error "Invalid tool angle".
10	0x400	Program stop after error "Invalid insert angle".
11	0x800	Program stop after error "Invalid combination of cutting edge position and holder angle".
12	0x1000	Display error "Cutting edge plane deviates too significantly from machining plane".
13	0x2000	Program stop after error "Cutting edge plane deviates too significantly from machining plane".
14	0x4000	Error "Invalid angle ALPHA".
15	0x8000	Program stop after error "Invalid angle ALPHA".

20126	TOOL_CARRIER_RESET_VALUE			C03	W1	
-	Active tool holder on RESET			DWORD	Reset	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	-	7/7	M

Description:

Definition of the tool holder for which tool length compensation is selected during runup or on reset or part program end as a function of MD20110 \$MC_RESET_MODE_MASK and as a function of MD20112 \$MC_START_MODE_MASK on part program start.

This data is valid without tool management.

Related to:

MD20110 \$MC_RESET_MODE_MASK

MD20112 \$MC_START_MODE_MASK

20127	CUTMOD_INIT			C08	K1, W1	
-	Initialize CUTMOD after power ON			DWORD	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-2	999999999	7/2	M

Description:

The value programmable with NC command CUTMOD is initialized automatically on power ON with the value stored in this machine data. If the value of the machine data equals -2, CUTMOD will be set to the value included in MD20126 \$MC_TOOL_CARRIER_VALUE.

20128	COLLECT_TOOL_CHANGE			C04	-	
-	Tool change commands to PLC after search run			DWORD	PowerOn	
-						
-	-	1, 1, 1, 1, 1, 1, 1, 1...	-	-	1/1	M

Description:

This MD is only relevant with active magazine management (MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK, MD20310 \$MC_TOOL_MANAGEMENT_MASK).

It defines whether or not tool change commands, tool preparation commands (tool change commands in general) are output to the PLC after block search with calculation.

1: Tool change commands, tool preparation commands are collected and, after reaching the search target, output to the PLC with program start.

0: All tool/magazine-specific commands that have been collected during the block search are not output to the PLC with the subsequent program start! This means that programmed POSM, TCI, TCA commands are not output either.

Note 1:

Without active magazine management, the tool change M code is not collected if it is not assigned to an auxiliary function group. With active magazine management, this corresponds to MD value = 0.

Note 2:

Value = 0 is appropriate if, for example, after reaching of the search target, the collected tool change commands are output to the PLC in an ASUB by means of the GETSELT, GETEXET commands.

Related to:

MD22560 \$MC_TOOL_CHANGE_M_CODE

20130	CUTTING_EDGE_RESET_VALUE	C03	-
-	Tool edge with length compens. during runup (reset/end of pp)	DWORD	Reset
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 32000 7/2 M

Description: Definition of the cutting edge for which tool length compensation is selected during runup or on reset or part program end as a function of MD20110 \$MC_RESET_MODE_MASK, and as a function of MD20112 \$MC_START_MODE_MASK on part program start.

With active tool management and with bit 0 and bit 6 set in MD20110 \$MC_RESET_MODE_MASK at selection, the last offset of the tool active at power OFF - as a rule the tool on the spindle - is effective after runup.

Related to:

MD20110 \$MC_RESET_MODE_MASK

MD20112 \$MC_START_MODE_MASK

20132	SUMCORR_RESET_VALUE	C03	-
-	Effective resulting offset on RESET	DWORD	Reset
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 6 7/2 M

Description: Definition of the total offset with which the tool length compensation is selected in the runup and on reset or part program end as a function of MD20110 \$MC_RESET_MODE_MASK and as a function of MD20112 \$MC_START_MODE_MASK on part program start.

MD18110 \$MN_MM_MAX_SUMCORR_PER_CUTTEDGE determines the maximum useful value which can be entered.

20140	TRAFO_RESET_VALUE	C03	F2, TE4, M1
-	Transformation data block selected during runup (reset/pp end)	BYTE	Reset
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 20 7/2 M

Description: Definition of the transformation data block which is selected during runup and on reset or part program end as a function of MD20110 \$MC_RESET_MODE_MASK, and as a function of MD20112 \$MC_START_MODE_MASK on part program start.

Related to:

MD20110 \$MC_RESET_MODE_MASK

MD20112 \$MC_START_MODE_MASK

20142	TRAFO_RESET_NAME	C03	K1
-	Transformation during power up (reset/part program end)	STRING	Reset
-			
-	-	-	- 7/2 M

Description: Specifies the name of a transformation (\$NT_NAME[n]) defined with the aid of kinematic chains, which is selected during power on or on reset/part program end as a function of MD 20110: \$MC_RESET_MODE_MASK and, on part program start, as a function of MD 20112: \$MC_START_MODE_MASK.

If this machine data is not empty, machine data MD20140 \$MC_TRAFO_RESET_VALUE is ignored. This means that MD20142 \$MC_TRAFO_RESET_NAME has priority over MD20140 \$MC_TRAFO_RESET_VALUE.

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Not relevant:

MD20110 \$MC_RESET_MODE_MASK, bit 0 = 0

20144	TRAFO_MODE_MASK			C07	M1	
-	Function selection of kinematic transformation			UBYTE	Reset	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0	0x03	7/2	M

Description:

The specific functionality of the kinematic transformation is selected by setting the following bits:

Bit 0 = 0:

Default behavior.

Bit 0 = 1:

The transformation as defined in MD20140 \$MC_TRAFO_RESET_VALUE is persistent. That is, it is also selected with TRAFOOF and not shown in the display. This requires that the transformation defined in MD20140 \$MC_TRAFO_RESET_VALUE is selected automatically after RESET and START via MD20110 \$MC_RESET_MODE_MASK and MD20112 \$MC_START_MODE_MASK. This means that:

MD20110 \$MC_RESET_MODE_MASK bit 0 = 1 and bit 7 = 0,

MD20112 \$MC_START_MODE_MASK bit 7 = 1

MD20118 \$MC_GEOAX_CHANGE_RESET = TRUE

Bit 1 = 0:

Default behavior.

Bit 1 = 1:

The last active transformation is selected again after control power on. MD20110 \$MC_RESET_MODE_MASK Bit 0 = 1 and Bit 7 = 1 also have to be set.

20147	ZERO_CHAIN_ELEM_NAME			EXP, N01	K1	
-	Name of the kinematic chain element for defining the machine zero point			STRING	Reset	
-						
-	-	-	-	-	7/2	M

Description:

Specifies the name of a kinematic chain element that defines the machine zero point. This zero point is required, for example, to specify the position of a workpiece defined by the language command WORKPIECE, if its position is not specified relative to a kinematic chain in the language command itself.

20150	GCODE_RESET_VALUES			C11, C03	F2, TE4, K3, M1, M5, K1, K2, P1, V1	
-	Initial setting of G groups			BYTE	Reset	
-						
-	70	2, 0, 0, 1, 0, 1, 1, 1, 0, 1, 0, 1, 2, 1, 2, 1, 1, 1, 1, 1, ...	0	-	7/2	M

Description:

Definition of the G codes, which are active when powering up and reset and/or end of part program depending on MD20152 \$MC_GCODE_RESET_MODE and for the start of part program depending on MD20112 \$MC_START_MODE_MASK.

The index of the G codes in the respective groups must be programmed as the default value.

For a list of the G groups and their G functions, please refer to References:

Programming Manual, Fundamentals

Designation Group Standard value for 840D

GCODE_RESET_VALUES[0] 1 2 (G1)

GCODE_RESET_VALUES[1]	2	0 (inactive)
GCODE_RESET_VALUES[2]	3	0 (inactive)
GCODE_RESET_VALUES[3]	4	1 (STARTFIFO)
GCODE_RESET_VALUES[4]	5	0 (inactive)
GCODE_RESET_VALUES[5]	6	1 (G17)
GCODE_RESET_VALUES[6]	7	1 (G40)
GCODE_RESET_VALUES[7]	8	1 (G500)
GCODE_RESET_VALUES[8]	9	0 (inactive)
GCODE_RESET_VALUES[9]	10	1 (G60)
GCODE_RESET_VALUES[10]	11	0 (inactive)
GCODE_RESET_VALUES[11]	12	1 (G601)
GCODE_RESET_VALUES[12]	13	2 (G71)
GCODE_RESET_VALUES[13]	14	1 (G90)
GCODE_RESET_VALUES[14]	15	1 (G94)
GCODE_RESET_VALUES[15]	16	1 (CFC)
GCODE_RESET_VALUES[16]	17	1 (NORM)
GCODE_RESET_VALUES[17]	18	1 (G450)
GCODE_RESET_VALUES[18]	19	1 (BNAT)
GCODE_RESET_VALUES[19]	20	1 (ENAT)
GCODE_RESET_VALUES[20]	21	1 (BRISK)
GCODE_RESET_VALUES[21]	22	1 (CUT2D)
GCODE_RESET_VALUES[22]	23	1 (CDOF)
GCODE_RESET_VALUES[23]	24	1 (FFWOF)
GCODE_RESET_VALUES[24]	25	1 (ORIWKS)
GCODE_RESET_VALUES[25]	26	2 (RMI)
GCODE_RESET_VALUES[26]	27	1 (ORIC)
GCODE_RESET_VALUES[27]	28	1 (WALIMON)
GCODE_RESET_VALUES[28]	29	1 (DIAMOF)
GCODE_RESET_VALUES[29]	30	1 (COMPOF)
GCODE_RESET_VALUES[30]	31	1 (inaktiv)
GCODE_RESET_VALUES[31]	32	1 (inactive)
GCODE_RESET_VALUES[32]	33	1 (FTOCOF)
GCODE_RESET_VALUES[33]	34	1 (OSOF)
GCODE_RESET_VALUES[34]	35	1 (SPOF)
GCODE_RESET_VALUES[35]	36	1 (PDELAYON)
GCODE_RESET_VALUES[36]	37	1 (FNORM)
GCODE_RESET_VALUES[37]	38	1 (SPIF1)
GCODE_RESET_VALUES[38]	39	1 (CPRECOF)
GCODE_RESET_VALUES[39]	40	1 (CUTCONOF)
GCODE_RESET_VALUES[40]	41	1 (LFOF)
GCODE_RESET_VALUES[41]	42	1 (TCOABS)
GCODE_RESET_VALUES[42]	43	1 (G140)
GCODE_RESET_VALUES[43]	44	1 (G340)
GCODE_RESET_VALUES[44]	45	1 (SPATH)
GCODE_RESET_VALUES[45]	46	1 (LFTXT)
GCODE_RESET_VALUES[46]	47	1 (G290 SINUMERIK mode)
GCODE_RESET_VALUES[47]	48	3 (G462)
GCODE_RESET_VALUES[48]	49	1 (CF)
GCODE_RESET_VALUES[49]	50	1 (ORIEULER)

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GCODE_RESET_VALUES[50]	51	1 (ORIVECT)
GCODE_RESET_VALUES[51]	52	1 (PAROTOF)
GCODE_RESET_VALUES[52]	53	1 (TOROTOF)
GCODE_RESET_VALUES[53]	54	1 (ORIROTA)
GCODE_RESET_VALUES[54]	55	1 (RTLION)
GCODE_RESET_VALUES[55]	56	1 (TOWSTD)
GCODE_RESET_VALUES[56]	57	1 (FENDNORM)
GCODE_RESET_VALUES[57]	58	1 (RELIEVEON)
GCODE_RESET_VALUES[58]	59	1 (DYNNORM)
GCODE_RESET_VALUES[59]	60	1 (WALCS0)
GCODE_RESET_VALUES[60]	61	1 (ORISOF)
GCODE_RESET_VALUES[61]	62	1 (inactive)
GCODE_RESET_VALUES[62]	63	1 (inactive)
GCODE_RESET_VALUES[63]	64	1 (GS0)
:	:	:
GCODE_RESET_VALUES[69]	70	1 (not defined)

20152	GCODE_RESET_MODE			C03	M1, K1, K2, P1	
-	Reset response of G groups			BYTE	Reset	
-						
-	70	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, ...	0	1	7/2	M

Description:

This MD is only evaluated if bit 0 is set in MD20110 \$MC_RESET_MODE_MASK.

For each entry in MD20150 \$MC_GCODE_RESET_VALUES (that is for each G group), this MD is used to determine whether, on reset/part program end, the setting in MD20150 \$MC_GCODE_RESET_VALUES is used again (MD = 0) or the current setting is retained (MD = 1).

Example 1:

Here, the basic setting for the 6th G group (current plane) is read from MD20150 \$MC_GCODE_RESET_VALUES at each reset / part program end:

MD20150 \$MC_GCODE_RESET_VALUES[5]=1 ; reset value of the 6th G group is G17

MD20152 \$MC_GCODE_RESET_MODE[5]=0 ; after reset / part program end, the basic setting for 6th G group corresponds to MD20150 \$MC_GCODE_RESET_VALUES[5]

However, if the current setting for the 6th G group (current plane) is to be retained after reset / part program end, then the following setting results:

MD20150 \$MC_GCODE_RESET_VALUES[5]=1 ; reset value of the 6th G group is G17

MD20152 \$MC_GCODE_RESET_MODE[5]=1 ; current setting for the 6th G group

; is retained even after reset / part program end.

Example 2:

Here, the basic setting for the 8th G group (work offset) is read from MD20150 \$MC_GCODE_RESET_VALUES at each reset / part program end

MD20150 \$MC_GCODE_RESET_VALUES[7]=2 ; Reset value of the 8th G group is G54

MD20152 \$MC_GCODE_RESET_MODE[7]=0 after reset / part program end, the basic setting for the 8th G group corresponds to MD20150 \$MC_GCODE_RESET_VALUES[7]

If G54 was already active, especially at the time of reset, the values of the corresponding data handling frame at the time of reset are activated.

However, if the current setting for the 8th G group (work offset) is to be retained after reset / part program end, then the following setting results:

MD20152 \$MC_GCODE_RESET_MODE[7]=1 ; if a work offset (e.g. G54) was active at the time of reset, then the values of the corresponding data handling frame at the time of reset are activated (that is UIFR[1] with G54)

Related to:

MD20110 \$MC_RESET_MODE_MASK

MD20112 \$MC_START_MODE_MASK

20154	EXTERN_GCODE_RESET_VALUES			C11, C03	-	
-	Initial setting of G groups in ISO mode			BYTE	Reset	
-						
-	31	1, 1, 1, 2, 1, 1, 1, 3, 4, 1, 1, 2, 2, 1, 3, 2, 1, 0, 1, 1, 1,, ...	0	-	2/2	M

Description: When an external NC programming language is used, the G codes which become active on runup and reset or at part program end are defined as a function of MD20110 \$MC_RESET_MODE_MASK and at part program start as a function of MD20112 \$MC_START_MODE_MASK.

The following external programming languages are possible:

ISO mode Milling

ISO mode Turning

The G group division that is to be used is stated in the current SINUMERIK documentation.

The following groups within MD20154 \$MC_EXTERN_GCODE_RESET_VALUES can be written:

ISO mode M:

G group 2: G17/G18/G19

G group 3: G90/G91

G group 5: G94/G95

G group 6: G20/G21

G group 13: G96/G97

G group 14: G54-G59

ISO mode T:

G group 2: G96/G97

G group 3: G90/G91

G group 5: G94/G95

G group 6: G20/G21

G group 16: G17/G18/G19

20156	EXTERN_GCODE_RESET_MODE			C03	-	
-	Reset response of external G groups			BYTE	Reset	
-						
-	31	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,, ...	0	1	7/2	M

Description: This MD is evaluated only if bit0 is set in MD20110 \$MC_RESET_MODE_MASK (see there). For each entry in MD20154 \$MC_EXTERN_GCODE_RESET_VALUES (that is for each G group), this MD is used to determine whether, on reset/part program end, the setting in MD20154 \$MC_EXTERN_GCODE_RESET_VALUES is used again (MD = 0) or the current setting is retained (MD = 1).

Example for ISO mode M:

Here, the basic setting for the 14th G group (settable work offset) is read from MD20154 \$MC_EXTERN_GCODE_RESET_VALUES at each reset / part program end:

MD20154 \$MC_EXTERN_GCODE_RESET_VALUES[13]=1 ; the reset value for the 14th G group
;is G54

MD20156 \$MC_EXTERN_GCODE_RESET_MODE[13]=0 ; the basic setting for the 14th G group

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```

;after reset / part program end is defined
by
;MD20154 $MC_EXTERN_GCODE_RESET_VALUES[13]
;
However, if the current setting for the 14th G group is to be retained beyond reset /
part program end, this results in the following setting:
MD20154 $MC_EXTERN_GCODE_RESET_VALUES[13]=1 ;reset value for the 14th G group
;is G54
MD20156 $MC_EXTERN_GCODE_RESET_MODE[13]=1 ;current setting for the 14th
;G group is retained even after
;reset / part program end

```

20160	CUBIC_SPLINE_BLOCKS	EXP, C09	-
-	Number of blocks for C spline	BYTE	PowerOn
-			
-	-	8, 8, 8, 8, 8, 8, 8, 8...	4 9 7/2 M

Description: Number of motion blocks across which a spline section is calculated with the cubic spline (CSPLINE) function.

The larger the value, the closer the generated contour is to the ideal mathematical cubic spline, which in the boundary condition CUBIC_SPLINE_BLOCKS = reaches infinity. However, the higher the value, the longer the block search calculation time.

References:

/PA/, Programming Guide: Fundamentals

20170	COMPRESS_BLOCK_PATH_LIMIT	C09	B1
mm	Maximum traversing distance of an NC block with compression	DOUBLE	NEW CONF
-			
-	-	1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0...	0.0 - 7/2 M

Description: The machine data defines the maximum traversing length of a block that can be compressed. Longer blocks interrupt the compression and are traversed in the normal way.

Related to:

MD33100 \$MA_COMPRESS_POS_TOL (maximum deviation with compression)

References:

/PA/, Programming Guide: Fundamentals

20171	SURF_BLOCK_PATH_LIMIT	C09	-
mm	Maximum traverse length of an NC block for the COMPSURF function	DOUBLE	NEW CONF
-			
-	-	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	0.0 - 7/2 M

Description: The machine data defines the maximum traverse length of a block that is still regarded as compressible. Longer blocks interrupt the smoothing and are traversed normally.

If the value 0 is entered, then the maximum traverse length in the control is determined by the specified tolerance.

20172	COMPRESS_VELO_TOL			C09	B1, V1	
mm/min	Max. permissible deviation of path feedrate with compression			DOUBLE	PowerOn	
-						
-	-	60000.0, 60000.0, 60000.0, 60000.0, 60000.0, 60000.0, 60000.0, 6...	0.0	-	7/2	M

Description: The value indicates the maximum permissible deviation for the compression for the path feedrate. The larger the value, the more short blocks can be compressed into one long block. The maximum number of compressible blocks is limited by the size of the spline buffer.

In this way, the the compressors COMPON and COMPCURV may limit the compression of the path axes.

Compressor COMPCAD acts differently: It ignores changes to the F word as long as they lie below the threshold defined by COMPRESS_VELO_TOL. If the feed programmed in a block changes more than COMPRESS_VELO_TOL, COMPCAD interrupts the compression at this block transition so that the feed change takes place at exactly the desired position.

Related to:

MD33100 \$MA_COMPRESS_POS_TOL[AXn]
MD20170 \$MC_COMPRESS_BLOCK_PATH_LIMIT

References:

/PGA/, Programming Guide, Advanced

20173	SURF_VELO_TOL			C09	-	
mm/min	Maximum permitted deviation of the path feed on compression with COMPSURF			DOUBLE	PowerOn	
-						
-	-	1000.0, 1000.0, 1000.0, 1000.0, 1000.0, 1000.0, 1000.0, 1000.0...	0.0	-	7/2	M

Description: The value specifies the maximum permitted deviation for compression for the path feed. The larger the value, the more short blocks can be compressed into one long block.

20180	TOCARR_ROT_ANGLE_INCR			C08	W1	
-	Rotary axis increment of orientable tool holder			DOUBLE	NEW CONF	
-						
-	2	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0,...	-	-	7/3	M

Description: For orientable tool carriers, this machine data defines the size of the minimum increment (in degrees) by which the first or second orientation axis can be changed (e.g. for Hirth tooth systems).

A programmed or calculated angle is rounded to the nearest value resulting from

$$\phi = s + n * d$$

with integer n.

In which:

s = MD20180 \$MC_TOCARR_ROT_ANGLE_INCR[i]
d = MD20182 \$MC_TOCARR_ROT_ANGLE_OFFSET[i]
and i is 0 for the 1st and 1 for the 2nd axis.

There is no rounding if this machine data is equal to zero.

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20182	TOCARR_ROT_ANGLE_OFFSET			C08	-	
-	Rotary axis offset of orientable tool holder			DOUBLE	NEW CONF	
-						
-	2	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0,...	-	-	7/3	M

Description: This machine data defines the offset of the rotary axis for an orientable tool holder if its position cannot be continuously changed.

It is only evaluated if MD20180 \$MC_TOCARR_ROT_ANGLE_INCR is not equal to zero.

For the precise meaning of this machine data, see the description of MD20180 \$MC_TOCARR_ROT_ANGLE_INCR.

20184	TOCARR_BASE_FRAME_NUMBER			C08	K2, W1	
-	Base frame number for holding machine table offset			DWORD	NEW CONF	
-						
-	-	-1, -1, -1, -1, -1, -1, -1, -1...	-1	15	7/3	M

Description: This machine data indicates into which channel-specific base frame the table offset of an orientable tool holder with a rotary table is written.

This machine data must refer to a valid base frame.

If its content is less than 0 or greater than or equal to the maximum number of base frames set in MD28081 \$MC_MM_NUM_BASE_FRAMES, selection of a corresponding tool holder causes an alarm.

20188	TOCARR_FINE_LIM_LIN			C07	W1	
mm	Limit of linear fine offset TCARR			DOUBLE	Immediately	
-						
-	-	1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0...	0.0	-	7/3	M

Description: Indicates for each channel the input limit for the linear fine offset values of an orientable tool holder.

20190	TOCARR_FINE_LIM_ROT			C07	W1	
degrees	Limit of rotary fine offset TCARR			DOUBLE	Immediately	
-						
-	-	1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0...	0.0	-	7/3	M

Description: Indicates for each channel the input limit for the rotary fine offset values of an orientable tool holder.

20191	IGN_PROG_STATE_ASUP			EXP	K1	
-	Do not display interrupt program execution on OPI			UDWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	0x7FFFFFFF	7/2	M

Description: The execution of the ASUB assigned to the interrupt is NOT displayed by the OPI variables "progStatus" and "chanStatus".

Bit 0 = 1: Enable interrupt 1 (user interrupt)

Bit 1 = 1: Enable interrupt 2 (user interrupt)

...

Bit 7 = 1: Enable interrupt 8 (user interrupt)

Bit 8 = 1: Enable interrupt 9 (system interrupt, reserved)

Bit 9 = 1: Enable interrupt 10 (system interrupt, reserved)
 Bit 10 = 1: Enable interrupt 11 (system interrupt, reserved)
 ...
 Bit 31 = 1: Enable interrupt 32 (system interrupt, reserved)
 NOTICE:
 System ASUBs started by system interrupts may contain traversing motions.
 Related to:
 MD11602 \$MN_ASUP_START_MASK
 MD20115 \$MC_IGNORE_REFP_LOCK_ASUP
 MD20116 \$MC_IGNORE_INHIBIT_ASUP
 MD20117 \$MC_IGNORE_SINGLEBLOCK_ASUP
 MD20194 \$MC_IGNORE_NONCSTART_ASUP

20192	PROG_EVENT_IGN_PROG_STATE			EXP	-	
-	Do not display the Prog-Event on OPI			UDWORD	NEW CONF	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0	0x3F	7/2	M

Description: Event-driven program calls (Prog-Events) can be set regarding their response on the OPI.
 The progStatus and chanStatus variables remain unaffected despite Prog-Event processing being active and retain the old value. This provides a means of concealing Prog-Event processing from the HMI.
 Bit 0 = 1 :
 Reserved bit, ineffective
 Bit 1 = 1 :
 Prog-Event after end-of-part-program does not change progStatus and chanStatus
 Bit 2 = 1 :
 Prog-Event after OP reset does not change progStatus and chanStatus
 Bit 3 = 1 :
 Prog-Event after ramp-up does not change progStatus and chanStatus
 Bit 4 = 1 :
 Reserved
 Bit 5 = 1 :
 Safety-Prog-Event during ramp-up does not change progStatus and chanStatus
 Corresponds to:
 MD20105 \$MC_PROG_EVENT_IGN_REFP_LOCK
 MD20106 \$MC_PROG_EVENT_IGN_SINGLEBLOCK
 MD20107 \$MC_PROG_EVENT_IGN_INHIBIT
 MD20108 \$MC_PROG_EVENT_MASK
 MD20193 \$MC_PROG_EVENT_IGN_STOP

20193	PROG_EVENT_IGN_STOP			EXP	-	
-	Prog-Events ignore the stop key			UDWORD	NEW CONF	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0	0xF	7/2	M

Description: Event-controlled program calls (Prog-Events) can be influenced with regard to their behavior after pressing of the stop key.
 The Stop, StopAll and StopAtEnd key of the PLC is ignored, if required.

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Bit 0 = 1 :

Prog-Event after part program start delays the stop until the part program starts, i.e. the stop only becomes active in the part program, not before its start. If the part program starts with a traversing block, it is possible that it starts briefly, i.e. a short motion occurs, although Stop has already been pressed in the Start-Prog-Event.

Bit 1 = 1 :

Prog-Event after part program end ignores the stop

Bit 2 = 1 :

Prog-Event after operator panel reset ignores the stop

Bit 3 = 1 :

Prog-Event after power up ignores the stop

Corresponds to:

MD20105 \$MC_PROG_EVENT_IGN_REFP_LOCK

MD20106 \$MC_PROG_EVENT_IGN_SINGLEBLOCK

MD20107 \$MC_PROG_EVENT_IGN_INHIBIT

MD20108 \$MC_PROG_EVENT_MASK

MD20192 \$MC_PROG_EVENT_IGN_PROG_STATE

20194	IGNORE_NONCSTART_ASUP			EXP	K1	
-	Permit ASUB in spite of "Interlock NC-START" if user alarms present.			UDWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	0x7FFFFFFF	7/2	M

Description:

A user alarm from the number range 65500-65999 sets the signal "NC start interlock". By default, an ASUB is not executed on account of interrupts.

Despite the presence of signal "NC start interlock", the assigned ASUB with the set bit is executed for the interrupt:

Bit 0 = 1: Enable interrupt 1 (user interrupt)

Bit 1 = 1: Enable interrupt 2 (user interrupt)

...

Bit 7 = 1: Enable interrupt 8 (user interrupt)

Bit 8 = 1: Enable interrupt 9 (system interrupt, reserved)

Bit 9 = 1: Enable interrupt 10 (system interrupt, reserved)

Bit 10 = 1: Enable interrupt 11 (system interrupt, reserved)

...

Bit 31 = 1: Enable interrupt 32 (system interrupt, reserved)

NOTICE:

System ASUBs started by system interrupts may contain traversing motions.

Related to:

MD11602 \$MN_ASUP_START_MASK

MD20115 \$MC_IGNORE_REFP_LOCK_ASUP

MD20116 \$MC_IGNORE_INHIBIT_ASUP

MD20117 \$MC_IGNORE_SINGLEBLOCK_ASUP

MD20191 \$MC_IGN_PROG_STATE_ASUP

20196	TOCARR_ROTAX_MODE			C07	W1	
-	ToolCarrier: rotary axis setting with axis positions not defined			UDWORD	Immediately	
-						
-	-	2, 2, 2, 2, 2, 2, 2, 2...	0	0x7	7/3	U

Description:

The MD is bit-coded. Bit 0 applies to orientable tool holders with one axis, bit 1 for those with 2 axes.

When the axis positions of an orientable tool holder are determined from a specified frame, it may happen that the required orientation is achieved at any position of a rotary axis.

This MD specifies how the rotary axis position is defined in these cases:

If the relevant bit is 0, the position of the rotary axis will be 0; a possibly necessary rotation is performed through the specified frame.

If the relevant bit is 1, the rotation is performed by means of the rotary axis of the orientable tool holder. The resulting frame will no longer include a rotation.

Example:

A tool in its basic position points into the Z direction, and an axis of the orientable tool holder rotates the workpiece around Z (C_Axis). If the tool is to be oriented parallel to the Z axis of a rotating frame, and if the frame only rotates around the Z axis, the tool orientation will not be changed if the C axis is rotated. The condition stating that the tool is to point in the direction of the Z axis defined by the frame is therefore fulfilled for any position of the Z axis.

Bit 2: If this bit is set, the value 1 is output in the system variable \$P_TCSOL as the number of solutions in a singular position for which there is one unique solution because of the alignment with the vertical coordinate axes perpendicular to the orientation. If this bit is not set, two solutions are output (the angles around the orientation axis differ by 180 degrees). This variant is required for compatibility with older software versions.

20200	CHFRND_MAXNUM_DUMMY_BLOCKS			EXP, C02, C06, C09	V1	
-	Empty blocks with chamfer/radii			BYTE	PowerOn	
-						
-	-	3, 3, 3, 3, 3, 3, 3, 3...	0	15	7/2	M

Description:

Indicates the maximum number of blocks without traversing information in the compensation plane (dummy blocks) that can be programmed between two blocks with traversing information when chamfer/rounding are active.

20201	CHFRND_MODE_MASK			C09	V1	
-	Chamfer/rounding behavior			UDWORD	Reset	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0	0xFFFF	7/2	M

Description:

Determination of the chamfer/rounding behavior

Bit 0: (LSB) Assignment of the chamfer/rounding to the preceding or following block.

This influences:

- The technology of the chamfer/rounding (feed, type of feed, M commands ...)
- The execution of the blocks without movement in the active plane (e.g. M commands, movement in the applicate) before or after a modal rounding (RNDM)

Bit 1: free

Meaning of the individual bits:

Bit 0 = 0

Chamfer/rounding is derived from the following block (default value).

The technology of the chamfer/rounding is determined by the following block. Blocks without movement (M commands) or movement only in the applicate between two motion blocks in the plane are executed before the modal rounding.

Bit 0 = 1:

Chamfer/rounding is derived from the preceding block.

2.3 NC machine data

The technology of the chamfer/rounding is determined by the preceding block. Blocks without movement (M commands) or movement only in the applicate between two motion blocks in the plane are executed after the modal rounding.

20202	WAB_MAXNUM_DUMMY_BLOCKS			C02, C06	W1	
-	Maximum number of blocks w/o traversing movement with SAR			BYTE	Reset	
-						
-	-	5, 5, 5, 5, 5, 5, 5...	0	10	7/2	M

Description: Maximum number of blocks which can appear between the SAR (soft approach and retraction) block and the traversing block which determines the direction of the approach or retraction tangent.

20204	WAB_CLEARANCE_TOLERANCE			C06	W1	
mm	Change of direction with SAR			DOUBLE	PowerOn	
-						
-	-	0.01, 0.01, 0.01, 0.01, 0.01, 0.01, 0.01, 0.01...	0.0	-	7/2	M

Description: In the case of smooth approach and retraction, the point defined with DISCL, from which, in the case of infeed from the initial plane, traversing is carried out at lower speed (G341) or the point in which the actual approach movement begins (G 340), must lie between the initial plane and the approach plane.

If this point lies outside this interval and the deviation is less than or equal to this machine data, it is assumed that the point lies in the approach or retraction plane.

If the deviation is greater, then alarm 10741 is output.

Example:

An approach is made from position Z = 20. The SAR plane is at Z = 0. The point defined by DISCL must therefore lie between these two values. If it lies between 20.000 and 20.010 or between 0 and -0.010, it is assumed that the value 20.0 or 0.0 was programmed (under the condition that the MD has the value 0.010). The alarm is output if the position is greater than 20.010 or less than -0.010.

20210	CUTCOM_CORNER_LIMIT			C08, C06	W1	
degrees	Maximum angle f. compensation blocks in tool radius compensation			DOUBLE	Reset	
-						
-	-	100., 100., 100., 100., 100., 100., 100., 100....	0.0	150.	7/2	M

Description: Where outer corners are very pointed, G451 can result in long idle paths. The system therefore switches automatically from G451 (intersection) to G450 (transition circle, with DISC where appropriate) when the outer corners are very pointed. The contour angle which can be traversed following this automatic switchover (intersection ---> transition circle) can be defined in CUTCOM_CORNER_LIMIT.

20212	CUTCOM_CUSP_LIMIT			C08, C06	W1	
degrees	Maximum angle for path overlap with tool radius compensation			DOUBLE	Reset	
-						
-	-	0.3, 0.3, 0.3, 0.3, 0.3, 0.3, 0.3, 0.3...	0.0	2.	7/2	M

Description: Owing to rounding errors (limited resolution of the positions in the NC program), very sharp outside corners (near 180 degrees) may lead to overlapping at the reversal point of the path. This means that block transitions that should actually be outside corners are regarded mathematically as inside corners.

This machine data can be used to set the deviation from 180 degrees at which an inside corner is to be treated as an outside corner.

20220	CUTCOM_MAX_DISC				C08, C06	W1	
-	Maximum value for DISC				DOUBLE	Reset	
-							
-	-	50.0, 50.0, 50.0, 50.0, 50.0, 50.0, 50.0, 50.0...	0.0	75.0	7/2	M	

Description: The G450 transition circle cannot produce sharp outer contour corners, because the path of the tool center point through the transition circle is controlled so that the cutting edge stops at the outer corner (programmed position).

Where sharp outer corners are to be machined with G450, the DISC instruction can be used in the program to program an overshoot. This transforms the transition circle into a conic section and the cutting edge lifts off from the outer corner.

The value range of the DISC instruction extends from 0 to theoretically 100 in steps of 1.

DISC = 0 ...Overshoot disabled, transition circle active

DISC = 100 ...Overshoot large enough to theoretically produce a response similar to intersection (G451).

Programmed values of DISC which are higher than those stored in CUTCOM_MAX_DISC are limited to this maximum value without output of a message. A severely non-linear alteration in the path velocity can thus be avoided.

Special cases:

It is not generally meaningful to enter values higher than 50 in DISC.

It is therefore not possible to enter values > 75.

20230	CUTCOM_CURVE_INSERT_LIMIT			C08, C06	W1	
-	Maximum angle for calculation of intersection with TRC			DOUBLE	Reset	
-						
-	-	10., 10., 10., 10., 10., 10., 10., 10....	0.0	150.	7/2	M

Description: Where outer corners are very flat, G450 (transition circle) and G451 (intersection) approximate each other more and more. In such a case, it is no longer useful to insert a transition circle. Especially with 5-axis machining, it is not allowed to insert a transition circle at these outer corners, as this might lead to losses in velocity during continuous-path mode (G64).

That is why the system switches automatically from G450 (transition circle, possibly with DISC) to G451 (intersection) in the case of very flat outer corners. The contour angle (in degrees), as of which the automatic switchover (transition circle ---> intersection) is to be carried out, can be specified in CUTCOM_CURVE_INSERT_LIMIT.

20240	CUTCOM_MAXNUM_CHECK_BLOCKS			C08, C02	W1	
-	Blocks for look-ahead contour calculation with TRC			DWORD	PowerOn	
-						
-	-	4, 4, 4, 4, 4, 4, 4, 4...	2	10000	7/2	M

Description: Indicates the maximum number of blocks with traversing information at the offset plane that are considered simultaneously for collision detection with active radius compensation.

20250	CUTCOM_MAXNUM_DUMMY_BLOCKS			C08, C02	W1	
-	Maximum number of blocks without traversing motion in TRC			DWORD	PowerOn	
-						
-	-	3, 3, 3, 3, 3, 3, 3, 3...	0	1000	7/2	M

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Description: During active TRC only program blocks with movements of geometry axes perpendicular to the current tool orientation are normally programmed. Nevertheless, individual intermediate blocks that do not contain such path information may also be programmed during active TRC. For example:

- Movements in the direction of tool orientation
- Movements in axes that are not geometry axes
- Auxiliary functions
- In general: Blocks that are taken over into the main run and executed there

The maximum number of intermediate blocks is defined with this MD. If the value is exceeded, alarm 10762 "Too many empty blocks between 2 traversing blocks during active tool radius compensation" is output.

Note:

Comment blocks, arithmetic blocks and empty blocks are not intermediate blocks in the sense of this MD and can therefore be programmed in any number (without an alarm being triggered).

20252	CUTCOM_MAXNUM_SUPPR_BLOCKS			EXP, C01, C08, C02	W1	
-	Maximum number of blocks with compensation suppression			DWORD	PowerOn	
-						
-	-	5, 5, 5, 5, 5, 5, 5...	0	1000	7/2	M

Description: Indicates the maximum number of blocks for active tool radius compensation, in which the function "Keep radius offset constant" (CUTCONON or reprogramming of G41 / G42 during active TRC) may be active.

Note:

The restriction of the number of blocks with active CUTONON is necessary in order to carry out repositioning in this situation too. Increasing this value for the machine data can lead to an increased memory requirement for NC blocks.

20254	ONLINE_CUTCOM_ENABLE			EXP, C01, C08	-	
-	Real-time tool radius compensation enabled			BOOLEAN	PowerOn	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/2	M

Description: This data enables online tool radius compensation. When the function is enabled, the control reserves the necessary memory space required for online tool radius compensation after POWER ON.

ONLINE_CUTCOM_ENABLE = 0:

Online tool radius compensation can be used

ONLINE_CUTCOM_ENABLE = 1:

Online tool radius compensation cannot be used

20256	CUTCOM_INTERS_POLY_ENABLE			C09	W1	
-	Intersection procedure for polynomials is possible			BOOLEAN	PowerOn	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/2	M

Description: If this machine data is TRUE and tool radius compensation active, the transitions at outer corners where polynomials (splines) are involved can be treated with the intersection mode. If the machine data is FALSE, conic sections (circles) are always inserted in this case.

If the machine data is FALSE, the response is identical to that of software releases older than 4.0.

20262	SPLINE_FEED_PRECISION			EXP, C09, C05	-	
-	Permissible rel. error of path velocity for spline			DOUBLE	PowerOn	
-						
-	-	0.001, 0.001, 0.001, 0.001, 0.001, 0.001, 0.001, 0.001...	0.000001	1.0	7/2	M

Description: This machine data is evaluated only if MD28540 \$MC_MM_ARCLENGTH_SEGMENTS is greater than 0.

The factor indicates how large the relative error of the path velocity may be for splines, compressor and polynomial interpolation. The smaller the factor the more computing time is required for preprocessing.

Furthermore, more memory is required to display the arc length function (see 28540 \$MC_MM_ARCLENGTH_SEGMENTS).

Example:
SPLINE_FEED_PRECISION=0.1, programmed path velocity=1000 mm/min.

The actual path velocity for polynomial and spline interpolations may then vary within the range between 900 and 1100 mm/min.

20270	CUTTING_EDGE_DEFAULT			C11, C03	H2, W1	
-	Initial position of tool cutting edge without programming			DWORD	PowerOn	
-						
-	-	1, 1, 1, 1, 1, 1, 1, 1...	-2	32000	7/2	M

Description: Default cutting edge after tool change

If no cutting edge has been programmed after a tool change, the default cutting edge number set in MD20270 \$MC_CUTTING_EDGE_DEFAULT is used.

Value
:= 0

Initially, no cutting edge is active after a tool change.

The cutting edge is not selected until D programming.

:= 1

MD_SLMAXCUTTINGEDGENUMBER

No. of cutting edge (MD_SLMAXCUTTINGEDGENUMBER=9 is valid up to P4)

:= -1

Cutting edge number of old tool also applies to new tool.

:= -2

Cutting edge (correction) of old tool remains active until D is programmed. This means that the old tool remains the active tool until D is programmed. In other words, the tool on the spindle remains the programmed tool until D is programmed.

Example:
MD20270 \$MC_CUTTING_EDGE_DEFAULT = 1;

After a tool change, the first cutting edge is active if no other cutting edge has been programmed.

20272	SUMCORR_DEFAULT			C03	H2, W1	
-	Initial position resulting offset without program			DWORD	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-1	6	7/2	M

Description: The number of the total offset of the cutting edge which becomes active when a new cutting edge compensation is activated without a programmed DL value being available.

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MD18110 \$MN_MM_MAX_SUMCORR_PER_CUTTEDGE

defines the maximum useful value which can be entered.

Value Meaning

> 0 Number of the total offset

= 0 No total offset active with D programming

= 1 The total offset number for the previously programmed D is used.

Related to:

MD20270 \$MC_CUTTING_EDGE_DEFAULT.

20274	MULTITOOLLOC_DEFAULT	N09	-
-	Number of the multitool location, whose tool is selected for T= location.	DWORD	Immediately
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 72 7/3 U

Description:

Only of significance when the 'Multitool' function is active plus 'T= location' programming: Multitool location number of the location in the multitool, whose tool is selected for a tool change programmed with 'T= location'. If the tool is not ready for use, with the appropriate configuration, an attempt is made to select a replacement tool.

If the tool at the magazine location programmed with 'T= location' is not a multitool, then MD20274 has no effect.

The value zero signifies that when programming 'T= location' the multitool location number is used, which corresponds to the multitool position.

Entering the MD can be suppressed by explicitly programming the multitool location number with the MTL command.

The value entered in MD20274 must correspond at the time of programming to the location of the multitool, located in the magazine location, which was programmed with 'T= location'.

Example:

MD20274 \$MC_MULTITOOLLOC_DEFAULT = 2;

T=5 ; 5 is a magazine location with a multitool. Select the tool that is located at location 2 of this multitool.

T=5 MTL=1 ; 5 is a magazine location with a multitool. Select the tool that is located at location 1 of this multitool. Programming MTL suppresses the setting of this MD

20280	LIMIT_CHECK_MODE	EXP	-
-	Type of limit position check	DWORD	Reset
-			
-	-	1, 1, 1, 1, 1, 1, 1, 1...	0 1 1/1 M

Description:

This MD can be used to set the mode of operation for the software limit position check.

The following options are available:

0: The limit positions are checked in real time on active transformation

1: The limit positions are checked in a preparative manner on active transformation

20310	TOOL_MANAGEMENT_MASK	C09	P3 pl, P3 sl
-	Activation of tool management functions	UDWORD	PowerOn
-			
-	-	0x2, 0x2, 0x2, 0x2, 0x2, 0x2, 0x2, 0x2...	0 0xFFFFFFFF 7/2 M

Description:

MD = 0: Tool management inactive

Bit 0 to bit4

Bit 0=1: Tool management active

Tool management functions are enabled for the current channel.

Bit 1=1: Tool monitoring function active

The functions for monitoring the tools (tool life and quantity) are enabled.

Bit 2=1: OEM functions active

The memory for user data can be used (see also MD18090 \$MN_MM_NUM_CC_MAGAZINE_PARAM to MD18098 \$MN_MM_NUM_CC_MON_PARAM)

Bit 3=1: Consider adjacent location active

Bit 0 to bit 3 must be set as in MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK.

Bit 4=1: The PLC has the option of requesting a T preparation again with changed parameters.

The acknowledgment states "2", "7" und "103" are enabled with this bit. The tool selection is then recalculated in the NCK.

Note: Bit4=1 (PLC can reject tool) and Bit23=1 (interpreter selects tool) are mutually exclusive.

Bit 5 to bit 8

Bit 5 and bit 7 refer to the main spindle

Bit 6 und bit 8 refer to secondary spindles

Bit 5 = 1: The command is regarded as output when the internal transport acknowledgment + the transport acknowledgment are present, that is, when the command has been accepted by the basic PLC program.

(Bit 19=1 also allows the block change to be prevented (main run) until the required acknowledgments have been received.)

Bit 7 = 1: The output of the command is not regarded as being completed until the end acknowledgment has been received from the PLC. That is, the command has been acknowledged by the PLC user program with status "1".

(Bit 19=1 also allows the block change to be prevented (main run) until the required acknowledgments have been received.)

Bit 5 and bit 7 (alternatively bit 6 and bit 8) are mutually exclusive.

Only the following combinations are permissible:

Bit 5: ...0...1...0

Bit 7: ...0...0...1

With the default setting, that is bits 5 to 8 = 0, synchronization takes place in the block in which a cutting edge is selected for the first time.

Setting these bits delays the block processing.

Bit 9 to bit 11

Bit 9: Reserved for test purposes

It can also be used by machine manufacturers during the test phase, provided that the PLC program does not yet control the tool change.

Bit 10=1: M06 is delayed until the preparation has been accepted by the PLC user program.

The change command is not output until the preparation acknowledgment has been received. That can be, for example, status "1" or "105".

Bit 10=0: The change command is output without delay, directly after the preparation command.

Bit 11=1: The tool preparation command (PLC command numbers=2, 4, 5) is also executed if the same tool preparation command has already been executed. (Commands 4, 5 contain the tool preparation)

Example: (Tool changed with M6 (PLC command no.= 3):

T="Tool1"; tool preparation

M6; tool change

T="Tool2" ; 1st tool preparation after M6 (for same tool holder)

; is always output to PLC.

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T="Tool2"; 2nd tool preparation is only output as a command to the PLC if bit 11 = 1.
; This tool preparation counts as the first if the state of the tool has changed since the previous tool preparation such that it would no longer be serviceable.
That might be, for example, an asynchronous unloading of the tool. This tool preparation then attempts to select a replacement tool.
Bit 11=0: The preparation command can only be output once for any one tool.
Bit 12 to bit 14
Bit 12=1: The preparation command (PLC command numbers = 2, 4, 5) is also executed when the tool is already in the spindle/tool holder.
T="Tool1" ; tool preparation
M6; tool change
T="Tool1"; tool is already in the tool holder
; 1st tool preparation after M6 (for the same tool holder)
; is only output to the PLC if bit 12 = 1.
; An unserviceable tool (e.g. disabled because of tool monitoring.) on the tool holder does not count as being on the tool holder. This tool preparation then attempts to select a replacement tool.
T="Tool2" ; 2nd tool preparation - the rules of bit 11 apply to the output.
Bit 12=0: The preparation command is not executed if the tool is already in the spindle.
Bit 13=1: On reset, the commands are retrieved from the diagnostics buffer and stored in the passive file system (TCTRAxx.MPF under part program) This file is required by the Hotline.
The tool sequences are only recorded in the diagnostics buffers of systems that have adequate memory (NCU572, NCU573)).
Bit 14=1: Reset mode
Tool and offset selection correspond to the settings in MD20110 \$MC_RESET_MODE_MASK and MD20112 \$MC_START_MODE_MASK.
Bit 14=0: No reset mode
Bit 15 to bit 19
Bit 15=1: No return transport of the tool if there are multiple preparation commands (Tx->Tx).
Bit 15=0: Return transport of the tool from any defined buffers.
Bit 16=1: T = location number is active
Bit 16=0: T="Tool name"
Bit 17=1: Tool life decrementation can be started and stopped via the PLC in channel DB 2.1...DBx 1.3.
Bit 18=1: Activation of monitoring of "Last tool in the tool group"
Bit 18 Lengthens the search for a suitable tool, above all, when there are a large number of disabled replacement tools.
Bit 18=0: No monitoring of "Last tool in the tool group"
Bit 19=1: The synchronizations determined by bits 5...8 refer to the main run block. This means that the block change is delayed until the required acknowledgments have been received.
Bit 19, in conjunction with set bits 5, 6, 7, 8, delays block processing.
Bit 19=0: The synchronizations determined by bits 5...8 refer to the tool command output. This means that the block change is not delayed.
Bit 20 to bit 24
Bit 20=0: If the PLC signal "Program test active" is present, then the commands generated are not output to the PLC. The NCK acknowledges the commands itself. The magazine and tool data are not changed.

Bit 20=1: If the PLC signal "Program test active" is present, then the commands generated are output to the PLC. Depending upon the type of acknowledgment, tool/magazine data can be changed in the NCK. If the acknowledgment parameters for the "target magazine" are given the values of the "source magazine", then there is no tool transport, and thus also no data change in the NCK.

Bit 21=0: Default setting: Ignore the tool state "W" during tool selection.

Bit 21=1: Tools in the state "W" cannot be selected by another tool change/tool preparation command.

Bit 22=1: Function "Tool subgroups"

\$TC_TP11[x] is the grouping or selection parameter

Bit 23=0: Default setting

The tool management selects the tool optimally and safely in the main run. This means that the interpreter may have to wait until the end of the tool selection for the offset selection.

Bit 23=1: For simple applications

The interpreter selects the tool itself. This means synchronization with the main run is not required for the offset selection. (However, an uncorrectable alarm may be issued if a tool becomes unserviceable after selection but before loading.)

Note: Bit4=1 (PLC can reject tool) and Bit23=1 (interpreter selects tool) are mutually exclusive.

Bit 24=0: Default setting

If the PLC commands 8 and 9 (asynchronous transfer) want to move a tool to a location reserved for another tool, then this is rejected with an alarm.

Bit 24=1: If the PLC commands 8 and 9 want to move a tool to a location reserved for another tool with "Reserved for tool from buffer" (bit value= "H4"), then this is possible. This location reservation is removed before execution of the motion ("Reserved for new tool to be loaded" (bit value= "H8") remains effective).

Related to:

MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK

MD20320 \$MC_TOOL_TIME_MONITOR_MASK

MD20122 \$MC_TOOL_RESET_NAME

MD20110 \$MC_RESET_MODE_MASK

MD20124 \$MC_TOOL_MANAGEMENT_TOOLHOLDER

MD22560 \$MC_TOOL_CHANGE_M_CODE

20320	TOOL_TIME_MONITOR_MASK			C06, C09	-	
-	Time monitoring for tool in tool holder			UDWORD	PowerOn	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0	0x7FFFFFFF	7/2	M

Description: Activation of the tool time monitoring for the tool holders and spindles 1..x.

As soon as the path axes have been traversed (not with G00, always with G63), the tool time monitoring data of the active D compensation are updated for the tool in the selected tool holder, which is also the master tool holder.

Bit 0...x-1: Monitoring of the tool in tool holder 1...x

20350	TOOL_GRIND_AUTO_TMON			C06, C09	-	
-	Activation of tool monitoring. 0/1: Monitoring off/on			BYTE	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	1	7/2	M

Description: This MD is used to define whether tool monitoring is switched on automatically if tool length compensation for a grinding tool with monitoring is selected (odd type number types 401 - 499).

2.3 NC machine data

TOOL_GRIND_AUTO_TMON = 1 : Automatic monitoring switched on

TOOL_GRIND_AUTO_TMON = 0 : Automatic monitoring switched off

20360	TOOL_PARAMETER_DEF_MASK			C09	M5, P1, W1	
-	Definition of tool parameters			UDWORD	PowerOn	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0	0x7FFFFFFF	7/2	M

Description:

Definition of the effects of tool parameters.

Bit no. meaning when bit is set

Bit 0: (LSB):

For turning and grinding tools, the wear parameter of the transverse axis is included in the calculation as a diameter value.

Bit 1:

For turning and grinding tools, the tool length component of the transverse axis is included in the calculation as a diameter value.

Bit 2:

If a tool length correction is included in the calculation as a diameter value, the tool may only be used in the plane that was active when the tool was selected. If this bit is set, a plane change leads to an alarm.

Bit 3:

Work offsets in frames in the transverse axis are included in the calculation as diameter values.

Bit 4:

PRESET value is included in the calculation as a diameter value

Bit 5:

Include the external work offset in the transverse axis in the calculation as a diameter value

Bit 6:

Read actual values of the transverse axis as diameter values (AA_IW, AA_IEN, AA_IBN, AA_IB. Notice: Not AA_IM.)

Bit 7:

Display all actual values of the transverse axis as diameter values, irrespective of the G code of group 29 (DIAMON / DIAMOF)

Bit 8:

Always display the distance-to-go as a radius in the Work (WCS)

Bit 9:

During DRF handwheel travel of a transverse axis, only half the distance of the specified increment is traveled (on condition that MD11346 \$MN_HANDWH_TRUE_DISTANCE = 1).

Bit10:

Activate the tool component of an active, orientable tool holder even if no tool is active.

Bit11:

The tool parameter \$TC_DP6 is not interpreted as a tool radius but as a tool diameter.

Bit12:

The tool parameter \$TC_DP15 is not interpreted as wear of the tool radius but as wear of the tool diameter.

Bit13:

During JOG of circles, the circle center coordinate is always a radius value, see D42690 \$SC_JOG_CIRCLE_CENTRE.

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Description:

Indicates for each channel max. two number ranges for tool types that are treated as forming tools. Therefore individual ranges are possible both for grinding and for turning tools.

The first range is specified by the first and the second number, the second range by the third and fourth number.

If the first number is not smaller than the second one (the same applies for the third and fourth number), no range will be defined, but two individual numbers will be specified instead.

The numbers 400 through 599 are permissible (tool type numbers for turning and grinding tools), and also value 0 (no tool type number defined).

Examples:

400 405 590 596 : Tool types 400-405 and 590-596 are contour tools

410 400 590 596 : tool types 400, 410 and 590-596 are contour tools

450 0 420 430 : Tool types 450 and 420-430 are contour tools

20372	SHAPED_TOOL_CHECKSUM			C01, C08	-	
-	Checksum test for contour tools			BOOLEAN	Immediately	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/5	U

Description:

Indicates for each channel whether for completion of the contour tool definition an edge must be available that includes the negative sums of tool length components and tool radius of the previous edges.

20380	TOOL_CORR_MODE_G43G44			C01, C08, C11	-	
-	Treatment of tool length compensation with G43 / G44			BYTE	Reset	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	2	7/2	M

Description:

This machine data determines in ISO mode M (G43 / G44) the way in which length compensations programmed with H are processed.

0: Mode A

Tool length H always acts on the third geometry axis (usually Z)

1: Mode B

Tool length H acts, depending on the active plane, on one of the three geometry axes. This means with

G17 on the 3rd geometry axis (usually Z)

G18 on the 2nd geometry axis (usually Y)

G19 on the 1st geometry axis (usually X)

In this mode, compensations in all three geometry axes can be configured through multiple programming, i.e. through the activation of one component, the length compensation possibly active in another axis is not deleted.

2: Mode C

The tool length acts, independent of the active plane, on the axis that has simultaneously been programmed with H. Otherwise, the response is the same as with mode B.

20382	TOOL_CORR_MOVE_MODE			C01, C08	-	
-	Traversing of tool length compensation			BOOLEAN	Reset	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/2	M

Description: This machine data determines how the tool length compensations are traversed.

0: A tool length compensation is only traversed if the associated axis has been programmed (behavior as in previous software versions)

1: Tool lengths are always traversed independently of whether the associated axes are programmed or not.

20384	TOOL_CORR_MULTIPLE_AXES			C01, C08, C11	-	
-	Tool length compensation in several axes simultaneously			BOOLEAN	Reset	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/2	M

Description: This machine data determines for tool length compensation in ISO mode M (ISO2) (G43 / G44), whether the compensation shall be allowed in mode C (selection of the axis on which the compensation is acting by specifying the corresponding axis letter) to act on several axes simultaneously.

If this machine data is 1, this type of programming is allowed; otherwise it is rejected with an alarm.

20390	TOOL_TEMP_COMP_ON			C01, C08	K3, W1	
-	Activation of temperature compensation for tool length			BOOLEAN	Reset	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/2	M

Description: This machine data activates the temperature compensation in tool direction (see also SD42960 \$SC_TOOL_TEMP_COMP)

20392	TOOL_TEMP_COMP_LIMIT			C01, C08	W1	
mm	Max. temperature compensation for tool length			DOUBLE	Reset	
-						
-	3	1.0, 1.0 , 1.0, 1.0, 1.0 , 1.0, 1.0, 1.0 , 1.0, 1.0, 1.0 , 1.0, ...	0.0	-	7/7	U

Description: With temperature compensation, this machine data indicates the maximum permissible value for the tool length for each geometry axis.

If a temperature compensation value larger than this limit value is entered, it will be limited without an alarm.

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20400	LOOKAH_USE_VELO_NEXT_BLOCK			EXP, C05	B1	
-	LookAhead following block velocity			BOOLEAN	PowerOn	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/2	M

Description: For SW-internal function optimization.

20430	LOOKAH_NUM_OVR_POINTS			EXP, C02, C05	B1	
-	Number of override characteristics for LookAhead			DWORD	PowerOn	
-						
-	-	1, 1, 1, 1, 1, 1, 1...	0	2	7/2	M

Description: For SW-internal function optimization.

20440	LOOKAH_OVR_POINTS			EXP, C05	B1	
-	Override switch points for Look Ahead			DOUBLE	PowerOn	
-						
-	2	1.0, 0.2, 1.0, 0.2, 1.0, 0.2, 1.0, 0.2, 1.0, 0.2, 1.0, 0.2, 1.0,...	0.2	2.0	7/2	M

Description: For SW-internal function optimization.

20443	LOOKAH_FFORM			EXP, C05	-	
-	Activate extended LookAhead			BYTE	NEW CONF	
-						
-	5	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0...	0	2	7/2	M

Description: The MD specifies for which technology groups the extended LookAhead is active.
Value 0: Default LookAhead
Value 1: Extended LookAhead
Value 2: reserved
E.g. MD20443 \$MC_LOOKAH_FFORM[4]=1; i.e. activation for DYNFINISH.
Entry for all dynamic G code groups.
When changing between default LookAhead and extended LookAhead or vice versa, the continuous-path mode is interrupted by an interpolatory stop.

20450	LOOKAH_RELIEVE_BLOCK_CYCLE			EXP, C05	B1	
-	Relief factor for the block change time			DOUBLE	PowerOn	
-						
-	-	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	0.0	-	7/2	M

Description: Block change problems occur for the following reason:
The traversing length of the NC blocks to be processed is so short that the Look Ahead function has to reduce the machine velocity to provide enough time for block preparation. In this situation, constant decelerations and accelerations of the path motion can occur.
This machine data defines the extent to which such velocity fluctuations are to be smoothed.
Special cases:

Values up to approx. 1.0 are appropriate.

The value 0.0 means that the function is deactivated.

20455	LOOKAH_FUNCTION_MASK			EXP, C05	-	
-	Look Ahead special functions			UBYTE	NEW CONF	
-						
-	-	0x1, 0x1, 0x1, 0x1, 0x1, 0x1, 0x1, 0x1...	0	0x3	7/2	M

Description: Look Ahead special functions:
 Bit 0 = 1:
 The Safety Integrated setpoint limitation is already taken into account in Look Ahead.
 Bit 1 = 1:
 The Safety Integrated setpoint limitation is taken into account in detail in the block.

20460	LOOKAH_SMOOTH_FACTOR			EXP, C05	B1	
%	Smoothing factor for Look Ahead			DOUBLE	NEW CONF	
-						
-	-	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	0.	0.	7/2	M

Description: Notice: This function is obsolete and is no longer supported!
 A smoothing factor could be defined to give a more stable path velocity control.
 It defined the maximum permitted productivity loss.
 Acceleration procedures which contribute less than this factor to a shorter program run time have not been executed.
 In this case, only those acceleration procedures whose frequency lies above the frequency parameterized in MD32440 \$MA_LOOKAH_FREQUENCY have been taken into account.
 The entry of 0.0 deactivates the function.

20462	LOOKAH_SMOOTH_WITH_FEED			EXP, C05	B1	
-	Path velocity smoothing with programmed feed			BOOLEAN	NEW CONF	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/2	M

Description: The MD defines whether the programmed feed is also taken into account for smoothing the path velocity. In these cases, the factor defined in MD20460 \$MC_LOOKAH_SMOOTH_FACTOR can be better maintained when the override is set to 100%.
 Related to:
 MD32440 \$MA_LOOKAH_FREQUENCY,
 MD20460 \$MC_LOOKAH_SMOOTH_FACTOR

20463	FIFOCTRL_ADAPTION			EXP, C05	-	
-	Adaptation of the IPO buffer control			DOUBLE	NEW CONF	
-						
-	-	0.0, 0.0, 0.0, 0.0, 0.0, 0.0. 0.0. 0.0...	0.0	1.0	1/1	M

Description: The MD defines how significantly the IPO buffer control (FIFOCTRL) should influence the path feedrate with the buffer full.
 0.0 means that the IPO buffer control, for a full IPO buffer stops limiting the path feedrate. This shortens the machining time, but it can increase the risk of the IPO buffer running empty.

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1.0 means that the IPO buffer control, with full IPO buffer continues to control the path feedrate, and therefore avoids the IPO buffer becoming empty faster. This results in minor fluctuations of the IPO buffer fill level. However, a longer machining time must be expected.

Values between 0.0 and 1.0 permit a smooth, seamless transition from the old to the new response.

Corresponds with:

FIFOCTRL

20464	PATH_MODE_MASK			EXP, C05	-	
-	Path behavior			UDWORD	Reset	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	0xffff	7/2	M

Description: This machine data is used to influence the path action

Bit0:

If only rotary axes are traversed in the block as path axes with active G700, the programmed rotary axis velocity corresponds to

0: [degrees/min]

1: [25.4*degrees/min]

20465	ADAPT_PATH_DYNAMIC			EXP, C05	B1	
-	Adaptation of path dynamic response			DOUBLE	NEW CONF	
-						
-	2	1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0,...	1.0	1.0	7/2	M

Description: Notice: This function is obsolete and is no longer supported!

This adaptation factor could be used to reduce the dynamics of changes in the path velocity.

ADAPT_PATH_DYNAMIC[0] was effective with Brisk and reduced the permissible acceleration

ADAPT_PATH_DYNAMIC[1] was effective with Soft and reduced the permissible jerk

Only acceleration processes using a frequency above the frequency parameterized in MD32440 \$MA_LOOKAH_FREQUENCY were considered.

To disable this function, enter 1.0.

20470	CPREC_WITH_FFW			EXP, C06, C05	K6	
-	Programmable contour accuracy			BYTE	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	5	7/2	M

Description: This machine data defines the behaviour of the programmable function CPRECON.

0: The CPRECON function is inactive when feedforward control is activated simultaneously.

1: CPRECON is also active with feedforward control.

2: As 1, but the function is parameterised with MD32415 \$MA_EQUIV_CPREC_TIME.

3: As 2, but any contour accuracy programmed with CTOL has priority over SD42450 \$SC_CONTPREC.

4: CPRECON is active independently of the feedforward control and jerk filter. Only MD32415 \$MA_EQUIV_CPREC_TIME is taken into account in the calculation of the contour error. All time constants that have effects on the contour error must be summated and entered MD32415 \$MA_EQUIV_CPREC_TIME.

5: As 4, but a contour accuracy that may have been programmed with CTOL has priority over SD42450 \$SC_CONTPREC.

The values 0 and 1 are no longer recommended. They only provide compatibility with older software versions.

Related to:

SD42450 \$SC_CONTPREC

SD42460 \$SC_MINFEED

MD32415 \$MA_EQUIV_CPREC_TIME

20476	ORISON_STEP_LENGTH			EXP	F2	
mm	Path length for block division with ORISON			DOUBLE	NEW CONF	
-						
-	-	0.5, 0.5, 0.5, 0.5, 0.5, 0.5, 0.5, 0.5...	0.001	-	1/1	M

Description:

The path lengths of the part blocks are set with this MD as they are formed with orientation smoothing with ORISON.

For this data to be active, the division of blocks with ORISON must be enabled with MD20478 \$MC_ORISON_MODE

(Value 100).

If a length is set for this MD that is significantly shorter than the default length of 0.5 mm, problems may occur with the performance and effectiveness of the orientation smoothing with large tolerances. If this length is reduced, the block buffer for the orientation smoothing (MD28590 \$MC_MM_ORISON_BLOCKS) usually also has to be increased, so that the orientation smoothing can still act over an adequately long path length.

20478	ORISON_MODE			EXP	F2	
-	Mode of orientation smoothing			DWORD	NEW CONF	
-						
-	-	100, 100, 100, 100, 100, 100, 100, 100...	0	3232	7/7	U

Description:

The mode of operation of orientation smoothing with ORISON can be set with this MD.

The units, tens, hundreds and thousands digits have different meanings.

The following possibilities are available:

The units digits of this data define the type of smoothing: rotary axis or vector smoothing.

xx0: The type of smoothing is defined by the active G code of the 51st G code group:

ORIAXES active: rotary axis smoothing, ORIAXES inactive (e.g. ORIVECT): vector smoothing.

xx1: Vector smoothing irrespective of the active G code of the 51st G code group

xx2: Rotary axis smoothing irrespective of the active G code of the 51st G code group

The tens digits can change the effect of the smoothing:

x0x: Smoothing takes place along the entire path length.

x1x: Smoothing takes place homogeneously along the traversing length of the orientation axes.

x2x: Tolerance changes become active block-synchronously. In the other case, a change of tolerance becomes active incrementally over a defined path length. As a rule, this leads to a more homogeneous progression of the orientation. This setting option only plays a role if the blocks are subdivided (hundreds digit of this machine data 1xx). If the blocks are not subdivided, any tolerance change always becomes active block-synchronously.

The hundreds digits can be used to set whether the smoothing works on the programmed original blocks or on suitably split blocks:

0xx: The programmed blocks are not subdivided. The effect of the orientation smoothing is very dependent on the programmed block structure.

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1xx: The programmed blocks are subdivided so that the orientation smoothing can generate a homogeneous progression of the orientation.

Only those blocks are subdivided, in which a compressor (COMPCAD, COMPCURV, COMPON) is active.

2xx: The programmed blocks are subdivided so that the orientation smoothing can generate a homogeneous progression of the orientation.

All program blocks are subdivided, irrespective of whether a compressor (COMPCAD, COMPCURV, COMPON) is active in it or not.

The thousands digit can be used to set how the tolerance is specified for the orientation smoothing:

0xxx: The tolerance is specified according to the usual rules. This means that when OTOL = <...> is programmed, the value thus programmed becomes active, otherwise the value of SD \$SC_ORISON_TOL becomes active. The G0 tolerance factor is always

calculated in (value of MD20560 \$MC_G0_TOLERANCE_FACTOR or the value programmed with STOLF = <...>).

1xxx: The tolerance is always specified with SD42678 \$SC_ORISON_TOL, irrespective of whether OTOL = <...> was programmed.

2xxx: The G0 tolerance factor is not included in the calculation. This is the case both for the tolerance specified with OTOL = <...> as well as with SD42678 \$SC_ORISON_TOL. The two numerical values can be combined with one another.

20480	SMOOTHING_MODE			EXP	B1	
-	Behavior of smoothing with G64x			DWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	75744	7/7	U

Description:

Configuration of smoothing with G641 and G642 or G643.

The MD is decimal-coded. The units digits define the response with G643, and the tens digits the response with G642. The hundreds digit can define whether, with G641 or G642, the axes may be accelerated within the smoothing range or traversed at constant velocity. The thousands and ten-thousands digits are used to configure smoothing with G644.

x0: G643 uses axis-specific tolerances; these are set with the axis-specific MD33100 \$MA_COMPRESS_POS_TOL.

x1: G643 uses the contour tolerance SD42465 \$SC_SMOOTH_CONTUR_TOL for smoothing the geometry axes. The axis-specific tolerances in MD33100 \$MA_COMPRESS_POS_TOL are used for smoothing all other axes.

x2: The angular tolerance SD42466 \$SC_SMOOTH_ORI_TOL is used for smoothing the orientation movement. The axis-specific tolerances in MD33100 \$MA_COMPRESS_POS_TOL are used for all other axes.

x3: Combination of the two options 01 and 02. This means that G643 uses the tolerances SD42465 \$SC_SMOOTH_CONTUR_TOL and SD42466 \$SC_SMOOTH_ORI_TOL. All other axes are smoothed with an axis-specific tolerance.

x4: G643 uses the smoothing length programmed with ADIS= or ADISPOS=. The specification of possible axis-specific tolerances or contour and orientation tolerances is ignored.

0x: G642 uses axis-specific tolerances; these are set with the axis-specific MD33100 \$MA_COMPRESS_POS_TOL.

1x: G642 uses the contour tolerance for smoothing the geometry axes. The axis-specific tolerances in MD33100 \$MA_COMPRESS_POS_TOL are used for smoothing all other axes.

2x: The orientation movement with G642 is smoothed using the angular tolerance SD42466 \$SC_SMOOTH_ORI_TOL. The axis-specific tolerances in MD33100 \$MA_COMPRESS_POS_TOL are used for smoothing all other axes.

3x: Combination of both options 10 and 20. This means that G642 uses the tolerances SD42465 \$SC_SMOOTH_CONTUR_TOL and SD42466 \$SC_SMOOTH_ORI_TOL. Other axes are smoothed with an axis-specific tolerance.

4x: G642 uses the smoothing length programmed with ADIS= or ADISPOS=. The specification of possible axis-specific tolerances or contour and orientation tolerances is ignored.

Possible values of the hundreds digit (specification of path velocity for smoothing):

0xx: A profile of the limit velocity is calculated within the smoothing range from the specified maximum values for acceleration and jerk of the axes or path involved. This can lead to an increase in

path velocity in the smoothing range and consequently to an acceleration of the axes involved.

1xx: A profile of the limit velocity is not calculated for smoothing blocks with G641. Only a constant limit velocity is specified. In the case of smoothing with G641/G642, this prevents the axes involved accelerating in the

smoothing range. However, this setting may lead to smoothing blocks being traversed at a velocity that is too low, especially in the case of long smoothing ranges.

2xx: No velocity profile for G642 and G645 (see the above scenario for description).

4xx: The "effective" path velocity in a smoothing block will remain constant, if possible, as long as the dynamic response of the axes permits this. Unlike the default setting, the smoothing blocks are also interpolated as a path with this setting.

Possible values for the thousands digit (configuration of G644):

0xxx:

When smoothing with G644, the maximum deviations of each axis specified in MD COMPRESS_POS_TOL are adhered to. If the dynamic response of the axis allows, the specified tolerance may not be fully utilized.

1xxx:

When smoothing with G644, the smoothing distance is specified.

2xxx:

When smoothing with G644, the maximum frequency at which the smoothing movement of each axis occurs is limited. The maximum frequency is specified in MD32440 \$MA_LOOKAH_FREQUENCY.

3xxx:

When smoothing with G644, neither the tolerance nor the smoothing distance is monitored. Each axis traverses around a corner with the maximum possible dynamic response. With SOFT, both the maximum acceleration and the maximum jerk of each axis are observed. With BRISK, the jerk is not limited; instead, each axis traverses with the maximum possible acceleration.

4xxx:

When smoothing with G644, the maximum deviations of each axis specified in MD COMPRESS_POS_TOL are adhered to. In contrast to the value 0xxx, the specified tolerance is fully utilized where possible. The axis then does not reach its maximum possible dynamic response.

5xxx:

When smoothing with G644, the smoothing distance is specified (ADIS or ADISPOS). In contrast to the value 1xxx, the specified smoothing distance is also fully utilized where possible. The axes involved then might not reach their maximum dynamic response.

Possible values for the ten-thousands digit (various special setting options for G641/G642/G645):

0xxxx:

The velocity profiles of the axes in the smoothing range are defined without jerk limitation when BRISK is active, and with jerk limitation when SOFT is active.

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1xxxx:

The velocity profiles of the axes in the smoothing range are always defined with jerk limitation no matter whether BRISK or SOFT is active.

2xxxx: When smoothing tangential block transitions with G645, "counter motion" may occur when moving along the contour. This can be avoided if circles are involved. If this function is activated, the circles involved are reduced by the set tolerance. As a consequence, the smoothed contour runs on the inner side of the tolerance band and "counter motion" is avoided.

4xxxx: When smoothing with G641/G642 and G645, the smoothing movements of the orientation axes are made with vector interpolation if possible, this is conditional upon vector interpolation being active in both the blocks involved and the active orientation transformation permitting this (e.g. by pole handling).

By default, the orientation axes are always smoothed by means of rotary axis interpolation.

The values of the units, tens, hundreds and ten-thousands digits are added.

The values of the thousands digit are interpreted individually.

Related to:

MD33100 \$MA_COMPRESS_POS_TOL,

SD42465 \$SC_SMOOTH_CONTUR_TOL,

SD42466 \$SC_SMOOTH_ORI_TOL

20481	ORISMOOTHING_MODE			EXP	B1	
-	Behavior of smoothing of orientations with OST/OSD			DWORD	NEW CONF	
-						
-	-	1, 1, 1, 1, 1, 1, 1, 1...	0	12	7/7	U

Description:

Settings for the behavior of smoothing of orientation motions with OST/OSD.

It can be set how block transitions are smoothed if additional rotary axes are participating in a path motion which do not act as orientation axes in a transformation. If the value of this MD is zero, for OST/OSD at a block transition, only rotary axes that act as orientation axes in a transformation are smoothed. For values <> 0, any existing additional rotary axes are also smoothed, depending on the situation.

Meaning of the unit position:

x0: Additional rotary axes are not smoothed.

x1: Additional rotary axes are only smoothed if rotary axis interpolation is active for orientation.

x2: Additional rotary axes are smoothed even if vector interpolation is active. In this case, in both blocks it is switched to rotary axis interpolation. Depending on machine kinematics and situation, the switchover can cause undesired rotary axis movements (orientation changes).

Meaning of the decade:

0x: If no orientation transformation is active, rotary axis motions with OST/OSD are not smoothed.

1x: Even without active transformation, rotary axis motions are smoothed. This permits the active smoothing of rotary axes with OST/OSD even without active orientation transformation.

20482	COMPRESSOR_MODE			EXP	F2	
-	Mode of compressor			DWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	1333	7/7	U

Description:

This MD is used to set the compressor operating mode.

The units digits, the tens digits and the hundreds digits have different meanings.

The following options are available:

Units digits:

0: With the compressor, the tolerances specified with MD33100 \$MA_COMPRESS_POS_TOL are met for all axes (geometry and orientation axes).

1: With the compressor, the contour tolerances specified with SD42475 \$SC_COMPRESS_CONTUR_TOL are active for the geometry axes.

For the orientation axes, the axis-specific tolerances MD33100 \$MA_COMPRESS_POS_TOL are active.

2: With the compressor, the axis-specific tolerances MD33100 \$MA_COMPRESS_POS_TOL become active for the geometry axes. The orientation movement is compressed in compliance with the maximum angular deviations specified with SD42476 \$SC_COMPRESS_ORI_TOL or SD42477 \$SC_COMPRESS_ORI_ROT_TOL.

3: With the compressor, the contour tolerance SD42475 \$SC_COMPRESS_CONTUR_TOL becomes active for the geometry axes and the maximum angular deviation SD42476 \$SC_COMPRESS_ORI_TOL or SD42477 \$SC_COMPRESS_ORI_ROT_TOL becomes active for the orientation axes.

Tens digits:

The tens digits of this MD can be used to set a compressor response that is compatible with previous software releases (< SW 6.3).

0x: All blocks with orientations and value assignments are compressed.

This is the default setting.

Notice: This response is incompatible with previous software releases!

1x: Blocks with value assignments are not compressed (e.g. X=100 ..., etc.)

2x: Blocks with a programmed tool orientation are not compressed.
(e.g. A3= B3= C3=).

3x: All blocks with value assignments and/or programmed tool orientation are not compressed. With this setting, the response is fully compatible with previous software releases (< 6.3).

Hundreds digits:

The hundreds digit can be used to set which blocks in addition to G01 blocks are to be compressed or not:

0xx: Circular blocks and G00 blocks are not compressed. Is compatible with previous releases.

1xx: Circular blocks are linearized and compressed by COMPCAD.

2xx: G00 blocks are compressed; a different tolerance may be applied here (see MD 20560 \$MC_GO_TOLERANCE_FACTOR).

3xx: Combination of the two previous options: Both circular blocks and G00 blocks are compressed.

The thousands digits optimize the compressor for different machine types:

0xxx: Optimization for a good surface quality in tool and mold building.

1xxx: Optimization for soft and fast traversing in special applications.

20485	COMPRESS_SMOOTH_FACTOR			EXP, C05	B1	
-	Smoothing by compressor			DOUBLE	NEW CONF	
-						
-	5	0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., ...	0.	1.	7/2	M

Description: Smoothing of the programmed block end points with compressor type COMPCAD. Value 0: no smoothing. Value 1: maximum smoothing.
Entry for all dynamic G code groups.

Description: Spline degree for compressor type COMPCAD. Value 3 is recommended; value 5 may be possible for roughing, if soft and rapid movements are more important than accuracy
Entry for all dynamic G code groups.

Description:	Extent to which the programmed block end points are smoothed in the case of compressor type COMPCAD for non-geometry axes. Value 0: No smoothing. Value 1: Maximum smoothing. Entry for each dynamic G code group.

Description:	This MD is used to determine the settings for spline interpolation. The allocation of the spline segments to the NC blocks can thus be influenced. With spline interpolation, the spline blocks are combined, if possible, in such a way, that there are no blocks that are too short and could lead to a reduction in the possible path velocity. Bit 0: With BSPLINE, blocks that are too short are avoided. Bit 1: With BSPLINE/ORICURVE, blocks that are too short are avoided. Bit 2: With CSPLINE, blocks that are too short are avoided.

Description: A block transition is normally only smoothed with G64x when the path velocity at block transition is reduced by the overload factor set in MD32310 \$MA_MAX_ACCEL_OVL_FACTOR. When SOFT is active, the maximum jerk occurring at block transitions is also limited by MD32432 \$MA_PATH_TRANS_JERK_LIM. This means that the effect of smoothing with G64x depends on the values set for the overload factor and possibly for the maximum jerk. By setting MD20490 \$MC_IGNORE_OVL_FACTOR_FOR_ADIS = TRUE, a block transition can be smoothed with G64x, irrespective of the values set for the overload factor.

20500	CONST_VELO_MIN_TIME			EXP, C05	B2	
s	Minimum time with constant velocity			DOUBLE	PowerOn	
-						
-	-	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	0.0	0.1	7/2	M

Description: Defines the minimum time for constant velocity during transition from acceleration to deceleration in short blocks in which the set velocity cannot be reached. Entering a time of at least several IPO cycles prevents a direct transition from the acceleration to the deceleration phase and thus reduces the acceleration jump to half. This acceleration limitation is only active with the acceleration profile BRISK.

MD irrelevant for:

Look Ahead does not take account of this function.

20550	EXACT_POS_MODE			EXP	B1	
-	Exact stop conditions on G00/G01.			BYTE	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	33	7/2	M

Description: Configuration of the exact stop conditions for G00 and other G codes of the 1st G code group.

The MD is decimal-coded. The units digits define the behavior at G00 (infeed motion) and the tens digits the behavior of all the other G codes of the 1st group ("machining G codes").

x0: At G00, the relevant programmed exact stop conditions become active.

x1: At G00, G601 (fine positioning window) becomes active independent of the programmed exact stop condition.

x2: At G00, G602 (coarse positioning window) becomes active independent of the programmed exact stop condition.

x3: At G00, G603 (setpoint value reached) becomes active independent of the programmed exact stop condition.

0x: At the machining G codes, the relevant programmed exact stop conditions become active.

1x: At the machining G codes, G601 (fine positioning window) becomes active independent of the programmed exact stop condition.

2x: At the machining G codes, G602 (coarse positioning window) becomes active independent of the programmed exact stop condition.

3x: At the machining G codes, G603 (setpoint value reached) becomes active independent of the programmed exact stop condition.

The values of the units digits and tens digits are added.

For example, the value of EXACT_POS_MODE = 2 means that the exact stop condition G602 is always activated automatically at G00, independently of which exact stop condition was programmed. At all other G codes of group 1, the programmed exact stop condition becomes active.

20552	EXACT_POS_MODE_G0_TO_G1			EXP	B1	
-	Exact stop condition at G00-G01 transition			BYTE	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	5	7/2	M

Description: Configuration of a stop at transition from G00 to a different G code of the 1st G code group, and also vice versa, at transition from non-G00 to G00 in continuous-path mode.

In exact-stop mode, the positioning window programmed or set in MD20550 \$MC_EXACT_POS_MODE is used.

The following applies:

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- 0: No additional stop, no control of exact stop
 1: Behavior active as with G601 (positioning window, fine).
 2: Behavior active as with G602 (positioning window, coarse).
 3: Behavior active as with G603 (setpoint reached).
 4: As 0, no stop at block transition.

At block change from G0 to non-G0 in the G0 block in continuous-path mode, LookAhead takes account of the current value of the feedrate override of the following non-G0 block. Depending on the axis dynamics and the path length of the current block, the block change takes place with the exact or best possibly adapted velocity of the following block.

- 5: As 0, no stop at block transition.

At block change from G0 to non-G0 and non-G0 to G0 in continuous path mode, LookAhead takes account of the current value of the feedrate override (G0 to non-G0) or rapid traverse override (non-G0 to G0) of the following block. Depending on the axis dynamics and the path length of the current block, the block change takes place with the exact or best possibly adapted velocity of the following block.

20560	G0_TOLERANCE_FACTOR			EXP	B1	
-	Tolerance factor for G00			DOUBLE	NEW CONF	
-						
-	-	1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0...	1.e-9	-	1/1	M

Description:

Tolerance factor for G00.

This factor is used to make different settings for the tolerances for processing when G00 is active (rapid traverse, infeed motion).

This tolerance factor is relevant for the following control functions:

1. Compressor (COMPCAD, COMPCURV, and COMPON)
2. Smoothing with G64x
3. Smoothing of orientation with OST
4. Smoothing of orientation response with ORISON

This factor can be both greater than 1 and less than 1. However, higher tolerance settings are usual for infeed motion.

If the factor is equal to 1, the tolerances applied for G00 motion are the same as those for non-G00 motion.

20600	MAX_PATH_JERK			C05	B1, B2	
m/s³	Path-related maximum jerk			DOUBLE	NEW CONF	
-						
-	5	100., 100., 100., 100., 100., 100., 100., 100., 100., 100., 100....	1.e-9	-	7/2	M

Description:

The jerk limitation restricts the path acceleration change in SOFT mode. The path acceleration divided by the jerk limitation value produces a time in which the acceleration change takes place.

The jerk limitation is activated on the path by the NC command SOFT, and deactivated by BRISK.

MD irrelevant for:

Error states that lead to a rapid stop. In addition, the limitation is also inactive for positioning axes.

There is an entry for each dynamic G code group.

20602	CURV_EFFECT_ON_PATH_ACCEL			EXP, C05	B1, B2	
-	Effect of path curvature on path dynamic			DOUBLE	NEW CONF	
-						
-	5	0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., ...	0.	0.95	7/2	M

Description: This MD is used to determine whether the reaction of path curvature on path acceleration and path velocity is taken into account.

0:

Not taken into account

> 0:

If required, the path velocity and path acceleration are reduced in order to keep a sufficient reserve on the machine axes for centripetal acceleration.

0.75: Recommended setting.

MD20602 \$MC_CURV_EFFECT_ON_PATH_ACCEL defines the proportion of the axis accelerations (see MD32300 \$MA_MAX_AX_ACCEL[...]) that can be used for centripetal acceleration. The remainder is used for changing the path velocity.

Centripetal acceleration is not required for linear blocks; the full axis acceleration is therefore available for the path acceleration. On slightly curved contours or with a sufficiently low maximum path feedrate \$MC_CURV_EFFECT_ON_PATH_ACCEL has only a partial or no effect. Accordingly, the path acceleration is higher than that specified by $(1. - \text{MD20602 } \$\text{MC\_CURV\_EFFECT\_ON\_PATH\_ACCEL}) * \text{MD32300 } \$\text{MA\_MAX\_AX\_ACCEL}[...]$.

There is an entry for each dynamic G code group.

20603	CURV_EFFECT_ON_PATH_JERK			EXP, C05	B1	
-	Effect of path curvature on path jerk			DOUBLE	NEW CONF	
-						
-	5	0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., ...	0.	1000.	7/2	M

Description: Allows the reaction of the path curvature on the path jerk to be taken into account on especially jerk-sensitive machines.

Entry for each dynamic G code group.

20605	PREPDYN_SMOOTHING_FACTOR			EXP, C05	B1	
-	Factor for curve smoothing			DOUBLE	NEW CONF	
-						
-	5	1., 1., 1., 1., 1., 1., 1., 1., 1., 1., 1., 1., 1., 1., 1., 1., ...	0.0	-	1/1	M

Description: Factor to determine the degree of smoothing and torsion.

A larger value of this MD causes a stronger smoothing and thus a more homogenous curvature/torsion and resulting path velocity.

With this factor being zero no smoothing is performed.

There is an entry for all dynamic G code groups.

20606	PREPDYN_SMOOTHING_ON			EXP, C05	B1	
-	Activation of curve smoothing			DWORD	NEW CONF	
-						
-	5	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0. 0. 0. 0...	0	2	7/2	M

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Description: Switch on of curve and torsion smoothing.
Smoothing of the curve or torsion causes a homogenous path velocity.
Smoothing is only performed, when the relevant factor is MD 20605
\$MC_PREPDYN_SMOOTHING_FACTOR > 0.
Meaning:
0: Curve smoothing off.
1: Curve smoothing on.
2: Curve smoothing also on for axis couplings.
There is an entry for all dynamic G code groups.

20610	ADD_MOVE_ACCEL_RESERVE			C05	F2, B2, K1	
-	Acceleration margin for overlaid movements			DOUBLE	PowerOn	
-						
-	-	.2, .2, .2, .2, .2, .2, .2, .2... 2...	0.	0.9	7/2	M

Description: This machine data contains the factor that defines the acceleration and velocity margins which are not used by the path movements on the machine axes in order to provide sufficient acceleration and velocity margins for an overlaid movement for the velocity control.
A factor of 0.2 means that the path axes utilize 80% of the path acceleration and of the maximum velocity in normal operation. Only when a request for overlaid movement is made, can 100% of the path acceleration and velocity be utilized.
MD irrelevant for:
Error states that lead to a rapid stop. In addition, the limitation is also ineffective for positioning axes.
Special cases:
At the moment the machine data is only taken into account:
If the function "Fast retraction" is already activated
If the function "Online tool length compensation" is activated by the program command TOFFON
Related to:
MD32000 \$MA_MAX_AX_VELO (maximum axis velocity)
MD32300 \$MA_MAX_AX_ACCEL (maximum axis acceleration)

20620	HANDWH_GEOAX_MAX_INCR_SIZE			C08, C06	H1	
mm	Limitation handwheel increment for geometry axes			DOUBLE	PowerOn	
-						
-	-	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	0.0	-	7/2	M

Description: > 0: Limitation of the size of the selected increment for geometry axes
MD 11330 \$MN_JOG_INCR_SIZE0[<increment/VDI signal>] or
SD41010 \$SN_JOG_VAR_INCR_SIZE for geometry axes
0: No limitation on geometry axes

20621	HANDWH_ORIAX_MAX_INCR_SIZE			C08, C06	-	
degrees	Limiting of handwheel increment for orientation axes			DOUBLE	PowerOn	
-						
-	-	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	0.0	-	7/2	M

Description: > 0: Limitation of the size of the selected increment for orientation axes
MD11330 \$MN_JOG_INCR_SIZE[<increment/VDI signal>] or

SD41010 \$SN_JOG_VAR_INCR_SIZE for orientation axes

= 0: No limitation on orientation axes

20622	HANDWH_GEOAX_MAX_INCR_VSIZE			C08, C06, C05	-	
mm/min	Path velocity override			DOUBLE	PowerOn	
-						
-	-	500., 500., 500., 500., 500., 500., 500., 500....	0.0	-	7/2	M

Description:

The following applies to the velocity override of the path:

> 0: Limitation of the size of the selected increment

(MD11330 \$MN_JOG_INCR_SIZE [<increment/VDI signal>] or

SD41010 \$SN_JOG_VAR_INCR_SIZE) / 1000*IPO sampling time

= 0: No limitation

20623	HANDWH_ORIAX_MAX_INCR_VSIZE			C08, C06, C05	-	
rev/min	Orientation velocity overlay			DOUBLE	PowerOn	
-						
-	-	0.1, 0.1, 0.1, 0.1, 0.1, 0.1, 0.1, 0.1...	0.0	-	7/2	M

Description:

For the orientation velocity overlay:

> 0: Limitation of the size of the selected increment

(MD11330 \$MN_JOG_INCR_SIZE [< increment/VDI signal>] or

SD41010 \$SN_JOG_VAR_INCR_SIZE) / 1000 * IPO sampling time

= 0: No limitation

20624	HANDWH_CHAN_STOP_COND			EXP, C09	H1, P1	
-	Definition of response of handwheel travel, channel-specific			UDWORD	PowerOn	
-						
-	-	0x13FF, 0x13FF, 0x13FF, 0x13FF, 0x13FF, 0x13FF, 0x13FF, 0x13FF...	0	0x1FFFF	7/2	M

Description:

Definition of the response for handwheel travel to channel-specific VDI interface signals (bit 0 to bit 7) or CP-SW limit stop or stop by an OEM application (bit 7):

Bit = 0:

Interruption or collection of the displacements entered via the handwheel.

Bit = 1:

Traversing canceled and no collecting.

Bit assignment:

Bit 0: Mode group stop

Bit 1: Mode group stop, axes plus spindle

Bit 2: NC stop

Bit 3: NC stop, axes plus spindles

Bit 4: Feedrate disable (exception for MD30460 \$MA_BASE_FUNCTION_MASK bit6)

For bit 4 feed disable, it must be taken into account that a PLC-controlled axis, for which MD30460 \$MA_BASE_FUNCTION_MASK bit 6 = 1, is not stopped by the feed disable, and that no interruption and no cancellation are triggered here.

Bit 5: Feedrate override

Bit 6: Rapid traverse override

Bit 7: Feedrate stop, geometry axis or CP-SW limit stop or stop by an OEM application

Bit 8 = 0:

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The maximum feedrate for handwheel travel of geometry axes is that specified in machine data JOG_AX_VELO for the corresponding machine axis/axes.

Bit 8 = 1:

The maximum feedrate for handwheel travel of geometry axes is that specified in machine data MAX_AX_VELO for the corresponding machine axis/axes.

Bit 9 = 0:

The override is active during handwheel travel of geometry axes.

Bit 9 = 1:

During handwheel travel of geometry axes, the override is assumed to be 100% irrespective of the position of the override switch.

Exception: override 0, which is always active.

Bit 10 = 0:

MD11310 \$MN_HANDWH_REVERSE is not active for DRF, i.e. handwheel travel with DRF is carried out as if MD11310 \$MN_HANDWH_REVERSE = 0.

Bit 10 = 1:

MD11310 \$MN_HANDWH_REVERSE is active for DRF.

Bit 11 = 0:

When the contour handwheel is deselected, program processing is continued automatically.

Bit 11 = 1:

When the contour handwheel is deselected, an NCSTOP is triggered automatically. Program processing is not continued until NCSTART is entered.

Bit 12 = 0:

NC start has no effect on handwheel travel.

Bit 12 = 1:

The previously collected paths are rejected at NC start.

Bit 13 = 0:

For DRF, bits 0 - 3 and bit 12: bit = 0 / bit = 1 are active (see above).

Bit 13 = 1:

For DRF, bits 0 - 3 and bit 12 are NOT active: the DRF motion is not interrupted by a stop, and a DRF motion can take place even in "Automatic interrupted" state (achieved by NC Stop).

Note:

If an alarm leads to an axis stop and if such an alarm is pending, no DRF motion can take place.

Bit 14 = 0:

The maximum feedrate for handwheel travel of geometry axes is that specified in SD41120 \$SN_JOG_REV_SET_VELO or in MD32050 \$MA_JOG_REV_VELO (for revolutionary feedrate) or in MD32040 \$MA_JOG_REV_VELO_RAPID (for rapid traverse) for the corresponding machine axis, the spindle or rotary axis feedrate is included in the calculation.

Bit 14 = 1:

The maximum rotational feedrate for handwheel travel of geometry axes is the feedrate specified in MD32000 \$MA_MAX_AX_VELO for the corresponding machine axis (see also bit 6).

Bit 15 = 0:

If an axis with active diameter programming is traversed in the channel, only half the distance of the specified increment is traveled during handwheel travel (MD11346 \$MN_HANDWH_TRUE_DISTANCE = 1 or 3)

Bit 15 = 1:

If an axis with active diameter programming is traversed in the channel, the specified increment is fully traveled during handwheel travel (MD11346 \$MN_HANDWH_TRUE_DISTANCE = 1 or 3).

Bit 16 = 0:

Return traveling is possible to the start of the block.

Bit 16 = 1:

Return traveling is not possible (response as at start of block, i.e. pulses are ignored).

20700	REFP_NC_START_LOCK			C01, C03	D1, R1, Z1	
-	NC start disable without reference point			BYTE	Reset	
-						
-	-	1, 1, 1, 1, 1, 1, 1, 1...	0	2	7/2	M

Description:

0: The NC/PLC interface signal DB21-30 DBX7.1 (NC start) for starting part programs or part program blocks (MDI and overstore) is active even if one or all axes of the channel have not yet been referenced.

To ensure that the axes nevertheless reach the correct position after NC startup, the work (workpiece coordinate system = work) must be set to the correct value by means of other methods (scratch method, automatic work offset determination etc.).

1: Axes for which the axial MD34110 \$MA_REFP_CYCLE_NR specifies that a reference point is mandatory (value > -1), must be referenced for NC startup to be enabled.

2: Advanced form of setting 1 in that the axis state "Position restored" (instead of "referenced") is sufficient for NC startup in MDI or overstore.

20730	G0_LINEAR_MODE			C09	P2	
-	G0 interpolation mode			BOOLEAN	PowerOn	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/2	M

Description:

This machine data defines the interpolation behavior of G0:

0: Non-linear interpolation (RTLIOF): Each path axis interpolates as an individual axis (positioning axis), independently of the other axes, at the rapid traverse velocity of the axis (MD32000 \$MA_MAX_AX_VELO).

However, this is possible only in simple cases:

- No transformation active (TRAORI, TRANSMIT etc.).
- G60 active (stop at end of block).
- No compressor active (COMPOF).
- No tool radius compensation active (G40).
- No contour handwheel selected.
- No nibbling active.

If one of these conditions is not fulfilled, linear interpolation takes place with the value 1 (RTLION).

1: Linear interpolation (RTLION): The path axes are interpolated jointly.

20734	EXTERN_FUNCTION_MASK			N12	-	
-	Function mask for external language			UDWORD	Reset	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	0x7FFFFFFF	7/2	M

Description:

This machine data is used to influence functions in ISO mode.

Bit0: 0:

ISO mode T: "A" and "C" are interpreted as axes. If contour definition has been programmed, "A" or "C" must be preceded by a comma.

1:

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"A" and "C" in the part program are always interpreted as a contour definition. An axis "A" or "C" is not allowed.

Bit1: 0:
ISO mode T: G10 P < 100 tool geometry
P > 100 tool wear
1:
G10 P < 10000 tool geometry
P > 10000 tool wear

Bit2: 0:
G04 dwell time: always [s] or [ms]
1:
If G95 is active, in spindle revolutions

Bit3: 0:
Errors in ISO mode lead to an alarm
1:
Errors in ISO mode are not output, the block is translated in Siemens mode.

Bit4: 0:
G00 is traversed with the current exact stop - continuous-path mode G code
1:
G00 is always traversed with G09

Bit5: 0:
Modulo rotary axis is positioned at the shortest possible distance
1:
Direction of rotation of modulo rotary axis depends on sign

Bit6: 0:
Only 4-digit program number allowed.
1:
8-digit program number allowed. If the program number has less than 4 digits, it is expanded to 4 digits with 0.

Bit7: 0:
Axis programming for geometry axis exchange/parallel axes is compatible with ISO mode.
1:
Axis programming for geometry axis exchange/parallel axes in ISO mode is compatible with Siemens mode.

Bit8: 0:
With cycles, the F value transferred is always interpreted as a feedrate.
1:
With threading cycles, the F value transferred is interpreted as a pitch.

Bit9: 0:
Multiplication with 0.01mm / 0.0001inch is carried out in ISO mode T for G84, G88 and in standard mode F for G95.
1:
Multiplication with 0.001mm / 0.00001inch is carried out in ISO mode T for G84, G88 and in standard mode F for G95.

Bit10: 0:
With M96 Pxx, the program programmed with Pxx is always called in the case of an interrupt
1:
With M96 Pxx, CYCLE396.spf is always called in the case of an interrupt

Bit11: 0:

With G54 Pxx, only G54.1 is displayed

1:

With G54 Pxx, the programmed program is displayed after the point, e.g. G54.48

Bit12: 0:

When the subroutine defined with M96 Pxx is called, \$P_ISO_STACK is not modified

1:

When the subroutine defined with M96 Pxx is called, \$P_ISO_STACK is incremented

Bit13: 0:

G10 is executed without internal STOPRE

1:

G10 is executed with internal STOPRE

Bit14: 0:

ISO mode T: No alarm if a cutting edge has been programmed in the T command.

1:

ISO mode T: Alarm 14185 if a cutting edge has not been programmed in the T command.

Bit 15: 0:

ISO mode M: G51 Scale, the axial scale factors I, J, K work with 'pocket calculator notation' as programmed.

1:

ISO mode M: G51 Scale, the axial scale factors I, J, K with 'pocket calculator notation', are multiplied by the value in MD22910 \$MC_WEIGHTING_FACTOR_FOR_SCALE.

Bit 16: 0:

In circular-path programming with radius R, there is no replacement of missing geometry axes of the selected plane. This corresponds to the behavior in Siemens mode

1:

In circular-path programming with radius R, missing geometry axes of the selected plane are supplemented by incremental distance 0

20750	ALLOW_G0_IN_G96			C09, C05	P2, V1	
-	G0 logic with G96, G961			BOOLEAN	PowerOn	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/2	M

Description:

This machine data defines the speed regulation characteristic of the spindle in G0 blocks with constant cutting speed (G96, G961) selected .

1: In a G0 block, the spindle speed is kept constant at the last value of the previous block that was unequal G0.

Prior to a subsequent block that does not contain G0, the spindle speed is increased to a value that belongs to the transverse axis position of the subsequent block.

0: In a G0 block, the spindle speed changes against the transverse axis position.

20800	SPF_END_TO_VDI			C04, C03	H2, K1	
-	End of subroutine to PLC			BYTE	PowerOn	
-						
-	-	1, 1, 1, 1, 1, 1, 1...	-	-	7/2	M

Description:

Bit 0 = 1:

The M functions for subroutine end (M17 and/or M2/M30) are transferred to the PLC interface.

Bit 0 = 0:

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The M functions for subroutine end (M17 and/or M2/M30) are not transferred to the PLC interface.

Note:

To prevent stopping in continuous-path mode, M17 must not be programmed alone in a block.

Example of a subroutine: G64 F2000 G91 Y10 X10
X10 Z10 M17

Bit 1 = 0:

M01:

conditional program stop is always output to PLC, irrespective of whether the M01 signal is active or not.

Fast auxiliary function output M=QU(1) is inactive because M01 is assigned to the 1st M function group and thus is always output at block end.

Bit 1 = 1:

M01:

conditional program stop is only output to PLC, if M01 is also active.

This thus enables optimal run-time processing of the part program.

With fast auxiliary function output M=QU(1), M1 is output during the movement; thus it is possible to traverse blocks in continuous-path mode with programmed M01 as long as M01 is not active.

The request of the M01 signal with M=QU(1) no longer occurs at block end but during the movement.

20850	SPOS_TO_VDI	C04, C03	S1
-	Output of M19 to PLC on SPOS/SPOSA	BYTE	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-

Description:

Bit 0 = 0:

When bit 19 is also set to '0' in MD35035 \$MA_SPIND_FUNCTION_MASK, auxiliary function M19 is not generated with SPOS and SPOSA. This also eliminates the acknowledgment time for the auxiliary function, which can cause faults with very short blocks.

Bit 0 = 1:

When SPOS and SPOSA are programmed in the part program, auxiliary function M19 is generated and output to the PLC. The address extension corresponds to the spindle number.

Related to:

SPIND_FUNCTION_MASK

20900	CTAB_ENABLE_NO_LEADMOTION	EXP	M3
-	Curve tables with jump of slave axis	BYTE	Reset
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0

Description:

This MD is used to configure the way jumps of the slave axis are processed in curve tables. A jump of the slave axis results from the presence of a movement of the slave axis in a segment of the curve table with no corresponding movement of the master axis. The jumps of the slave axis may be programmed directly, or they are created internally in the control.

These segments may be created especially if a curve table with active tool radius compensation is generated.

The following configurations are possible:

0: No curve tables are created that contain a jump of the slave axis. If a jump of the slave axis occurs, alarm 10949 (CTAB_NO_LEADMOTION) is issued and program processing is terminated. This setting is compatible with previous software versions.

1: Curve tables containing a jump of the slave axis may be implemented. If a jump of the slave axis occurs, alarm 10955 (CTAB_NO_LEADMOTIONWARNING) is issued without terminating program processing.

2: Curve tables with jumps of the slave axis are implemented without issuing an alarm or a note.

20905	CTAB_DEFAULT_MEMORY_TYPE			EXP	M3	
-	Default memory type for curve tables			BYTE	Reset	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	1	7/2	M

Description:

This machine data defines the memory (SRAM or DRAM) in which the curve tables are created by default.

This MD is only relevant if no memory type was specified when defining a curve table using CTABDEF().

The following settings can be selected:

0: By default, curve tables are created in the SRAM.

1: By default, curve tables are created in the DRAM.

21000	CIRCLE_ERROR_CONST			C06	-	
mm	Circle end point monitoring constant			DOUBLE	NEW CONF	
-						
-	-	0.01, 0.01, 0.01, 0.01, 0.01, 0.01, 0.01, 0.01...	0.0	-	7/2	M

Description:

This machine data is used to specify the permissible absolute circle error [mm].

When a circle is programmed, both conditions (that the distances from the programmed center point to the start and end points (circle radius) must be the same and that the center point of the circle must be located on the perpendicular bisector of the straight line connecting the start and end points (perpendicular bisector of the circular plane)) apply.

The fact that the circular parameters can be freely programmed means that these conditions are not usually met exactly in the case of circle programming with I, J, and K (the circle is "overdefined").

The maximum permissible difference between the two radii that is accepted without an alarm, as well as the distance between the programmed center point of the circle and the perpendicular bisector described above, is defined by the larger value in the following data:

- MD21000 \$MC_CIRCLE_ERROR_CONST
- Start radius multiplied by MD21010 \$MC_CIRCLE_ERROR_FACTOR

This means that for small circles the tolerance is a fixed value (MD21000 \$MC_CIRCLE_ERROR_CONST), and for large circles it is proportional to the start radius.

Related to:

MD21010 \$MC_CIRCLE_ERROR_FACTOR

(circle end point monitoring factor)

In the context of the predefined tolerances, conflicting circle data is compensated essentially by moving the center point of the circle. Please note that the deviation between the programmed center point and the actual center point can reach the order of magnitude set with machine data MD21000 \$MC_CIRCLE_ERROR_CONST and/or MD21010 \$MC_CIRCLE_ERROR_FACTOR. In the case of circles which are almost full circles in particular, this can also lead to contour deviations of the same order of magnitude.

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21010	CIRCLE_ERROR_FACTOR			C06	-	
-	Circle end point monitoring factor			DOUBLE	NEW CONF	
-						
-	-	0.001, 0.001, 0.001, 0.001, 0.001, 0.001, 0.001, 0.001...	0.0	-	7/2	M

Description:

Factor for permissible radius difference.

Defines the factor for large circles by which the starting radius and end radius may deviate from each other

(see also MD21000 \$MC_CIRCLE_ERROR_CONST (circle end point monitoring constant)).

When a circle is programmed, both conditions (that the distances from the programmed center point to the start and end points (circle radius) must be the same and that the center point of the circle must be located on the perpendicular bisector of the straight line connecting the start and end points (perpendicular bisector of the circular plane)) apply.

The fact that the circular parameters can be freely programmed means that these conditions are not usually met exactly in the case of circle programming with I, J, and K (the circle is "overdefined").

The maximum permissible difference between the two radii that is accepted without an alarm, as well as the distance between the programmed center point of the circle and the perpendicular bisector described above, is defined by the larger value in the following data:

- MD21000 \$MC_CIRCLE_ERROR_CONST
- Start radius multiplied by MD21010 \$MC_CIRCLE_ERROR_FACTOR

This means that for small circles the tolerance is a fixed value (MD21000 \$MC_CIRCLE_ERROR_CONST), and for large circles it is proportional to the start radius.

Related to:

MD21000 \$MC_CIRCLE_ERROR_CO'NST

(circle end point monitoring factor)

In the context of the predefined tolerances, conflicting circle data is compensated essentially by moving the center point of the circle. Please note that the deviation between the programmed center point and the actual center point can reach the order of magnitude set with machine data MD21000 \$MC_CIRCLE_ERROR_CONST and/or MD21010 \$MC_CIRCLE_ERROR_FACTOR. In the case of circles which are almost full circles in particular, this can also lead to contour deviations of the same order of magnitude.

21015	INVOLUTE_RADIUS_DELTA			C06	A2	
mm	Involute end point monitoring			DOUBLE	PowerOn	
-						
-	-	0.01, 0.01, 0.01, 0.01, 0.01, 0.01, 0.01, 0.01...	0.0	-	7/2	M

Description:

Permissible absolute difference of radius at involute interpolation [mm].

At involute interpolation, the radius of the basic circle determined by the end point may differ from the programmed radius.

This data is used to limit the permissible maximum difference between start radius and end radius.

21016	INVOLUTE_AUTO_ANGLE_LIMIT			C06	A2	
-	Automatic angle limitation during involute interpolation			BOOLEAN	PowerOn	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/2	M

Description: If the angle of rotation is programmed for an involute (AR=angle), the maximum angle of rotation is limited in case the involute is travelling towards the basic circle (AR < 0). The maximum angle of rotation is reached when the involute touches the basic circle.

Normally, if an angle larger than the maximum angle is programmed, an alarm is issued and the NC program canceled.

If this MD is set to TRUE any angle is accepted without an alarm for programming. If required, this angle is limited automatically.

21020	WORKAREA_WITH_TOOL_RADIUS			C03, C06	A3	
-	Consideration of tool radius for working area limitation			BOOLEAN	Reset	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/2	M

Description: This machine data indicates whether the tool radius is taken into account in the working area limitation.

0: It is checked whether the tool center lies within the working area limits.

1: The tool radius is taken into account when the working area limitation is checked. This means that the working area is reduced by the tool radius.

21050	CONTOUR_TUNNEL_TOL			C06	K6	
mm	Response threshold for contour tunnel monitoring			DOUBLE	NEW CONF	
-						
-	-	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	0.0	-	7/2	M

Description: Response threshold for contour tunnel monitoring. Defines the radius of the "tunnel" around the path of the tool tip.

If three geometry axes are defined, the tunnel can be regarded as a tube through the center of which the path of the tool tip travels.

If only two geometry axes are defined, this tube can be regarded as squashed flat in the plane of the two geometry axes.

Monitoring is only active if:

- option contour tunnel monitoring is present and
- MD21050 \$MC_CONTOUR_TUNNEL_TOL is larger than 0.0 and
- at least two and at most three geometry axes are defined.

Related to:

MD21060 \$MC_CONTOUR_TUNNEL_REACTION,
MD21070 \$MC_CONTOUR_ASSIGN_FASTOUT,
MD36500 \$MA_ENC_CHANGE_TOL

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21060	CONTOUR_TUNNEL_REACTION			C06	K6	
-	Reaction when contour tunnel monitoring responds			BYTE	PowerOn	
-						
-	-	1, 1, 1, 1, 1, 1, 1, 1...	0	2	7/2	M

Description: Reaction to response of the alarm
 0: Only display alarm, continue machining
 1: Ramp stop
 2: Rapid stop
 MD irrelevant:
 If the contour tunnel monitoring option is not available
 Related to:
 MD21050 \$MC_CONTOUR_TUNNEL_TOL, MD21070 \$MC_CONTOUR_ASSIGN_FASTOUT

21070	CONTOUR_ASSIGN_FASTOUT			C01, C06	K6	
-	Assignment of an analog output for the output of contour error			BYTE	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	8	7/2	M

Description: Assignment of an analog output on which the calculated contour error can be output.
 0: No output
 1: Output on output 1
 2: Output on output 2
 etc.
 8: Output on output 8
 An error as large as the response threshold MD21050 \$MC_CONTOUR_TUNNEL_TOL appears on the output as a voltage of 10V.
 Multiple assignment of the same output by other signals is checked automatically.
 MD irrelevant:
 If the contour tunnel monitoring option is available
 Related to:
 MD21050 \$MC_CONTOUR_TUNNEL_TOL, MD21060 \$MC_CONTOUR_TUNNEL_REACTION

21080	CUTCOM_PARALLEL_ORI_LIMIT			C08, C06	-	
degrees	Minimum angle (path tangent / tool orientation) in 3D TRC			DOUBLE	Reset	
-						
-	-	3., 3., 3., 3., 3., 3., 3., 3., 3....	0.1	89.	7/2	M

Description: With 3D tool radius compensation, the angle between the path tangent and the tool orientation may not drop below a certain limit angle. This machine data specifies this angle (in degrees).
 Generally speaking, the lower the value entered in this machine data, the greater the computing capacity required to check that the above conditions are fulfilled.
 Linear blocks with constant orientation are an exception.

21082	CUTCOM_PLANE_ORI_LIMIT			C08, C06	-	
degrees	Minimum angle between surface normal vector and tool orientation			DOUBLE	Reset	
-						
-	-	3., 3., 3., 3., 3., 3., 3., 3., 3....	1.0	89.	7/2	M

Description:

This machine data applies to 3D face milling operations and specifies the minimum angle that must exist between the surface normal vector and the tool orientation on every point of the path if the applied lateral angle is not equal to zero and the tool is not a ball mill. Otherwise, machining is canceled with an alarm if the angle is smaller than the value set here.

Generally speaking, the lower the value entered in this machine data, the greater the computing capacity required to check that the above conditions are fulfilled. This data has no effect in linear blocks with constant orientation. The angle between the surface normal vector and tool orientation may be as small as desired in such cases, even if the lateral angle is not equal to zero.

21084	CUTCOM_PLANE_PATH_LIMIT			C08, C06	W5	
degrees	Min. angle betw. surface normal vector and path tangent vector			DOUBLE	Reset	
-						
-	-	3., 3., 3., 3., 3., 3., 3., 3....	1.0	89.	7/2	M

Description:

This machine data applies to 3D face milling operations and specifies the minimum angle that must exist between the surface normal vector and the path tangent vector on every point of the path. Otherwise machining is canceled with an alarm if the angle is smaller than the value set here.

Generally speaking, the lower the value entered in this machine data, the greater the computing capacity required to check that the above conditions are fulfilled.

21090	MAX_LEAD_ANGLE			C08, C09	M1	
degrees	Maximum value of permitted lead angle for orientation progr.			DOUBLE	NEW CONF	
-						
-	-	80., 80., 80., 80., 80., 80., 80., 80....	0.	80.	7/7	U

Description:

Maximum permissible value of the lead angle in degrees.

21092	MAX_TILT_ANGLE			C08, C09	M1	
degrees	Maximum value of permitted side angle for orientation progr.			DOUBLE	NEW CONF	
-						
-	-	180., 180., 180., 180., 180.. 180.. 180.. 180....	-180.	180.	7/7	U

Description:

Maximum permissible value of the tilt angle in degrees.

21094	ORIPATH_MODE			C02	F2	
-	Setting for ORIPATH path-relative orientation			DWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	1241	7/7	U

Description:

This MD is used to set the response for ORIPATH, i.e. path-relative interpolation of tool orientation.

The various digits of this machine data are used to activate different functions for ORIPATH.

The tens digit of this MD enables the specification of the way in which the programmed LEAD and TILT angles are to be interpreted.

This setting option is also significant without active ORIPATH if offsets have been programmed for the LEAD and TILT angles

(with \$P_OFF_LEAD and \$P_OFF_TILT or \$AC_OFF_LEAD and \$AC_OFF_TILT).

Meaning of the units digit: Activation of "true" path-relative orientation interpolation

xxx0:

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The tool orientation has the relation to the path tangent and the normal vector programmed with LEAD and TILT only at the end of the block; within the block, the orientation does not follow the path tangent. This corresponds to the response in SW release 6.xx.

xxx1:

The tool orientation relation to the path tangent and the surface normal vector programmed with LEAD/TILT is retained throughout the block. Meaning of the tens digit: Interpretation of the TILT angle.

Meaning of the tens digit: Interpretation of the LEAD and TILT angles. This applies both to the angles programmed with LEAD and TILT with path-relative orientation interpolation (ORIPATH),

as well as to offsets of the LEAD and TILT angles, which can also be programmed without ORIPATH by means of \$P_OFF_LEAD and \$P_OFF_TILT or \$AC_OFF_LEAD and \$AC_OFF_TILT.

With path-relative orientation, the coordinate system is formed by the two vectors path tangent and normal vector. If an offset is applied to a programmed orientation, the current orientation itself takes over the role of the normal vector. A plane is then formed by the current orientation and the path tangent, in which the rotation is made perpendicularly with the LEAD angle or

the TILT angle.

xx0x:

The angles programmed with LEAD and TILT are evaluated in the following rotation sequence:

1. LEAD = Rotation around direction vertical to tangent and normal vector/orientation vector (forward angle)
2. TILT = Rotation of orientation around normal vector

This is the interpretation of the LEAD/TILT angles in SW releases < 7.2

xx1x:

The angles programmed with LEAD and TILT are evaluated in the following rotation sequence:

1. LEAD = Rotation around direction vertical to tangent and normal vector/orientation vector (forward angle)
2. TILT = Rotation of orientation around vector in direction of tangent (tilt angle)

xx2x:

The angles programmed with LEAD and TILT are evaluated in the following rotation sequence:

1. LEAD = Rotation around direction vertical to tangent and normal vector/orientation vector (forward angle)
2. TILT = Rotation of orientation around vector in direction of rotated (new) tangent (tilt angle)

xx3x:

The angles programmed with LEAD and TILT are evaluated in the following rotation sequence:

1. TILT = Rotation of orientation around vector in direction of tangent (tilt angle)
2. LEAD = Rotation around direction vertical to tangent and normal vector/orientation vector (forward angle)

xx4x:

The angles programmed with LEAD and TILT are evaluated in the following rotation sequence:

1. TILT = Rotation of orientation around vector in direction of tangent (tilt angle)
2. LEAD = Rotation around direction vertical to tangent and rotated (new) normal vector/orientation vector (forward angle)

Meaning of hundreds digit: Activation of a retract movement in the case of reorientation.

0xx:

In the case of reorientation with ORIPATH, a retract movement is not executed.

1xx:

In the case of reorientation with active ORIPATH, a retract movement in the direction of the programmed vector is executed. The programmed vector for the direction of the retract movement refers to the coordinate system defined by the current tool direction (z coordinate) and the change in orientation (x coordinate).

2xx:

In the case of reorientation with active ORIPATH, a retract movement in the direction of the programmed vector is executed. The programmed vector for the direction of the retract movement refers to the coordinate system defined by the current surface normal vector (z coordinate) and the change in orientation (x coordinate).

A retract movement is possible only with a "true" path-relative orientation interpolation, i.e. if the units digit of this MD has a value of one.

Meaning of the thousands digit: Response of path-relative orientation on activation / deactivation of tool offset.

0xxx:

The path-relative orientation is also retained in activation / deactivation blocks associated with tool offset.

1xxx:

The path-relative orientation is not retained in activation / deactivation blocks associated with tool offset. In these blocks, the tool orientation usually remains constant. However, tool orientation can be programmed in these blocks and then traversed there, although any orientation has to be programmed with vectors (the programming of rotary axis positions is not permitted).

21096	OFF_ORI_MODE			C08	-	
-	Effect of the override of the tool orientation			UDWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0x0	0x7FFFFFFF	7/2	M

Description:

With this machine data, the effect of the override of the tool orientation is set with the system variables (bit 0-15)

\$AC_OFF_O[i], \$AC_OFF_R[i], \$AC_OFF_LEAD, \$AC_OFF_TILT, \$AC_OFF_THETA, \$AC_OFF_O_ANGLE and \$AC_OFF_R_ANGLE

and the program variables (bit 16-31)

\$P_OFF_O[i], \$P_OFF_R[i], \$P_OFF_LEAD, \$P_OFF_TILT, \$P_OFF_THETA, \$P_OFF_O_ANGLE and \$P_OFF_R_ANGLE.

Bit 0-15: Effect of the overrides in the interpolator

Bit 0: Behavior of the system variables on RESET

0: Offset is deselected on RESET

1: Offset is retained after RESET

Bit 1: Behavior of the system variables in JOG mode

0: No offset of the tool orientation on account of the system variables for offsetting the tool orientation

1: An overlaid motion is interpolated on account of the system variables for offsetting the tool orientation.

Bit 2: Effect of the value assignment to the components of the system variable \$AC_OFF_O[i]

0: Absolute value

1: Incremental value (integrator)

Bit 3: Effect of the value assignment to the components of the system variable \$AC_OFF_R[i]

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```

0: Absolute value
1: Incremental value (integrator)
Bit 4: Effect of the value assignment to the system variable $AC_OFF_LEAD
0: Absolute value
1: Incremental value (integrator)
Bit 5: Effect of the value assignment to the system variable $AC_OFF_TILT
0: Absolute value
1: Incremental value (integrator)
Bit 6: Effect of the value assignment to the system variable $AC_OFF_THETA
0: Absolute value
1: Incremental value (integrator)
Bit 7: Effect of the value assignment on the system variable $AC_OFF_O_ANGLE
0: Absolute value
1: Incremental value (integrator)
Bit 8: Effect of the value assignment on the system variable $AC_OFF_R_ANGLE
0: Absolute value
1: Incremental value (integrator)
Bit 9: Suppression of the alarm 20301
0: Alarm is output
1: Alarm is suppressed
-----
Bit 16-31: Effect of the overrides in the NC program
-----
Bit 16: Effect of the value assignment to the components of the system variable
$P_OFF_O[i]
0: Absolute value
1: Incremental value (integrator)
Bit 17: Effect of the value assignment to the components of the system variable
$P_OFF_R[i]
0: Absolute value
1: Incremental value (integrator)
Bit 18: Effect of the value assignment on the system variable $P_OFF_LEAD
0: Absolute value
1: Incremental value (integrator)
Bit 19: Effect of the value assignment on the system variable $P_OFF_TILT
0: Absolute value
1: Incremental value (integrator)
Bit 20: Effect of the value assignment on the system variable $P_OFF_THETA
0: Absolute value
1: Incremental value (integrator)
Bit 21: Effect of the value assignment on the system variable $P_OFF_O_ANGLE
0: Absolute value
1: Incremental value (integrator)
Bit 22: Effect of the value assignment on the system variable $P_OFF_R_ANGLE
0: Absolute value
1: Incremental value (integrator)

```


21100	ORIENTATION_IS_EULER			C01, C09	F2, TE4, M1	
-	Angle definition for orientation programming			BOOLEAN	NEW CONF	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description: This data is only active for MD21102 \$MC_ORI_DEF_WITH_G_CODE = 0

MD = 0 (FALSE):

The values programmed with A2, B2, C2 during orientation programming are interpreted as an RPY angle (in degrees).

The orientation vector is produced by rotating a vector in direction Z first by C2 around the Z axis, then by B2 around the new Y axis and finally by A2 around the new X axis. In contrast to Euler angle programming, all three values influence the orientation vector in this case.

MD = 1 (TRUE):

The values programmed with A2, B2, C2 during orientation programming are interpreted as Euler angles (in degrees).

The orientation vector is produced by rotating a vector in direction Z first by A2 around the Z axis, then by B2 around the new X axis and finally by C2 around the new Z axis. This means that the value of C2 is meaningless.

21102	ORI_DEF_WITH_G_CODE			C01, C07	F2	
-	Definition of orientation axes with G code			BOOLEAN	NEW CONF	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/2	M

Description: Definition of the orientation angles A2, B2, C2

0: Definition as per MD21100 \$MC_ORIENTATION_IS_EULER

1: Definition as per G code (ORIEULER, ORIRPY, ORIVIRT1, ORIVIRT2)

21103	ORI_ANGLE_WITH_G_CODE			C01, C07	-	
-	Definition of orientation angles via G code			BOOLEAN	NEW CONF	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/2	M

Description: Definition of the orientation angles A2, B2, C2:

FALSE: Definition as per MD21100 \$MC_ORIENTATION_IS_EULER

TRUE : Definition as per G code (ORIEULER, ORIRPY, ORIVIRT1, ORIVIRT2)

Only programming of angles with A2, B2, C2 is interpreted in accordance with G codes ORIEULER, ORIRPY, ORIVIRT1, ORIVIRT2 and not programming of angles by means of the orientation axes, as is the case with MD21102 \$MC_ORI_DEF_WITH_G_CODE = 1.

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21104	ORI_IPO_WITH_G_CODE			C01, C07	F2	
-	G code for orientation interpolation			BOOLEAN	NEW CONF	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/2	M

Description: Definition of the type of interpolation for the orientation

FALSE: Referred to G codes ORIWKS and ORIMKS

TRUE : Referred to G codes ORIAxes, ORIVect, ORIPLANE, ORICONxx and ORICURVE of the 51st G code group

21106	CART_JOG_SYSTEM			C01, C07	F2, M1	
-	Coordinate systems for Cartesian JOG			UDWORD	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	7	7/2	M

Description: This machine data has two meanings. First, it is used to activate the "Cartesian manual traverse" function. Second, it is used to determine the reference systems between which a switchover can be performed.

The meaning of the individual bits is determined as follows:

Bit 0 : Basic coordinate system

Bit 1 : Workpiece coordinate system

Bit 2 : Tool coordinate system

21108	POLE_ORI_MODE			C07	F2	
-	Response with vector interpolation in pole position			DWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	11122	7/7	U

Description: This MD defines how the change in orientation in the case of vector interpolation is treated if the orientation runs through the pole taper, which is defined by MD24540, 24640, 25240, 35340 \$MC_TRAFO5_POLE_LIMIT_1,2,3,4.

Vector interpolation is present, if tool orientation is interpolated independent of the kinematics, e.g. by means of large circle interpolation (orientation is swiveled in a plane), taper interpolation or through interpolation of a 2nd reference point on the tool (ORICURVE), and not directly the orientation axes.

In the pole, the pole axis can have any position. For large circle interpolation, however, this axis requires a certain orientation.

If the start orientation is equal or close to the pole orientation and the end orientation of the block lies outside the tolerance circle defined by machine data TRAF05_POLE_LIMIT_n, the pole axis can be moved to a position suitable to ensure that the subsequent vector interpolation can be carried out. This is set via the units and tens digits of this machine data.

The units digits can have the following values (active if start orientation is equal to pole orientation):

0: The interpolation is carried out as an axis interpolation. The specified orientation path (large circle) is followed only if the pole axis (coincidentally) has the right position and the basic orientation is perpendicular to the 2nd rotary axis.

1: A block, that positions the pole axis such that large circle interpolation can be carried out in the subsequent block, is inserted before the block where the described situation occurs.

2: If the block preceding the block, in which the described situation occurs, contains a geometry axis movement but no orientation movement, the required positioning movement of the pole axis is additionally carried out in this previous block.

If one of the two conditions is not fulfilled (block does not contain a geometry axis movement or block contains an orientation movement), the pole axis movement is carried out in a separate block (same behavior as under 1.)

The tens digits can have the following values (active if the start orientation differs from the pole orientation, but lies within the tolerance circle defined by TRAF05_POLE_LIMIT_n):

00: The interpolation is carried out as an axis interpolation. The specified orientation path (large circle) is followed only if the pole axis (coincidentally) has the right position and the basic orientation is perpendicular to the 2nd rotary axis.

10: A block that positions the two rotary axes to the point where the programmed large circle interpolation intersects with the tolerance circle defined by TRAF05_POLE_LIMIT_n is inserted before the block where the described situation occurs. In the original block, large circle interpolation is applied as of this point.

20: If the block preceding the block in which the described situation occurs contains a geometry axis movement but no orientation movement, the necessary positioning movements of the two rotary axes are additionally carried out in this previous block. The residual movement in the original block is the same as that of value 10 of this machine data.

If one of the two conditions is not fulfilled (block does not contain a geometry axis movement or block contains an orientation movement), the pole axis movement is carried out in a separate block (same behavior as under 10.)

The hundreds digit of this MD is used to set the behavior in case the orientation runs through the pole taper or ends within the pole taper.

The hundreds digit can have the following values:

000: A block with the orientation running within the pole taper is subdivided only if the start orientation is equal to the pole orientation (with POLE_ORI_MODE = 1) or is close to the pole orientation (with POLE_ORI_MODE = 10). If the pole orientation occurs at an arbitrary point in the block, the whole change in orientation is traversed by means of rotary axis interpolation. In general, this leads to a more or less significant deviation from the programmed orientation path.

100: If the programmed orientation path runs through the pole taper, the block is subdivided in up to 3 parts, so that there is a deviation from the orientation path only within the pole taper. Outside the pole taper, the orientation is interpolated exactly on the programmed orientation path.

The pole handling behavior with active ORIANGL (interpolation of orientation in virtual axis angles) is set with the thousands digit of the MD.

0xxx: With this setting, the normal pole behavior is active even if ORIANGL is active. If the transformation causes a switchover to axis interpolation due to a pole, orientation is interpolated by means of the real rotary axes. This can result in considerable deviations from the programmed orientation path. Any different settings of the MD \$MC_POLE_ORI_MODE are also effective. This means, for example, that by means of the setting MD21108 \$MC_POLE_ORI_MODE = 100, this behavior can be changed such that deviations from the programmed orientation path only occur within the pole taper.

1xxx: If ORIANGL is active, there is never a switchover to the interpolation of the orientation by means of real rotary axes. The orientation is always interpolated with virtual axis angles (e.g. Euler angle or RPY angle). Different settings of the MD21108 \$MC_POLE_ORI_MODE do not become effective. For example, with MD21108 \$MC_POLE_ORI_MODE = 1100 the division of the orientation movement, which was activated by the value 100, does not become effective. Therefore, if MD21108 \$MC_POLE_ORI_MODE = 1xxx, the units, tens and hundreds digits are ignored.

Using the ten thousands digit, it is possible to set whether for the generic 5/6 axis transformation, alarm 14112 should be output, if the intermediate orientations do not lie in the orientation range of the kinematics but final orientation of the block is possible:

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0xxxx: The intermediate orientations are checked, as to whether these can be reached. If an orientation characteristic is programmed which goes through the range that cannot be reached, alarm 14112 (program orientation path not possible) is output.

1xxxx: The intermediate orientations are checked as to whether these can be reached. However, no alarm is output if the orientation runs through the range that cannot be reached, instead, the orientation change is performed using the rotary axis interpolation. This can result in significant deviations in orientation from the programmed orientation characteristic.

The values of the units, tens, hundreds and thousands digits are added. If the thousands digit = 1, the remaining decimals of the MD are not evaluated (with the exception of the ten thousands digit).

21110	X_AXIS_IN_OLD_X_Z_PLANE			EXP, C01, C09	M1, K2	
-	Coordinate system for automatic frame definition			BOOLEAN	NEW CONF	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	M

Description:

1 = With automatic definition of a frame (TOFRAME), the Z direction of which equals the current tool orientation, the new coordinate system is additionally rotated around the new Z axis so that the new X axis is in the old Z-X plane.

0 = With automatic definition of a frame (TOFRAME), the Z direction of which equals the current tool orientation, the new coordinate system is maintained as it results from the kinematics of the machine, i.e. it is assumed that the coordinate system is fixed to the tool and rotates with the tool (orientation).

From SW 5.3:

This machine data is only effective when the three lowest value decimal positions (units, tens, hundreds) of SD42980 \$SC_TOFRAME_MODE equal zero. Otherwise the frame definition is specified by SD42980 \$SC_TOFRAME_MODE.

MD irrelevant for:

No orientation programming

Related to:

MD21100 \$MC_ORIENTATION_IS_EULER

Further references:

/PG/, Programming Guide, Fundamentals

21120	ORIAX_TURN_TAB_1			C07	F2, M1	
-	Definition of reference axes for orientation axes			BYTE	NEW CONF	
-						
-	3	1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1...	0	3	7/2	M

Description:

Defines the assignment of the rotations of the orientation axes around the reference axes for each channel (definition 1).

This orientation description is activated with the G code ORIVIRT1

0: No rotation

1: Rotation around reference axis X

2: Rotation around reference axis Y

3: Rotation around reference axis Z

Example :

MD21120 \$MC_ORIAX_TURN_TAB_1[0] = 3 ; 1st ORI axis rotates around reference axis Z

MD21120 \$MC_ORIAX_TURN_TAB_1[1] = 2 ; 2nd ORI axis rotates around reference axis Y

MD21120 \$MC_ORIAX_TURN_TAB_1[2] = 1 ; 3rd ORI axis rotates around reference axis X

21130	ORIAX_TURN_TAB_2			C07	F2	
-	Definition of reference axes for orientation axes			BYTE	NEW CONF	
-						
-	3	1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1...	0	3	7/2	M

Description: Defines the assignment of the rotations of the orientation axes around the reference axes for each channel (definition 2).
This orientation description is activated with the G code ORIVIRT2
0: No rotation
1: Rotation around reference axis X
2: Rotation around reference axis Y
3: Rotation around reference axis Z
Example :
MD21120 \$MC_ORIAX_TURN_TAB_1[0] = 3 ; 1st ORI axis rotates around reference axis Z
MD21120 \$MC_ORIAX_TURN_TAB_1[1] = 2 ; 2nd ORI axis rotates around reference axis Y
MD21120 \$MC_ORIAX_TURN_TAB_1[2] = 1 ; 3rd ORI axis rotates around reference axis X

21132	ORI_DISP_IS_MODULO			C07	F2	
-	Modulo display of orientation axis positions			BOOLEAN	NEW CONF	
-						
-	3	FALSE,FALSE,FALSE , FALSE,FALSE,FALSE , FALSE,FALSE,FALSE , FALSE.F...	0	-	7/7	U

Description: This MD is used to activate the modulo display of orientation axes.
This only impairs the displayed positions and not the possible programming or traversing range of these axes.
The modulo range is set using MD21134 \$MC_ORI_DISP_MODULO_RANGE and MD21136 \$MC_ORI_DISP_MODULO_RANGE_START.

21134	ORI_DISP_MODULO_RANGE			C07	-	
degrees	Size of the modulo range for orientation axis display.			DOUBLE	NEW CONF	
-						
-	3	360.0, 360.0, 360.0, 360.0, 360.0, 360.0, 360.0, 360.0, 360.0, 3...	1.0	360000000.0	7/7	U

Description: Defines the size of the modulo range for the display of orientation axis positions.
This modulo range does not impair the programmable values of the positions nor the possible traversing range of orientation axes.

21136	ORI_DISP_MODULO_RANGE_START			C07	-	
degrees	Starting position of the modulo range for orientation axis display.			DOUBLE	NEW CONF	
-						
-	3	-180.0, -180.0, -180.0, -180.0, -180.0, -180.0, -180.0, -180.0, ...	-	-	7/7	U

Description: Defines the start position for the modulo range used to display the positions of orientation axes.

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This only impairs the displayed positions, but not the possible programming or traversing range of these axes.

Example:

Start = 0 degree -> modulo range 0 <-> 360 degrees

Start = 180 degrees -> modulo range 180 <-> 540 degrees

Start = -180 degrees -> modulo range -180 <-> 180 degrees

21140	DYN_ORI_OFF_ON			C07	F2	
-	Activation of the dynamic override of the orientation			BOOLEAN	NEW CONF	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	-	-	7/7	U

Description: The dynamic override of the tool orientation is activated with this MD. The current orientation is then corrected according to the current path velocity. This enables, for example, the jet of water jet machines to be corrected as a function of the velocity. See also the MDs

MD21142 \$MC_DYN_ORI_OFF_VEL

MD21144 \$MC_DYN_ORI_OFF_ANGLE

21142	DYN_ORI_OFF_VEL			C07	F2	
mm/min	Jet speed			DOUBLE	NEW CONF	
-						
-	-	20000, 20000, 20000, 20000, 20000, 20000, 20000, 20000...	-	-	7/7	U

Description: For the dynamic override of the tool orientation. The outflow speed of the water jet is specified with this data.

21144	DYN_ORI_OFF_ANGLE			C07	F2	
degrees	Additional offset angle of the water jet			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0,...	-	-	7/7	U

Description: For the dynamic override of the tool orientation.
Additional offset angle of the water jet:
0: LEAD angle longitudinal
1: Side angle TILT
2: Angle of rotation THETA (only with 6-axis kinematics)

21150	JOG_VELO_RAPID_ORI			C07	F2, R2	
rev/min	JOG rapid traverse for orientation axes			DOUBLE	Reset	
-						
-	3	10.0, 10.0, 10.0, 10.0, 10.0, 10.0, 10.0, 10.0, 10.0, 10.0, 10.0...	0.0	-	7/2	M

Description: Velocity in JOG mode with rapid traverse override for orientation axes in the channel [degrees/min]

21155	JOG_VELO_ORI	C07	F2
rev/min	Jog feedrate for orientation axes	DOUBLE	Reset
-			
-	3	2.0, 2.0, 2.0, 2.0, 2.0, 2.0, 2.0, 2.0, 2.0, 2.0, 2.0, 2.0, 2.0,...	0.0 - 7/2 M

Description: Velocity in JOG mode for orientation axes in the channel

21158	JOG_JERK_ORI	C07	F2
m/s ³	Jerk for jogging of orientation axes	DOUBLE	Reset
-			
-	3	100., 100., 100., 100., 100., 100., 100., 100., 100., 100., 100....	1.e-9 - 7/2 M

Description: The jerk limit value limits the change in acceleration of the orientation axes in SOFT mode when jogging. The acceleration divided by the jerk limit value results in a time period during which the acceleration is changed.

The jerk limitation during jogging of orientation axes is activated by the machine data MD21159 \$MC_JOG_JERK_ORI_ENABLE = 1 (SOFT), and deactivated by MD21159 \$MC_JOG_JERK_ORI_ENABLE = 0 (BRISK).

Not relevant for:

Fault conditions that cause a quick stop.

21159	JOG_JERK_ORI_ENABLE	C07	F2
-	Jogging of orientation axes with SOFT	BOOLEAN	Reset
-			
-	3	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, F...	0 - 7/2 M

Description: The jerk limitation function during jogging of orientation axes is enabled.

FALSE: no jerk limitation (BRISK)

TRUE: jerk limitation (SOFT)

21160	JOG_VELO_RAPID_GEO	C07	F2
mm/min	JOG rapid traverse for geometry axes	DOUBLE	Reset
-			
-	3	10000., 10000.0, 10000., 10000., 10000.0, 10000., 10000., 10000....	0.0 - 7/2 M

Description: Velocity in JOG mode with rapid traverse override for geometry axes in the channel (mm/min)

21165	JOG_VELO_GEO	C07	F2
mm/min	Jog feedrate for geometry axes	DOUBLE	Reset
-			
-	3	1000., 1000., 1000., 1000., 1000., 1000., 1000., 1000., 1000., 1...	0.0 - 7/2 M

Description: JOG velocity for geometry axes in the channel (mm/min)

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21166	JOG_ACCEL_GEO			C07, A04	F2	
m/s²	Acceleration for geometry axes			DOUBLE	Reset	
-						
-	3	.0, .0, .0, .0, .0, .0, .0, . 0, .0, .0, .0, .0, .0, . 0, .0, ...	0.0	-	7/2	M

Description: Acceleration of the geometry axes when traversing in Jog mode.
 If the machine data has the value zero, the value of the machine data MD32301 \$MA_JOG_MAX_ACCEL[<axis>] is used.

21168	JOG_JERK_GEO			C07, A04	F2	
m/s³	Jerk for jog mode of geometry axes			DOUBLE	Reset	
-						
-	3	0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., ...	1.e-9	-	7/2	M

Description: The jerk limit value limits the change in acceleration of the geometry axes in SOFT mode when jogging. The acceleration divided by the jerk limit value results in a time period during which the acceleration is changed.
 If the machine data has the value zero, the value of the machine data MD32436 \$MA_JOG_MAX_JERK[<axis>] is used.
 Jerk limitation during jogging of geometry axes is activated by the machine data \$JOG_AND_POS_JERK_ENABLED[<axis>] = 1 (SOFTA) of the underlying machine axes, and it is deactivated by \$JOG_AND_POS_JERK_ENABLED[<axis>] = 0 (BRISKA), or by means of the NC commands SOFTA, DRIVEA or BRISKA.
 Not relevant for:
 Fault conditions that cause a rapid stop.

21170	ACCEL_ORI			C07	F2	
rev/s²	Acceleration for ORI axes			DOUBLE	NEW CONF	
-						
-	3	.05, .				

Description: Acceleration for orientation axes in the channel

21180	ROT_AX_SWL_CHECK_MODE			C07	F2	
-	Check of software limits for orientation axes			DWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0, 0...	0	112	7/7	U

Description: This machine data is evaluated only with the generic 5-axis transformation.
 If the block preparation shows that the path programmed in the direction programming would lead to a violation of the software limits of the orientation axes, this machine data determines how the motions of the rotary axes have to be modified.
 The units digit of the MD is used to determine how alternative end positions of the rotary axes are created if the software limits would be violated. The tens digit is used to determine how the axes approach these end positions. The hundreds digit is used to activate an automatic limitation of the axis that swivels through the pole (non-pole axis).
 Meaning of the units digit:
 0: The path is not modified. Alarm 10720 (SW_LIMITSWITCH) is output if it is not possible to travel along the shortest path.

1: If the initially determined orientation path would violate the limits of the orientation axes, an attempt is made to modify the end points so that a motion becomes possible.

The first attempt uses the second solution. (There are usually two solutions to the conversion: orientation ==> angle of axis). If this solution would also violate the axis limits, an attempt is made to find a permissible solution by modifying both rotary axes by multiples of 360 degrees in both solutions.

The modifications of end positions described will only be performed if axis interpolation of rotary axes is active.

2: Monitoring and possibly modifications of the rotary-axis positions are the same as those when the machine data has the value 1.

However, modifications are also permissible if vector interpolation (large-circle interpolation, taper circumference interpolation, etc.) is active. If, in such a case, the rotary-axes positions would have to be modified, there is a switch to axis interpolation. The originally programmed orientation path will then usually not be followed.

Meaning of the tens digit:

0x: The orientation axes travel simultaneously to their possible end positions. There may be larger or smaller deviations from the original orientation path.

1x: If possible, the orientation is first rotated in the pole direction. In the pole position, the pole axis is then positioned so that the final orientation can be approached by rotating the orientation from the pole position into the programmed direction. The originally programmed orientation path is then followed.

Meaning of the hundreds digit:

0xx: The range of the non-pole axis is determined by its software limits or working area limitations.

1xx: The range of the non-pole axis is limited either in the positive or negative travel range. The possible range is limited by the larger of the absolute positive and negative values.

Examples:

1. MD36100 \$MA_POS_LIMIT_MINUS[AX5] = -5.0 and MD36110 \$MA_POS_LIMIT_PLUS[AX5] = 135.0, the possible range of axis AX5 is 0 ... 135.0
2. MD36100 \$MA_POS_LIMIT_MINUS[AX5] = -100.0 and MD36110 \$MA_POS_LIMIT_PLUS[AX5] = 10.0, the possible range of axis AX5 is -100.0 ... 0.0
3. MD36100 \$MA_POS_LIMIT_MINUS[AX5] = 5.0 und MD36110 \$MA_POS_LIMIT_PLUS[AX5] = 120.0, the possible range is 5.0 ... 120.0, there is no automatic limitation of the travel range.

21186	TOCARR_ROT_OFFSET_FROM_FR			C01, C07	F2	
-	Offset of TOCARR rotary axes from WO			BOOLEAN	Immediately	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/2	M

Description: Rotary axes offset for the orientable tool holder is automatically accepted from the work offset activated on activation of the orientable tool holder for the rotary axes.

21190	TOFF_MODE			C08	F2, 2.4	
-	Mode of correction in tool direction			UDWORD	Reset	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	0x7FF	7/2	M

Description: This machine data specifies the online correction mode in tool direction via \$AA_TOFF[].
Bit 0: Behavior of \$AA_TOFF in case of a RESET

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0: \$AA_TOFF is deselected on a RESET
 1: \$AA_TOFF is retained beyond a RESET
 Bit 1: Effect of the value assigned to the 1st component of \$AA_TOFF[]
 0: Absolute value
 1: Incremental value (integrator)
 Bit 2: Effect of the value assigned to the 2nd component of \$AA_TOFF[]
 0: Absolute value
 1: Incremental value (integrator)
 Bit 3: Effect of the value assigned to the 3rd component of \$AA_TOFF[]
 0: Absolute value
 1: Incremental value (integrator)
 Bit 4: Response of \$AA_TOFF motion on NC stop
 0: Motion is interrupted on NC stop
 1: Motion remains active on NC stop
 Bit 5: Response of \$AA_TOFF motion on RESET and end of program
 0: Motion is interrupted on RESET or end of program
 1: Motion remains active on RESET or end of program
 Bit 6: Effect of the setting data \$SC_TOFF_LIMIT_MINUS
 0: The lower limit \$SC_TOFF_LIMIT_MINUS has no effect. -\$SC_TOFF_LIMIT is taken as the lower limit.
 1: The lower limit \$SC_TOFF_LIMIT_MINUS is effective.
 Bit 7: Blockwise suppression of TOFF with SUPA
 0: TOFF is not suppressed block-by-block with SUPA.
 1: TOFF is suppressed block-by-block with SUPA.
 Bit 8: Response of the TOFF handwheel travel at TOFF_LIMIT / TOFF_LIMIT_MINUS
 0: Interruption, that means collection of the distances preset via the handwheel
 1: Abortion of the traversing movement, that means no collection
 Bit 9: \$AA_TOFF handwheel override possible without activation by TOFFON.
 0: \$AA_TOFF handwheel override possible only after activation of the \$AA_TOFF function by TOFFON.
 1: \$AA_TOFF handwheel override possible without activation of the \$AA_TOFF function by TOFFON.
 Bit 10: Axis assignment of the TOFF components on plane change.
 0: The axis components are exchanged cyclically on plane change from G17 to G18 or G19. This means that all three axes of the rotated coordinate system point in the positive axis directions of the initial coordinate system.
 1: The coordinate system is rotated -90 degrees around the X axis on plane change from G17 to G18, and 90 degrees around the Y axis on plane change from G17 to G18.
 In both cases, the rotated Z axis points in the same direction as when bit 10 is not set.
 The other two axes are exchanged in comparison to the setting with bit 10 not set, and one of the two axes points in the negative direction.
 This setting should only be used if compatibility with older software versions is required (SW 4.5 and older). This setting is not recommended for new developments.

21194	TOFF_VELO			C08	F2, 2.4	
mm/min	Feedrate for online correction in tool direction			DOUBLE	NEW CONF	
-						
-	3	0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., ...	0.0	-	7/2	M

Description: Feedrate for online correction in tool direction [mm/min] via \$AA_TOFF[]

21196	TOFF_ACCEL			C08	2.4	
m/s²	Acceleration for online correction in tool direction			DOUBLE	NEW CONF	
-						
-	3	100., 100., 100., 100., 100., 100., 100., 100., 100., 100., 100....	1.0e-6	-	7/2	M

Description: Acceleration for online correction in tool direction [m/s**2] via \$AA_TOFF[]

21198	ORI_TRAFO_ONLINE_CHECK_LIM			C07	F2	
mm	Activation limit of the realtime dynamic monitoring			DOUBLE	NEW CONF	
-						
-	-	1.0, 1.0, 1.0, 1.0, 1.0, 1.0. 1.0. 1.0...	0.0	-	7/2	M

Description: If, in the case of an orientation transformation, the effective BCS position or the effective tool length deviates from the values applied in preprocessing by more than the value defined in this machine data (e.g. due to superimposed movement or the activation of online tool length offset), real-time limiting of the dynamic response is activated.

21199	ORI_TRAFO_ONLINE_CHECK_LIMR			C07	F2	
degrees	Activation limit for real-time monitoring of dynamic response, rotary axes			DOUBLE	NEW CONF	
-						
-	-	1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0...	0.0	-	7/2	M

Description: If, in the case of an orientation transformation, the effective BCS position of one of the rotary axes involved in the transformation deviates from the values applied in preprocessing by more than the value defined in this machine data (e.g. due to superimposed movement), real-time limiting of the dynamic response is activated.

21200	LIFTFAST_DIST			C09	K1, V1, 2.6, 6.1	
mm	Traversing distance on rapid lift from contour			DOUBLE	PowerOn	
-						
-	-	0.1, 0.1, 0.1, 0.1, 0.1, 0.1, 0.1, 0.1...	0.0	-	7/2	M

Description: The machine data determines the absolute value of the traverse movement for rapid lift. The direction of the traverse movement is defined in the part program by the command ALF.

References:

/PA/, Programming Guide: Fundamentals

21202	LIFTFAST_WITH_MIRROR			C09	K1	
-	Rapid retract with mirroring			BOOLEAN	PowerOn	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/2	M

Description: 1: When determining the retraction direction, if mirroring of the contour is active then the retraction direction is also mirrored. Mirroring of the retraction direction only refers to the directional components vertical to the tool direction.

2.3 NC machine data

0: Mirroring of the contour is NOT taken into account when determining the retraction direction.

21203	LIFTFAST_MODE_MASK			C09	K1	
-	Settings for fast retraction			UDWORD	PowerOn	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0x0	0x1	7/2	M

Description:

Bit0: Behavior of LFWP with active frame

=0 If the retraction direction is defined with LFWP, the active frame is not effective.

=1 If the retraction direction is defined with LFWP, the active frame is effective. In this case MD21202 \$MC_LIFTFAST_WITH_MIRROR has no effect.

21204	LIFTFAST_STOP_COND			C09	M3	
-	Stop behavior with fast retraction			UDWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	0x7FFFFFFF	7/2	M

Description:

Specifies the stop behavior of the liftfast motion under different stop conditions

Bit0: Axial NC/PLC interface signal DB31, ... DBX4.3 (Axial feed stop / Spindle stop) or CP-SW limit stop or a stop by an OEM application

=0 Stop of the retraction motion in case of an axial feed stop or CP-SW limit stop or stop by an OEM application

=1 No stop of the retraction motion in case of an axial feedstop or CP-SW limit stop or stop by an OEM application

Bit1: Feed disable in channel NC/PLC interface signal DB21-30 DBX6.0 (Feed stop)

=0 Stop of the retraction motion in case of a feed stop in the channel

=1 No stop of the retraction motion in case of a feed stop in the channel

21210	SETINT_ASSIGN_FASTIN			C01, C09	-	
-	HW assignment of ext. NC input byte for NC progr. interrupts			UDWORD	PowerOn	
-						
-	-	1, 1, 1, 1, 1, 1, 1, 1...	0	0x7FFFFFFF	7/2	M

Description:

Assignment of input bytes for processing user interrupts in NC programs (SETINT)

Bit 0 ... 7: Number of the input byte (see below)

Bit 16 ... 23: Selection screen for the signals that are NOT evaluated in the channel

Bit 24 to 31: Selection screen for the signals that are evaluated in the channel in INVERTED form

Bit x = 0: Interrupt triggered by rising edge

Bit x = 1: Interrupt triggered by falling edge.

Input bytes:

Byte 1: On-board inputs of the NCU module (DB)

Bytes 2 - 5: External digital inputs (fast NCK I/Os or default via NC/PLC interface)

Bytes 128 - 129: Comparator byte (result from fast analogue inputs or default via NC/PLC interface)

21220	MULTFEED_ASSIGN_FASTIN			C01, C09	A4, V1	
-	Assignment of the NC I/Os for 'several feedrates in the block'			UDWORD	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	0x7FFFFFFF	7/2	M

Description:

In MD21220 \$MC_MULTFEED_ASSIGN_FASTIN (assignment of the input bytes of the NC I/Os for "Multiple feeds in one block"), at most two digital input bytes or comparator input bytes of the NC I/Os can be assigned to the input byte for the "Multiple feeds in one block" function.

Furthermore, the assigned input signals can be inverted with the machine data.

The MD is coded as follows:

Bit 0-7:

No. of 1st digital input byte or comparator input byte used

Bit 8 - 15:

No. of 2nd digital input byte or comparator input byte used

Bit 16 - 23:

Inversion mask for describing the 1st byte

Bit 24 - 31:

Inversion mask for describing the 2nd byte

Bit=0: do not invert

Bit=1: invert

The number for the digital inputs should be specified as follows:

1: for the on-board byte

2 - 5: for external bytes

The number for a comparator input byte should be specified as follows:

128: for comparator 1 (corresponds to 80Hex)

129: for comparator 2 (corresponds to 81Hex)

21230	MULTFEED_STORE_MASK	C01, C09	V1
-	Memory response for 'several feedrates in the block'	UBYTE	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 - 7/2 M

Description:

The priority of the signals for feeds F2 - F7 of the "Multiple feeds in one block" function decreases as the bit number increases in the input byte. The highest priority signal determines the current feed.

The MD21230 \$MC_MULTFEED_STORE_MASK (store input signals of the "Multiple feeds in one block" function) can be used to specify the response when the highest priority input drops out:

Set bit 2 - 7 has the effect that the associated feed (F2 to F7) that has been selected by the highest priority input signal in each case is retained, even if the input signal drops out and a lower priority is present.

The MD is coded as follows:

Bit 0 - 1: No significance

Bit 2 - 7: Storage response of the feed signals

21240	PREVENT_SYNACT_LOCK_CHAN	C01, C09	-
-	Protected synchronized actions	DWORD	PowerOn
-			
-	2	-1, -1, -1, -1, -1, -1, -1, -1 -1, -1, -1, -1, -1, -1, -1, -1 -1, -1...	-1 1399 7/2 M

Description:

The machine data specifies a range of synchronized action IDs.

Synchronized actions with IDs in this range cannot be overwritten, canceled or locked via synchronized actions.

With 0.0, there is no range of protected synchronized actions. The values are read as absolute values; the upper value and the lower value can be indicated in any order.

If a value is configured with -1, the configuration of the general machine data becomes active.

Note:

During the creation of protected static synchronized actions, the protection should be canceled; otherwise, a power ON would be necessary for each change in order to be able to redefine the logic.

21300	COUPLE_AXIS_1			C09	S3	
-	Synchron. spindle pair def, mach. axis no: follow. spindle [0], lead.sp [1]			BYTE	PowerOn	
-						
-	2	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0...	0	31	7/2	M

Description:

One pair of synchronous spindles per NC channel can be defined in a fixed configuration with this machine data.

The machine axis numbers (channel-specific MD20070 \$MC_AXCONF_MACHAX_USED) applicable in the NC channel must be entered for the following spindle [n=0] and the leading spindle [n=1].

The coupling is not regarded as configured if values of "0" are entered, thus leaving 2 couplings to be configured freely via the NC part program.

MD irrelevant for:

User-defined coupling

Related to:

Channel-specific MD21310 \$MC_COUPLING_MODE_1

(type of coupling in synchronous spindle mode)

Channel-specific MD21340 \$MC COUPLE IS WRITE PROT 1

(coupling parameters cannot be changed)

Channel-specific MD21330 \$MC COUPLE RESET MODE 1

(coupling cancelation response)

Channel-specific MD21320 \$MC_COUPLE_BLOCK_CHANGE_CTRL_1

(block change response in synchronous spindle mode)

SD42300 \$SC COUPLE RATIO 1

```
(speed ratio parameters for synchronous spindle mode)
```

21310	COUPLING_MODE_1			C03, C09	S3	
-	Type of coupling in synchronous spindle operation			BYTE	PowerOn	
-						
-	-	1, 1, 1, 1, 1, 1, 1, 1...	0	2	7/2	M

Description:

This machine data determines the type of coupling for the fixed coupling configuration defined with machine data COUPLE AXIS 1[n].

```
1: Setpoint coupling activated.
```

With a setpoint coupling, the reference variable for the following spindle is calculated from the position setpoint of the leading spindle, thus allowing the setpoints for the FS and LS to be input simultaneously. This has a particularly positive effect on the spindle synchronism during acceleration and deceleration processes.

A setpoint coupling thus achieves better command behavior than an actual-value coupling.

When a setpoint coupling is used, the following conditions must be fulfilled before synchronous mode is activated:

- The LS must be assigned to the same NC channel as the FS
- The FS and LS must be in position control mode (SPCON)
- The FS and LS must have the same dynamic control response

0: Actual-value coupling activated.

With an actual-value coupling, the command variable for the following spindle is calculated from the actual position value of the leading spindle. With this type of coupling, the following drive must be significantly more dynamic than the leading drive, but never vice versa.

The actual-value coupling can be used, for example, in the following cases:

- The LS must be assigned to a different NC channel than the FS.
- For leading spindles which are not suitable for position control.
- In cases where the dynamic control response of the leading spindle is considerably slower than that of the following spindle. As soon as the actual-value coupling is active, the NC/PLC interface signal DB31, ... DBX98.2 (Actual-value coupling) for the FS is set to "1-signal".

2: Speed coupling activated.

Internally, the speed coupling is a setpoint coupling. Lower dynamic requirements are placed on the FS and LS. A defined relation between the positions of the FS and LS cannot be established.

A speed coupling is used in the following cases:

- LS and/or FS are not in position control.
- There are no measuring systems present.

The coupling type can be altered in the NC part program when the coupling is deactivated by means of language instruction COUPDEF provided this option has not been inhibited by the channel-specific MD21340 \$MC_COUPLE_IS_WRITE_PROT_1. However, the parameterized value of channel-specific MD21310 \$MC_COUPLING_MODE_1 remains unchanged.

MD irrelevant to:

User-defined coupling

Related to:

Channel-specific MD21300 \$MC_COUPLE_AXIS_1

(definition of pair of synchronous spindles)

Channel-specific MD21340 \$MC_COUPLE_IS_WRITE_PROT_1

(write-protection for configured coupling parameters)

NC/PLC interface signal DB31, ... DBX98.2 (Actual-value coupling)

21320	COUPLE_BLOCK_CHANGE_CTRL_1			C09	S3	
-	Block change behavior in synchronous spindle operation			BYTE	PowerOn	
-						
-	-	3, 3, 3, 3, 3, 3, 3, 3...	0	3	7/2	M

Description:

This machine data determines the condition under which a block change has to be executed when synchronous mode is activated for the fixed coupling configuration defined in the channel-specific machine data COUPLE_AXIS_ [n].

The following options are available:

- 0: Block change is enabled immediately
- 1: Block change in response to "Fine synchronization"
- 2: Block change in response to "Coarse synchronization"
- 3: Block change in response to IPOSTOP (i.e. after setpoint-based synchronization)

The block change response can be altered in the NC part program with language instruction COUPDEF provided this option is not inhibited by the channel-specific MD21340 \$MC_COUPLE_IS_WRITE_PROT_1. However, the parameterized value of the channel-specific MD21320 \$MC_COUPLE_BLOCK_CHANGE_CTRL_1 remains unchanged.

The selected block change response remains valid even when the velocity ratio is changed or a defined angular offset is programmed while the coupling is active.

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MD irrelevant for:

User-defined coupling

Related to:

Channel-specific MD21300 \$MC_COUPLE_AXIS_1

(definition of pair of synchronous spindles)

Channel-specific MD21340 \$MC_COUPLE_IS_WRITE_PROT_1

(coupling parameters cannot be changed)

Channel-specific MD37200 \$MA_COUPLE_POS_TOL_COARSE or MD37220

\$MA_COUPLE_VELO_TOL_COARSE

(threshold value for coarse synchronization)

Channel-specific MD37210 \$MA_COUPLE_POS_TOL_FINE or MD37230 \$MA_COUPLE_VELO_TOL_FINE

(threshold value for fine synchronization)

21330	COUPLE_RESET_MODE_1			C03, C09	S3, K1	
-	Coupling cancelation behavior			UDWORD	PowerOn	
-						
-	-	1, 1, 1, 1, 1, 1, 1, 1...	0	0x3FF	7/2	M

Description:

This machine data defines the behavior of the synchronous mode for the pair of synchronous spindles configured with machine data COUPLE_AXIS_1[n].

Bit 0=0:

Synchronous mode remains active with a new program start and, as long as the control remains switched on, can be canceled only with COUPOF.

Bit 0=1:

Synchronous mode is canceled with program start (from the reset condition).

Bit 1=0:

Synchronous mode remains active even with program end and reset and, as long as the control remains switched on, can be canceled only with COUPOF.

Bit 1=1:

Synchronous mode is canceled with program end or RESET.

Bit 5=1:

The configured data are activated with program start.

Bit 6=1:

The configured data are activated with program end or RESET.

Bit 9=1:

Synchronous mode is switched on with program start.

Note:

Synchronous mode is not deselected with NC Start after NC Stop.

MD irrelevant to:

User-defined coupling

Related to:

Channel-specific MD21300 \$MC_COUPLE_AXIS_1 (definition of pair of synchronous spindles)

NC/PLC interface signal DB31, ... DBX84.4 (Active spindle mode - synchronous mode)

21340	COUPLE_IS_WRITE_PROT_1			C09	S3	
-	Coupling parameters cannot be altered			BOOLEAN	PowerOn	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/2	M

Description:

This machine data defines whether or not the coupling parameters (speed ratio, block change response, coupling type) for the pair of synchronous spindles configured with channel-specific machine data COUPLE_AXIS_1[n] may be altered by the NC part program.

1: Coupling parameters may not be altered by the NC program (write-protection active)
An alarm message is generated if an attempt is made to change the parameters.

0: NC part program may alter coupling parameters using language instruction COUPDEF.
MD irrelevant for:

User-defined coupling

Related to:

Channel-specific MD21300 \$MC_COUPLE_AXIS_1

(definition of pair of synchronous spindles)

Channel-specific MD21310 \$MC_COUPLING_MODE_1

(type of coupling in synchronous spindle mode)

Channel-specific MD21330 \$MC_COUPLE_RESET_MODE_1

(coupling cancelation response)

Channel-specific MD21320 \$MC_COUPLE_BLOCK_CHANGE_CTRL_1

(block change response in synchronous spindle mode)

SD42300 \$SC_COUPLE_RATIO_1

(speed ratio parameters for synchronous spindle mode)

21380	ESR_DELAY_TIME1			EXP, N09	M3	
s	Delay time ESR axes			DOUBLE	NEW CONF	
-						
-	-	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	0.0	-	7/2	M

Description: When, for example, an alarm occurs, this MD can be used to delay deceleration in order, for example, to enable a retraction from the tooth gap (ESR) in gear wheel machining.

21381	ESR_DELAY_TIME2			EXP, N09	M3	
s	ESR time for IPO controlled braking			DOUBLE	NEW CONF	
-						
-	-	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	0.0	-	7/2	M

Description: When time MD21380 \$MC_ESR_DELAY_TIME1 has expired, the time (MD21381 \$MC_ESR_DELAY_TIME2) specified for interpolatory braking is still available.
When time MD21381 \$MC_ESR_DELAY_TIME2 has expired, rapid deceleration with following tracking is initiated.

21500	TRACLG_GRINDSPI_VERT_OFFSET			C07	-	
mm	Vertical position offset of grinding axis in centerless grinding			DOUBLE	PowerOn	
-						
-	-	0., 0., 0., 0., 0., 0., 0., 0....	-	-	7/2	M

Description: The vertical offset of the grinding axis is specified in this MD.

21501	TRACLG_GRINDSPI_HOR_OFFSET			C07	-	
mm	Horiz. position offset of grinding axis in centerless grinding			DOUBLE	PowerOn	
-						
-	-	0., 0., 0., 0., 0., 0., 0., 0....	-	-	7/2	M

Description: Horizontal position offset of the grinding axis in centerless grinding.

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The setting in this MD is significant only when MD: TRAF0_AXES_IN_n[0] = 0, i.e. no axis is programmed for the grinding wheel.

21502	TRACLG_CTRLSP1_VERT_OFFSET	C07	-
mm	Vert. position offset of regulating axis in centerless grinding	DOUBLE	PowerOn
-			
-	-	0., 0., 0., 0., 0., 0., 0., 0....	- - 7/2 M

Description: The vertical offset for the regulating axis is specified in this MD.

21504	TRACLG_SUPPORT_VERT_OFFSET	C07	-
mm	Vertical offset of work blade in centerless grinding	DOUBLE	PowerOn
-			
-	-	0., 0., 0., 0., 0., 0., 0., 0....	- - 7/2 M

Description: Y offset for work blade
Rule: $X(0) = Y(\text{offset}) + Q1 < Y(\text{direction vector} Q1) + Q2 < Y(\text{direction vector} Q2)$

21506	TRACLG_SUPPORT_HOR_OFFSET	C07	S8
mm	Horizontal offset of work blade in centerless grinding	DOUBLE	PowerOn
-			
-	-	0., 0., 0., 0., 0., 0., 0., 0....	- - 7/2 M

Description: X offset for work blade
Rule: $X(0) = X(\text{offset}) + Q1 < X(\text{direction vector} Q1) + Q2 < X(\text{direction vector} Q2)$

21508	TRACLG_VERT_DIR_SUPPORTAX_1	C07	-
-	Vertical component of work blade direction vector for Q1	DOUBLE	PowerOn
-			
-	-	1., 1., 1., 1., 1., 1., 1., 1....	- - 7/2 M

Description: Y component of blade direction vector for Q1
Rule: $Y0 = Y(\text{offset}) + Q1 < Y(\text{direction vector} Q1) + Q2 < Y(\text{direction vector} Q2)$

21510	TRACLG_HOR_DIR_SUPPORTAX_1	C07	-
-	Horizontal component of work blade direction vector for Q1	DOUBLE	PowerOn
-			
-	-	0., 0., 0., 0., 0., 0., 0., 0....	- - 7/2 M

Description: X component of blade direction vector for Q1
Rule: $X(0) = X(\text{offset}) + Q1 < X(\text{direction vector} Q1) + Q2 < X(\text{direction vector} Q2)$

21512	TRACLG_VERT_DIR_SUPPORTAX_2	C07	-
-	Vertical component of work blade direction vector for Q2	DOUBLE	PowerOn
-			
-	-	0., 0., 0., 0., 0., 0., 0., 0....	- - 7/2 M

Description: Y component of blade direction vector for Q2
Rule: $Y(0) = Y(\text{offset}) + Q1 < Y(\text{direction vector} Q1) + Q2 < Y(\text{direction vector} Q2)$

21514	TRACLG_HOR_DIR_SUPPORTAX_2	C07	-
-	Horizontal component of work blade direction vector for Q2	DOUBLE	PowerOn
-			
-	-	1., 1., 1., 1., 1., 1., 1., 1....	- - 7/2 M

Description: X component of blade direction vector for Q2
Rule: $X(0) = X(\text{offset}) + Q1 < X(\text{direction vector } Q1) + Q2 < X(\text{direction vector } Q2)$

21516	TRACLG_SUPPORT_LEAD_ANGLE	C07	-
degrees	Lead angle of work blade in centerless grinding	DOUBLE	PowerOn
-			
-	-	0., 0., 0., 0., 0., 0., 0., 0....	-90. 90. 7/2 M

Description: The angle of lead of the work blade (a) is entered here.

21518	TRACLG_CONTACT_UPPER_LIMIT	C07	-
mm	Upper contact limit of work blade with work in centerl. grinding	DOUBLE	PowerOn
-			
-	-	0., 0., 0., 0., 0., 0., 0., 0....	- - 7/2 M

Description: It is necessary to specify the upper contact limit of the blade with the part to be ground (d1) for the purpose of monitoring the support range limits.
Related to:
MD21520 \$MC_TRACLG_CONTACT_LOWER_LIMIT

21520	TRACLG_CONTACT_LOWER_LIMIT	C07	-
mm	Lower contact limit of work blade with work in centerl. grinding	DOUBLE	PowerOn
-			
-	-	0., 0., 0., 0., 0., 0., 0., 0....	- - 7/2 M

Description: It is necessary to specify the lower contact limit of the blade with the part to be ground (d2) for the purpose of monitoring the support range limits.
Related to:
MD: TRACLG_CONTACT_UPPER_LIMIT

21522	TRACLG_GRINDSPI_NR	C07	-
-	Definition of grinding spindle for centerless grinding	BYTE	PowerOn
-			
-	-	2, 2, 2, 2, 2, 2, 2, 2...	1 20 7/2 M

Description: The number of the grinding spindle is specified in this MD.

21524	TRACLG_CTRLSPI_NR	C07	-
-	Definition of regulating spindle for centerless grinding	BYTE	PowerOn
-			
-	-	1, 1, 1, 1, 1, 1, 1, 1...	1 20 7/2 M

Description: The number of the regulating spindle is specified in this MD.

2.3 NC machine data

21526	TRACLG_G0_IS_SPECIAL			C07	-	
-	Special logic for G0 in centerless grinding			BOOLEAN	PowerOn	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/2	M

Description:

This MD can be used to define how the speed of the regulating wheel must respond in the case of transitions from motion blocks with G0 and without G0 (see table).

TRACLG_G0_IS_SPECIAL = 1:

On transition from a motion block with G0 to one without G0, the speed of the regulating wheel is increased during the G0 block to the desired initial speed in the block without G0.

TRACLG_G0_IS_SPECIAL = 0:

The speed of the regulating wheel is controlled only for motion blocks without G0 (the transitions from a motion block with G0 to one without G0 are not taken into account).

22000	AUXFU_ASSIGN_GROUP			C04	H2, S1	
-	Auxiliary function group			DWORD	PowerOn	
-						
-	255	1, 1,				

Description:

See MD22010 \$MC_AUXFU_ASSIGN_TYPE [n] (auxiliary function type)

22010	AUXFU_ASSIGN_TYPE			C04	H2, S1	
-	Auxiliary function type			STRING	PowerOn	
-						
-	255					

Description:

Machine data

AUXFU_ASSIGN_TYPE[n] (auxiliary function type),

AUXFU_ASSIGN_EXTENSION[n] (auxiliary function extension),

AUXFU_ASSIGN_VALUE[n] (auxiliary function value) and

AUXFU_ASSIGN_GROUP[n] (auxiliary function group)

assign an auxiliary function type (M,S,H,T,F,D,DL), the associated extension and the auxiliary function value to an auxiliary function group.

Example:

M0 = 100 => Group 5 (corr. M100)

Auxiliary function type M

Auxiliary function extension 0

Auxiliary function value 100

Auxiliary function group 5

MD22010 \$MC_AUXFU_ASSIGN_TYPE[0] = "M"

MD22020 \$MC_AUXFU_ASSIGN_EXTENSION[0] = 0

MD22030 \$MC_AUXFU_ASSIGN_VALUE[0] = 100

MD22040 \$MC_AUXFU_ASSIGN_GROUP[0] = 5 ; (5th group)

M00, M01, M02, M17 and M30 are assigned to group 1 as default.

M3, M4, M5 and M70 of the master spindle are assigned to group 2 as default.

The S functions of the master spindle are assigned to group 3 as default.

The four machine data for assigning an auxiliary function to an auxiliary function group must always be given the same index [n].

Special cases:

If the value of an auxiliary function is less than 0, all auxiliary functions of this type and extension are assigned to one group.

Example:

S2 = -1 => group 9

(all S values of the 2nd spindle are assigned to group 9)

Note:

Only one auxiliary function from a group may be programmed in each block, otherwise alarm 14760 is output.

Related to:

MD11100 \$MN_AUXFU_MAXNUM_GROUP_ASSIGN

22020	AUXFU_ASSIGN_EXTENSION			C04	H2, S1	
-	Auxiliary function extension			DWORD	PowerOn	
-						
-	255	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,, ...	-1	99	7/2	M

Description: See MD22010 \$MC_AUXFU_ASSIGN_TYPE[n] (auxiliary function type)

Special cases:

With the spindle functions M3, M4, M5, M19, M70, M40, M41, M42, M43, M44, M45 and S, the spindle number is output to the PLC in the auxiliary function extension.

22030	AUXFU_ASSIGN_VALUE			C04	H2, S1	
-	Auxiliary function value			DWORD	PowerOn	
-						
-	255	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,, ...	-	-	7/2	M

Description: See MD22010 \$MC_AUXFU_ASSIGN_TYPE[n] (auxiliary function type)

22035	AUXFU_ASSIGN_SPEC			C04	H2	
-	Output specification			UDWORD	PowerOn	
-						
-	255	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,, ...	0	0x7FFFFFFF	7/2	M

Description: Specification of the output behavior of the user-defined auxiliary functions.

- Bit 0 = 1 Acknowledgment "normal" after an OB1 cycle
- Bit 1 = 1 Acknowledgment "quick" with OB40
- Bit 2 = 1 No predefined auxiliary function
- Bit 3 = 1 No output to the PLC
- Bit 4 = 1 Spindle reaction after acknowledgment by the PLC
- Bit 5 = 1 Output before the motion
- Bit 6 = 1 Output during the motion
- Bit 7 = 1 Output at block end
- Bit 8 = 1 No output after block search types 1, 2, 4
- Bit 9 = 1 Collection during block search type 5 (SERUPRO)
- Bit 10 = 1 No output during block search type 5 (SERUPRO)

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Bit 11 = 1 Cross-channel auxiliary function during block search type 5 (SERUPRO)
 Bit 12 = 1 Output via synchronized action
 Bit 13 = 1 Implicit auxiliary function
 Bit 14 = 1 Active M01
 Bit 15 = 1 No output during running-in test
 Bit 16 = 1 Nibbling off
 Bit 17 = 1 Nibbling on
 Bit 18 = 1 Nibbling

22037	AUXFU_ASSIGN_SIM_TIME			C04	H2, S1	
-	Acknowledgment time			DWORD	PowerOn	
-						
-	255	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, ...	0	0x7FFFFFFF	7/2	M

Description: Acknowledgment time for auxiliary functions in ms.
 See MD22010 \$MC_AUXFU_ASSIGN_TYPE[n] (auxiliary function type)

22040	AUXFU_PREDEF_GROUP			C04	H2	
-	Predefined auxiliary function groups			DWORD	PowerOn	
-						
-	301	1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 2, 4, 4, 4, 4, 4, 3, 1, 1, 1,, ...	0	168	7/2	M

Description: Group assignment of predefined auxiliary functions.
 The predefined groups cannot be changed for indices 0, 1, 2, 3, 4, 22, 23, 24.

22050	AUXFU_PREDEF_TYPE			C04	H2	
-	Predefined auxiliary function type			STRING	PowerOn	
-						
-	301	M, M, M, M, M, M, M, M, M, M, M, M, M, M, M...	-	-	7/2	M

Description: The address codes of the predefined auxiliary functions are fix.
 This setting cannot be changed!

22060	AUXFU_PREDEF_EXTENSION			C04	H2	
-	Predefined auxiliary function extension			DWORD	PowerOn	
-						
-	301	0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 0, 0,, ...	-1	99	7/2	M

Description: Address extension for predefined auxiliary functions:
 This setting can be changed only for indices 5 to 17 and 21!

22070	AUXFU_PREDEF_VALUE			C04	H2	
-	Predefined auxiliary function value			DWORD	PowerOn	
-						
-	301	0, 1, 2, 17, 30, 6, 3, 4, 5, 19, 70, 40, 41, 42, 43, 44, 45, -1,...	-	-	7/2	M

Description: Value of predefined auxiliary functions.
This setting cannot be changed!

22080	AUXFU_PREDEF_SPEC			C04	H2, K1	
-	Output specification			UDWORD	PowerOn	
-						
-	301	0x81, 0x81, 0x81, 0x81, 0x81, 0x21, 0x21, 0x21, 0x21, 0x21,, 0x8...	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0x7FFFF, 0x7FFFF, 0x7FFFF, 0x7FFFF, 0x7FFFF, 0x7FFFF, 0x7FFFF, 0...	7/2	M

Description: Specification of the output behavior of the predefined auxiliary functions.

- Bit 0 = 1 Acknowledgment "normal" after an OB1 cycle
- Bit 1 = 1 Acknowledgment "quick" with OB40
- Bit 2 = 1 No predefined auxiliary function
- Bit 3 = 1 No output to the PLC
- Bit 4 = 1 Spindle reaction after acknowledgment by the PLC
- Bit 5 = 1 Output before the motion
- Bit 6 = 1 Output during the motion
- Bit 7 = 1 Output at block end
- Bit 8 = 1 No output after block search types 1, 2, 4
- Bit 9 = 1 Collection during block search type 5 (SERUPRO)
- Bit 10 = 1 No output during block search type 5 (SERUPRO)
- Bit 11 = 1 Cross-channel auxiliary function during block search type 5 (SERUPRO)
- Bit 12 = 1 Output via synchronized action
- Bit 13 = 1 Implicit auxiliary function
- Bit 14 = 1 Active M01
- Bit 15 = 1 No output during running-in test
- Bit 16 = 1 Nibbling off
- Bit 17 = 1 Nibbling on
- Bit 18 = 1 Nibbling

22090	AUXFU_PREDEF_SIM_TIME			C04	H2, S1	
-	Acknowledgment time			DWORD	PowerOn	
-						
-	301	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,, ...	0	0x7FFFFFFF	7/2	M

Description: Acknowledgment time for auxiliary functions in ms.
See MD22010 \$MC_AUXFU_PREDEF_TYPE[n] (auxiliary function type)

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22100	AUXFU_QUICK_BLOCKCHANGE	C04	H2
-	Block change delay with quick auxiliary functions.	DWORD	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 1 7/2 M

Description: Block change is not delayed with quick auxiliary functions.

0: With the quick auxiliary function output the block change is delayed until acknowledgment by the PLC (OB40).

1: With the quick auxiliary function output to the PLC the block change is not delayed.

MD irrelevant for:

Auxiliary functions with normal acknowledgment

References:

/FBSY/, Synchronized Actions

22110	AUXFU_H_TYPE_INT	C11, C04	H2, K1
-	Data format of H auxiliary functions (integer/real)	DWORD	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 1 7/2 M

Description: 0: The values of H auxiliary functions are present in floating point format. The maximum value range is +/-3.4028 ex 38.

1: The value of H auxiliary functions is rounded and changed to an integer. The basic program in the PLC must interpret the value as an integer. The maximum value range is -2147483648 to 2147483647.

22200	AUXFU_M_SYNC_TYPE	C04	H2, K1, 2.4
-	Output time of M functions	BYTE	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 3 7/2 M

Description: Synchronization of the M auxiliary functions with regard to a simultaneously programmed axis motion.

0 = Output before motion

1 = Output during motion

2 = Output at block end

3 = No output to the PLC (therefore no block change delay)

Notice:

An auxiliary function output specification configured by MD22080

\$MC_AUXFU_PREDEF_SPEC[preIndex], MD22035 \$MC_AUXFU_ASSIGN_SPEC[auxIndex] or

A group output specification configured by MD11110 \$MN_AUXFU_GROUP_SPEC[groupIndex] has a higher priority.

22210	AUXFU_S_SYNC_TYPE	C04	H2, 2.4
-	Output time of S functions (see MD22200 for values)	BYTE	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 4 7/2 M

Description: Synchronization of the S auxiliary functions with regard to a simultaneously programmed axis motion.

0 = Output before motion

1 = Output during motion

2 = Output at block end

3 = No output to the PLC (therefore no block change delay)
 4 = Output in accordance with the predefined output specification

Notice:

An auxiliary function output specification configured by MD22035
`$MC_AUXFU_ASSIGN_SPEC[ auxIndex ]` has a higher priority.

22220	AUXFU_T_SYNC_TYPE	C11, C04	H2, 2.4
-	Output time for T functions (see MD22200 for values)	BYTE	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 4 7/2 M

Description: Synchronization of the T auxiliary functions with regard to a simultaneously programmed axis motion.

0 = Output before motion

1 = Output during motion

2 = Output at block end

3 = No output to the PLC (therefore no block change delay)

4 = Output in accordance with the predefined output specification

Notice:

An auxiliary function output specification configured by MD22035
`$MC_AUXFU_ASSIGN_SPEC[ auxIndex ]` has a higher priority.

22230	AUXFU_H_SYNC_TYPE	C04	H2, 2.4
-	Output time for H functions (see MD22200 for values)	BYTE	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 3 7/2 M

Description: Synchronization of the H auxiliary functions with regard to a simultaneously programmed axis motion.

0 = Output before motion

1 = Output during motion

2 = Output at block end

3 = No output to the PLC (therefore no block change delay)

Notice:

An auxiliary function output specification configured by MD22080

`$MC_AUXFU_PREDEF_SPEC[ preIndex ]`, MD22035 `$MC_AUXFU_ASSIGN_SPEC[ auxIndex ]` or

A group output specification configured by MD11110 `$MN_AUXFU_GROUP_SPEC[ groupIndex ]`, which has a higher priority.

22240	AUXFU_F_SYNC_TYPE	C04	H2, K1, V1, Z1
-	Output time for F functions (see MD22200 for values)	BYTE	PowerOn
-			
-	-	3, 3, 3, 3, 3, 3, 3, 3...	0 4 7/2 M

Description: Synchronization of the F auxiliary functions with regard to a simultaneously programmed axis motion.

0 = Output before motion

1 = Output during motion

2 = Output at block end

3 = No output to the PLC (therefore no block change delay)

4 = Output in accordance with the predefined output specification

Notice:

An auxiliary function output specification configured by MD22035

`$MC_AUXFU_ASSIGN_SPEC[ auxIndex ]` has a higher priority.

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22250	AUXFU_D_SYNC_TYPE	C04	H2
-	Output time for D functions (see MD22200 for values)	BYTE	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0
-	-	4	7/2
-	-		M

Description: Synchronization of the D auxiliary functions with regard to a simultaneously programmed axis motion.

0 = Output before motion

1 = Output during motion

2 = Output at block end

3 = No output to the PLC (therefore no block change delay)

4 = Output in accordance with the predefined output specification

Notice:

An auxiliary function output specification configured by MD22035

\$MC_AUXFU_ASSIGN_SPEC[auxIndex] has a higher priority.

22252	AUXFU_DL_SYNC_TYPE	C04	H2
-	Output time of DL functions	BYTE	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0
-	-	4	7/2
-	-		M

Description: Synchronization of the auxiliary function with regard to a simultaneously programmed motion.

0 = Output before motion

1 = Output during motion

2 = Output at block end

3 = No output to the PLC (therefore no block change delay)

4 = Output in accordance with the predefined output specification

Notice:

An auxiliary function output specification configured by MD22035

\$MC_AUXFU_ASSIGN_SPEC[auxIndex] has a higher priority.

22254	AUXFU_ASSOC_M0_VALUE	C01, C03, C10	H2, K1
-	Additional M function to stop a program	DWORD	PowerOn
-			
-	-	-1, -1, -1, -1, -1, -1, -1, -1...	-
-	-	-	7/2
-	-		M

Description: This machine data defines an additional, predefined M function, which behaves in the same way as M0. The value of the machine data corresponds to the number of the auxiliary M function.

Predefined M numbers, such as M0, M1, M2, M3, etc., are not allowed.

Restriction:

See MD10715 \$MN_M_NO_FCT_CYCLE

Related to:

MD10714 \$MN_M_NO_FCT_EOP,

MD10715 \$MN_M_NO_FCT_CYCLE,

MD20094 \$MC_SPIND_RIGID_TAPPING_M_NR,

MD22254 \$MC_AUXFU_ASSOC_M0_VALUE

MD10814 \$MN_EXTERN_M_NO_MAC_CYCLE,

MD10804 \$MN_EXTERN_M_NO_SET_INT

MD10806 \$MN_EXTERN_M_NO_DISABLE_INT,

MD10800 \$MN_EXTERN_CHAN_SYNC_M_NO_MIN,
MD10802 \$MN_EXTERN_CHAN_SYNC_M_NO_MAX
MD20095 \$MC_EXTERN_RIGID_TAPPING_M_NR
MD26008 \$MC_NIBBLE_PUNCH_CODE

22256	AUXFU_ASSOC_M1_VALUE				C01, C03, C10	H2	
-	Additional M function for conditional stop				DWORD	PowerOn	
-							
-	-	-1, -1, -1, -1, -1, -1, -1, -1...	-	-	7/2	M	

Description: This machine data defines an additional, predefined M function, which behaves in the same way as M1. The value of the machine data corresponds to the number of the auxiliary M function.

Predefined M numbers, such as M0, M1, M2, M3, etc., are not allowed.

Restriction:

See MD10715 \$MN_M_NO_FCT_CYCLE

Related to:

MD10714 \$MN_M_NO_FCT_EOP,
MD10715 \$MN_M_NO_FCT_CYCLE,
MD20094 \$MC_SPIND_RIGID_TAPPING_M_NR,
MD22254 \$MC_AUXFU_ASSOC_M0_VALUE
MD10814 \$MN_EXTERN_M_NO_MAC_CYCLE,
MD10804 \$MN_EXTERN_M_NO_SET_INT
MD10806 \$MN_EXTERN_M_NO_DISABLE_INT,
MD10800 \$MN_EXTERN_CHAN_SYNC_M_NO_MIN,
MD10802 \$MN_EXTERN_CHAN_SYNC_M_NO_MAX
MD20095 \$MC_EXTERN_RIGID_TAPPING_M_NR
MD26008 \$MC_NIBBLE_PUNCH_CODE

22400	S_VALUES_ACTIVE_AFTER_RESET			C04, C03, C05	-	
-	S function active beyond RESET			BOOLEAN	PowerOn	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/2	M

Description: 1: The last S values set in the main run are still active after a RESET.
This also applies to the dynamic correction values ACC, VELOLIM in spindle mode.

0: The various S values are equal to 0 after a RESET, and must therefore be reprogrammed.

The dynamic correction values ACC and VELOLIM are reset to 100% for spindle mode if the axis-specific MD35040 \$MA_SPIND_ACTIVE_AFTER_RESET and MD32320 \$MA_DYN_LIMIT_RESET_MASK do not specify anything else.

Note:

The values for ACC and VELOLIM are also retained for spindle mode if MD35040 \$MA_SPIND_ACTIVE_AFTER_RESET is not equal to zero or the axis-specific MD35040 \$MA_SPIND_ACTIVE_AFTER_RESET is not equal to zero.

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22410	F_VALUES_ACTIVE_AFTER_RESET			C04, C03, C05	M3, V1	
-	F function active beyond RESET			BOOLEAN	PowerOn	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/2	M

Description:

1: The last programmed F, FA, OVR and OVRA values are still active after RESET. This also applies to the dynamic correction values (ACC, VELOLIM, JERKLIM, ACCLIMA, VELOLIMA, JERKLIMA).

0: The various values are set to their default values after reset. This does not apply to the dynamic correction values if the axis-specific MD32320 \$MA_DYN_LIMIT_RESET_MASK specifies anything else.

Note:

The dynamic correction values are also retained if the axis-specific MD32320 \$MA_DYN_LIMIT_RESET_MASK is not equal to zero.

Related to:

MD22240 \$MC_AUXFU_F_SYNC_TYPE Output time of the F functions

22420	FGROUP_DEFAULT_AXES			C11	-	
-	Default setting for FGROUP command			BYTE	PowerOn	
-						
-	8	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0...	-	-	7/7	U

Description:

Default setting for FGROUP command. You can specify up to 8 channel axes whose resulting velocity is equivalent to the programmed path feed.

If all eight values are zero (default), the geo axis entered in MD20050 \$MC_AXCONF_GEOAX_ASSIGN_TAB are active as the default setting for the FGROUP command as previously.

22430	FGROUP_PATH_MODE			EXP	-	
-	Response of the path velocity in singular situations			BYTE	Immediately	
-						
-	-	1, 1, 1, 1, 1, 1, 1, 1...	0	3	3/3	U

Description:

If the path of the FGROUP axes is short in comparison to that of the non-FGROUP axes, the latter must become very fast in order to follow the path. If the path is precisely 0, then they travel instead at the programmed feedrate. The machine data can be used to soften this abrupt transition.

Value 0: This abrupt transition is not processed. Setting compatible with the behavior before the software release 6

Value 1: From a threshold of the path relationship of MD22440 \$MC_FGROUP_PATH_RATIO, the paths of the non-FGROUP axes are increasingly taken into account. However, this is only applicable in polynomial blocks with significantly changing path components. Setting compatible with the behavior before software release NCK.P7_91

Value 2: As for 1, however, without the restrictions.

Value 3: As for 2, but with improved behavior if there are no geometry axes in the FGROUP. Recommended setting for mold building applications and special machines.

.

Related to:

MD22420 \$MC_FGROUP_DEFAULT_AXES, MD22440 \$MC_FGROUP_PATH_RATIO

22440	FGROUP_PATH_RATIO			EXP	-	
-	Path ratio when using the FGROUP singularity strategy			DOUBLE	Immediately	
-						
-	-	1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0...	0.	1.e6	3/3	U

Description: Ratio of the path of non-FGROUP axes to the FGROUP axes, from which also the path of the first is taken into account for the reference of the path velocity.

Is only of significance for MD22430 \$MC_FGROUP_PATH_MODE > 0 . A value of 0 has the same effect as if all axes were in the FGROUP. For larger values, this approaches the behavior of that of MDMD22430 \$MC_FGROUP_PATH_MODE = 0.

Corresponds with:

MD22420 \$MC_FGROUP_DEFAULT_AXES, MD22430 \$MC_FGROUP_PATH_MODE

22510	GCODE_GROUPS_TO_PLC			C04	K1, P3 pl, P3 sl	
-	G codes output at NCK-PLC interface on block change/RESET			BYTE	PowerOn	
-						
-	8	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0...	-	-	7/2	M

Description: Specification of the G code group, the G codes of which are output to the NCK/PLC interface in case of block change/ reset.

The interface is updated after each block change and reset.

Notice:

It is not guaranteed that a PLC user program has at all times a block-synchronous relation between the active NC block and the G codes present.

Example: Path mode with very short blocks

22512	EXTERN_GCODE_GROUPS_TO_PLC			C11, C04	-	
-	Send G codes of an external NC language to PLC			BYTE	PowerOn	
-						
-	8	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0. 0. 0. 0...	-	-	7/2	M

Description: Specification of the G code group of external languages, the G codes of which are output at the NCK interface on block change/reset.

The interface is updated at each block change and after RESET.

Notice:

It is not guaranteed that a PLC user program has at all times a block-synchronous relation between the active NC block and the G codes present. (Example: Path mode with very short blocks).

22515	GCODE_GROUPS_TO_PLC_MODE			C04	-	
-	Behavior of G group transfer to PLC			UDWORD	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	0x1	7/2	M

Description: For setting the behavior, i.e. how the G groups are to be interpreted in the PLC with regard to data.

With the current behavior (bit 0 = 0), the G group is the array index of a 64-byte field (DBB 208 - DBB 271).

Maximally the 64th G group can be reached in this way.

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With the new behavior (bit 0 = 1), the data storage in the PLC consists of max. 8 bytes (DBB 208 - DBB 215).

With this procedure, the array index of this byte array is identical with the index of the MD22510 \$MC_GCODE_GROUPS_TO_PLC[Index] and MD22512 \$MC_EXTERN_GCODE_GROUPS_TO_PLC[Index].

Each index (0 - 7) may only be set for one of the two machine data; the value 0 must be entered for the other MD.

Bit 0 (LSB) = 0:

Behavior as before, the 64-byte field is used for displaying the G codes

Bit 0 (LSB) = 1:

The user specifies for which G groups the first 8 bytes are to be used

22530	TOCARR_CHANGE_M_CODE			C04	H2, W1	
-	M code at change of tool holder			DWORD	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-99999999	99999999	7/2	M

Description:

The absolute value of this machine data indicates the number of the M code, which is output at the VDI interface when a tool holder is activated.

- If the MD is positive, the unchanged M code is always output.
- If the MD is negative, the number of the tool holder is added to the absolute value of the machine data and the number is output.

Special cases:

N M code is output, if the number of the M code to be output or the absolute value of this MD is set to one of the values 0 to 6, 17 or 30. It is not monitored whether an M code created in this way will conflict with other functions.

References:

/FB/, H2, Auxiliary Function Output to PLC

22532	GEOAX_CHANGE_M_CODE			C04	H2, K2	
-	M code at change of geo axes			DWORD	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	99999999	7/2	M

Description:

Number of the M code, which is output at the VDI interface in the case of a switchover of the geometry axes.

No M code is output if this MD is set to one of the values 0 to 6, 17 or 30.

It is not monitored whether an M code created in this way will conflict with other functions.

22534	TRAFO_CHANGE_M_CODE			C04	M1, H2	
-	M code at change of transformation			DWORD	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	99999999	7/2	M

Description:

Number of the M code that is output at the VDI interface in the case of a transformation changeover of the geometry axes.

No M code is output if this MD is set to one of the values 0 to 6, 17 or 30.

It is not monitored whether an M code created in this way will conflict with other functions.

22550	TOOL_CHANGE_MODE			C01, C11, C04, C09	W3, K1, W1	
-	New tool compensation for M function			BYTE	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	1	7/2	M

Description: The T function is used to select a tool in the program. The setting in this machine data determines whether the new tool is loaded immediately on execution of the T function:

MD22550 \$MC_TOOL_CHANGE_MODE = 0

The new tool is loaded directly with the programming of T or D. This setting is mainly used on turning machines. If a D is not programmed in the block by T, then the tool offset defined in MD20270 \$MC_CUTTING_EDGE_DEFAULT is active.

In this case, the function "Manual tools" is not enabled.

MD22550 \$MC_TOOL_CHANGE_MODE = 1

The new tool is prepared for loading on execution of the T function. This setting is used mainly on milling machines with a tool magazine in order to bring the new tool into the tool change position without interrupting the machining process. The M function entered in MD22560 \$MC_TOOL_CHANGE_M_CODE is used to remove the old tool from the spindle and load the new tool onto the spindle. According to DIN 66025, this tool change has to be programmed with M function M06.

Related to:

MD22560 \$MC_TOOL_CHANGE_M_CODE

22560	TOOL_CHANGE_M_CODE			C01, C04, C09	H2, K1, W1	
-	M function for tool change			DWORD	PowerOn	
-						
-	-	6, 6, 6, 6, 6, 6, 6, 6...	6	99999999	7/2	M

Description: If the T function is only used to prepare a new tool for a tool change (this setting is used mainly on milling machines with a tool magazine, in order to bring the new tool into the tool change position without interrupting the machining process), another M function must be used to trigger the tool change.

The M function entered in TOOL_CHANGE_M_CODE triggers the tool change (remove old tool from the spindle and load new tool into the spindle). This tool change is required to be programmed with M function M06, in accordance with DIN 66025.

Related to:

MD22550 \$MC_TOOL_CHANGE_MODE

22562	TOOL_CHANGE_ERROR_MODE			C09	W1	
-	Response to tool change errors			UDWORD	PowerOn	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0	0x1FF	7/2	M

Description: Behavior if faults/problems occur during programmed tool change.

Bit 0=0: Standard behavior: Stop at the faulty NC block

Bit 0=1: If a fault is detected in the block with the tool change preparation, the alarm relevant to the preparation command T is delayed until the corresponding tool change command (M06) has been interpreted in the program sequence. Until then, the alarm triggered by the preparation command is not output. The operator can take corrective actions in this block. When the program continues, the faulty NC block is re-interpreted, and the preparation command is automatically executed again internally.

The value = 1 is relevant only if the setting MD22550 \$MC_TOOL_CHANGE_MODE = 1 is used.

Bit 1 Only relevant with active tool management.

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Bit 1=0: Standard behavior: Only tools with data assigned to a magazine are detected during tool change preparation.

Bit 1=1: Manual tools can be loaded.

A tool will also be loaded if its data is known in the NCK but has not been assigned to a magazine. In this case, the tool data is automatically assigned to the programmed toolholder.

The user is prompted to insert tools into or remove tools from the toolholder.

Bit 2 qualifies the offset programming

Bit 2=0: active D no. > 0 and active T no.=0 gives offset 0

Active D no. > 0 and active D no.=0 gives total offset 0

Bit 2=1: active D no. > 0 and active T no.=0 lead to an alarm message

Active D no. > 0 and active D no.=0 lead to an alarm message

Bits 3 and 4 are only relevant with active tool management.

Function:

Control of the behavior of the init. block generation on program start if a disabled tool is on the spindle and this tool is to be activated.

See also: MD20112 \$MC_START_MODE_MASK, MD20110 \$MC_RESET_MODE_MASK

On RESET, this does not affect the behavior "Keep disabled tool on the spindle active".

Bit 3=0: Standard: If the tool on the spindle is disabled, generate a tool change command requesting a replacement tool. An alarm will be generated if there is no such replacement tool.

Bit 3=1: The disabled status of the spindle tool is ignored. The tool becomes active. The subsequent part program should be formulated so that no parts are machined with the disabled tool.

Bit 4=0: Standard: The system tries to activate the spindle tool or its replacement tool

Bit 4=1: If the tool on the spindle is disabled, T0 is programmed in the start init block.

The combination of bits 3 and 4 produces the following statements:

0 / 0: Behavior as before, automatic change on NC start if a disabled tool is in the spindle

1 / 0: No automatic change

0 / 1: A T0 is automatically generated if a disabled tool is in the spindle at NC start

1 / 1: No statement

Bit 5: Reserved

Bit 6=0: Standard: If T0 or D0, only T0 or D0 is exactly programmed.

This means that MD20270 \$MC_CUTTING_EDGE_DEFAULT and MD20272 \$MC_SUMCORR_DEFAULT define, with the programming of T0 the value of D, DL.

For example, MD20270 \$MC_CUTTING_EDGE_DEFAULT=1

MD20272 \$MC_SUMCORR_DEFAULT=2

MD22550 \$MC_TOOL_CHANGE_MODE=0 (tool change with T programming)

N10 T0; T no. 0 has active number D1 and DL=2 which results in offset zero. If bit 2 is also set:

Programming of

a) T0; for tool deselection

b) D0; for offset deselection

generates an alarm, if at least one of the machine data

MD20270 \$MC_CUTTING_EDGE_DEFAULT

MD20272 \$MC_SUMCORR_DEFAULT

is not equal to zero (T0 D0 DL=0 is the correct programming).

or MD20272 \$MC_SUMCORR_DEFAULT is not equal to zero (D0 DL=0 is the correct programming).

Bit 6=1: controls the NCK response when programming (x, y, z all greater than zero), if at least one of

MD20270 \$MC_CUTTING_EDGE_DEFAULT

MD20272 \$MC_SUMCORR_DEFAULT

is not equal to zero.

a) Tx Dy -> T0

T0 is automatically programmed in NCK D0 or D0 DL=0; i.e. values not equal to zero of MD20270 \$MC_CUTTING_EDGE_DEFAULT, MD20272 \$MC_SUMCORR_DEFAULT are treated as value equal to zero.

b) Tx Dy -> T0 Dy, or T0 DL =z, or T0 Dy DL=z, or T0 D0 DL=z explicitly programmed values of D, DL are not influenced.

c) Dy DL=z -> D0

With D0, DL=0 is automatically programmed in the NCK; i.e. values in MD20272 \$MC_SUMCORR_DEFAULT unequal to zero are treated as values equal to zero.

d) Dy DL=z -> D0 DL=z

Explicitly programmed values of DL are not influenced.

If bit 2 is also set:

Only T0 / D0 have to be programmed for tool/offset deselection, and this does not generate an alarm.

The statements relating to MD20272 \$MC_SUMCORR_DEFAULT or DL are only valid if the total offset function is active

(see MD18080 \$MN_MM_TOOL_MANAGEMENT_MASK, bit 8).

Bit 7=0: When Tx is programmed, a check is made to see whether a tool with T number x is known in the T0 unit of the channel. If not, the program is stopped in this block with alarm 17190.

Bit 7=1: only if the tool basic functionality is active

(MD20310 \$MC_TOOL_MANAGEMENT_MASK, bit 0,1=0)

and (MD18102 \$MN_MM_TYPE_OF_CUTTING_EDGE=0):

When Tx is programmed, an unknown Tx is initially ignored, and the alarm relating to the preparation command (Tx) is also ignored until the D selection is interpreted in the program sequence. Only then is alarm 17191, which has been triggered by the preparation command, output. This means that the operator can take corrective actions with the D selection in this block. When the program is continued, the incorrect NC block is re-interpreted, and the preparation command is automatically executed again internally.

(This is of interest for Cutting-Edge-Default=0 or =-2 and D0 programming, otherwise the D of Cutting-Edge-Default is deselected on tool change.)

This variant is justified for programming "Tool number=Location" (revolver as toolholder) without tool management. The revolver can now be positioned on a location for which a tool has not (yet) been defined.

This bit has no meaning if bit 0=1 is set.

Bit 8=0: A tool that is located at a blocked magazine location is not taken into account when selecting a tool. (default setting)

Bit 8=1: Even a tool that is located at a blocked magazine location is taken into account when selecting a tool (this corresponds to the previous behavior.)

22600	SERUPRO_SPEED_MODE			EXP	K1	
-	Speed for block search run type 5			DWORD	Immediately	
-						
-	-	1, 1, 1, 1, 1, 1, 1, 1...	0	3	2/2	M

Description: This machine data specifies the search run mode: SERUPRO in more detail.
SERUPRO search run is activated with PI service _N_FINDBL mode parameter = 5.

2.3 NC machine data

SERUPRO means Search Run by Program test, i.e. traversing under program test from beginning of program to search target.

Note:

Program test does not move any axes/spindles.

MD22600 \$MC_SERUPRO_SPEED_MODE= 0

Program test with the search run/dry run speed

Under program test, the axes/spindles are traversed at the following velocity/speed:

Axes: MD22601 \$MC_SERUPRO_SPEED_FACTOR*dry run feed

Spindles: MD22601 \$MC_SERUPRO_SPEED_FACTOR*programmed speed

Dynamic axis / spindle limitations are not taken into account.

MD22600 \$MC_SERUPRO_SPEED_MODE= 1

Program test at programmed speed

Under program test, the axes/spindles are traversed at the following velocity/speed:

Axes: at the same velocity as dry run feed.

Spindles: at the programmed speed.

Dynamic axis / spindle limitations are taken into account.

MD22600 \$MC_SERUPRO_SPEED_MODE= 2

Program test at dry run speed

Under program test, the axes/spindles are traversed at the programmed velocity/speed.

Dynamic axis /spindle limitations are taken into account.

MD22600 \$MC_SERUPRO_SPEED_MODE= 3

Program test at search run speed

Under program test, the axes/spindles are traversed at the following velocity/speed:

Axes: MD22601 \$MC_SERUPRO_SPEED_FACTOR*programmed feed

Spindles: MD22601 \$MC_SERUPRO_SPEED_FACTOR*programmed speed.

Dynamic axis / spindle limitations are not taken into account.

Note:

With active revolutional feedrate (e.g. G95), the programmed F value is not multiplied by the factor MD22601 \$MC_SERUPRO_SPEED_FACTOR but only by the programmed spindle speed. Here again, this increases the effective path velocity by the MD22601 \$MC_SERUPRO_SPEED_FACTOR.

Related to:

SD42100 \$SC_DRY_RUN_FEED, MD22601 \$MC_SERUPRO_SPEED_FACTOR

22601	SERUPRO_SPEED_FACTOR			EXP	K1	
-	Speed factor for search run type 5			DOUBLE	Immediately	
-						
-	-	10.0, 10.0, 10.0, 10.0, 10.0, 10.0, 10.0, 10.0...	1.0	-	2/2	M

Description: SERUPRO means Search Run by Program test, i.e. traversing under program test from beginning of program to search target.

Note:

Program test does not move any axes / spindles.

The machine data is relevant only if the first two bits of MD22600

\$MC_SERUPRO_SPEED_MODE are 0. The machine data has the following meaning:

Axes: MD specifies the factor by which the test run feedrate is multiplied.

Spindles: MD specifies the factor by which the programmed speed is multiplied.

Dynamic limitations of axes / spindles are always ignored.

Related to:

SD42100 \$SC_DRY_RUN_FEED, MD22600 \$MC_SERUPRO_SPEED_MODE

22620	START_MODE_MASK_PRT			EXP, C03	M3, K1	
-	Initial setting on special starts			UDWORD	Reset	
-						
-	-	0x400, 0x400, 0x400, 0x400, 0x400, 0x400, 0x400, 0x400...	0	0xFFFF	7/2	M

Description: This machine data is activated via MD22621 \$MC_ENABLE_START_MODE_MASK_PRT.
 If MD22621 \$MC_ENABLE_START_MODE_MASK_PRT is in its initial setting, MD22620 \$MC_START_MODE_MASK_PRT is inactive.
 If MD22620 \$MC_START_MODE_MASK_PRT is activated for "search via program test" (abbr. SERUPRO), then MD22620 \$MC_START_MODE_MASK_PRT replaces MD20112 \$MC_START_MODE_MASK when "search via program test" is started.
 This enables a behavior deviating from PLC start to be set at the start of the search. The meaning of the bit-by-bit assignment of MD22620 \$MC_START_MODE_MASK_PRT is the same as that in MD20112 \$MC_START_MODE_MASK.

22621	ENABLE_START_MODE_MASK_PRT			EXP, C03	M3, K1	
-	Enables MD22620 \$MC_START_MODE_MASK_PRT			UDWORD	Reset	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0	0x1	7/2	M

Description: MD22620 \$MC_START_MODE_MASK_PRT is activated via MD22621 \$MC_ENABLE_START_MODE_MASK_PRT.
 If MD22621 \$MC_ENABLE_START_MODE_MASK_PRT is in its initial setting, MD22620 \$MC_START_MODE_MASK_PRT is inactive.
 Bit0 = 1:
 If a "search via program test" (English abbr. SERUPRO) is started from RESET (PI service _N_FINDBL mode parameter == 5), MD22620 \$MC_START_MODE_MASK_PRT replaces MD20112 \$MC_START_MODE_MASK.
 This method can be used to set a start behavior differing from PLC start when the search is started.

22622	DISABLE_PLC_START			EXP	-	
-	Enable part program start via PLC			UDWORD	PowerOn	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0	0x7FFFFFFF	2/2	M

Description: Allow part program start via PLC.
 This machine data will ONLY be evaluated, if "Group-Serupro" mode is switched on. "Group-Serupro" is switched on by means of "\$MC_SERUPRO_MODE BIT2".
 BIT0 = 0
 A part program can be started in this channel only via the PLC. Starting via the part program command "START" is interlocked.
 BIT0 = 1
 A part program can be started in this channel only by means of the part program command "START" from another channel. Starting via the PLC is interlocked.

22680	AUTO_IPTR_LOCK			EXP, C03	K1	
-	Disable interrupt pointer			UDWORD	Reset	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0	0x3	7/2	M

22700	TRACE_STARTTRACE_EVENT				EXP, C06	-	
-	Diagnostic data rec. starts with event TRACE_STARTTRACE_EVENT.				STRING	PowerOn	
NBUP							
-	-	-	-	-	2/2	M	

22702	TRACE_STARTTRACE_STEP			EXP, C06	-	
-	Conditions for start of trace recording			STRING	PowerOn	
NBUP						
-	2		-	-	2/2	M

22704	TRACE_STOPTRACE_EVENT			EXP, C06	-	
-	Conditions for stop of trace recording			STRING	PowerOn	
NBUP						
-	-	CLEARCANCELALAR M_M, CLEARCANCELALAR M_M, CLEARCANCELALAR M_M, CLEA...	-	-	2/2	M

22706	TRACE_STOPTRACE_STEP			EXP, C06	-	
-	CommandSequenzStep with which the recording ends			STRING	PowerOn	
NBUP						
-	2		-	-	2/2	M

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22708	TRACE_SCOPE_MASK				EXP, C06	-	
-	Selects the contents of the trace file				STRING	PowerOn	
NBUP							
-	-	-	-	-	2/2	M	

Description: The machine data is only intended for diagnostics purposes.
Specific trace contents are selected with the MD data.
The entry SETALARM records the alarm environment and the block change in the main run is also logged by means of BLOCK_CHANGE.
The machine data is additionally activated using the Cancel alarm key.

22710	TRACE_VARIABLE_NAME			-	-	
-	Definition of trace data			STRING	PowerOn	
NBUP						
-	10	BL_NR, TR_POINT, EV_TYPE, EV_SRC, CS_ASTEP,, BL_NR, TR_POINT, EV...	-	-	2/2	M

Description: The machine data is only intended for diagnostic purposes.
The MD datum defines which data are recorded in the trace file.

22712	TRACE_VARIABLE_INDEX			EXP, C06	-	
-	Index for trace recording data			DWORD	PowerOn	
NBUP						
-	10	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0,....	0	0xFFFF	2/2	M

Description: The machine data is only intended for diagnostic use.
The MD data, together with TRACE_VARIABLE_NAME, determines which data are recorded in the trace file.
It enables access to an array element.
E.g. use as an axis index when accessing axis data.

22714	MM_TRACE_DATA_FUNCTION			EXP, C02, C06	-	
-	Activating diagnostics			UDWORD	PowerOn	
NBUP						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0	0x3FFFFFFF	2/2	M

Description: The machine data is only intended for diagnostic purposes.
Activating diagnostics
An internal ring buffer records important events.
After a trigger event, the 'Cancel alarm' key is set as default,
the ring buffer is briefly frozen, read, and converted into an ASCII file
in the part program directory. The file name for the 1st channel
is ncsctr01.mpf and for the 7th channel it is ncsctr07.mpf.
The data in the ring buffer is referred to as dynamic data in the following.
In addition to the trigger event, other up-to-date data is read from the
NCK and transferred to the ASCII file. These recordings do
NOT have a history and are referred to as static data in the following.
Bit no. Significance when bit is set

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```

-----
0 (LSB) Recording of dynamic data (see TRACE_VARIABLE_NAME)
1   Recording of block control static data
2   Recording of alarm data static data
3   Recording of process data static data
4   Recording of command sequence static data
5   Recording of tool management static data
6   Recording of the NCK version file. Static data
7   Recording of the states of the current block
   Various states of the axes and the SPARPI. Static data
8   Recording of various states of the channel. Static data
9   Error states in the NCK memory management are scanned during trace generation.
   An error renames the trace file. Static data
   Possible names and their meanings:
   NCFIER.MPF   Error in the file system
   NCSLER.MPF   Error during string creation
   NCFIER.MPF   Error on New/Delete
10  All block changes in the interpreter are recorded. Dynamic data.
11  Axial VDI signals are recorded. Dynamic data.
   Only in conjunction with MD18794 $MN_MM_TRACE_VDI_SIGNAL
12  OEM traces are activated. Dynamic data.
13  Synchronized actions are recorded. Dynamic data.
   NOTICE: Filled in applications with intensive use of
   these trace points, other events are ignored!
   That is why this bit should remain at 0 in these cases.
14  Reserved.
15  Recording of station commands. Dynamic data.
   Note: Most important output of the NCK module NCSC!
16  Recording of gantry commands
17  Recording of changes in the drive's status
18  Recording of the processing of the Event-Queue and generation of command sequences
19  Recording of time of event destructor calls
20  Recording of the dynamic limitations per block (only active when bit 0 is set).
21  Recording of the Look Ahead data (only active when bit 0 is set).
22  Recording of all Functions Config data.
   Both a static part as well as a block-related part with the dynamic block data
   are output at the time of trace generation.
22  Config data output (static)
23  Recording if computing time is given away during preprocessing (only active when
   bit 0 is set).
24  Recording of multi-threading sequences (Multicore).
25  Recording of the external communication.

```

22900	STROKE_CHECK_INSIDE			EXP, C01, C11	-	
-	Direction (inside/outside) in which prot. zone 3 is effective			BOOLEAN	PowerOn	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/2	M

Description: This MD defines whether protection zone 3 is a protection zone inside or outside.
Meaning:
0: Protection zone 3 is a protection zone inside, i.e. the protection zone must not entered inwardly.
1: Protection zone 3 is a protection zone outside

22910	WEIGHTING_FACTOR_FOR_SCALE			EXP, C01, C11	-	
-	Input resolution for scaling factor			BOOLEAN	PowerOn	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/2	M

Description: Definition of the unit for the scaling factor P and for the axial scaling factors I, J, K.
Meaning:
0 Scale factor in 0.001
1 Scale factor in 0.00001
Related to:
SD43120 \$SA_DEFAULT_SCALE_FACTOR_AXIS,
SD42140 \$SC_DEFAULT_SCALE_FACTOR_P

22914	AXES_SCALE_ENABLE			EXP, C01, C11	-	
-	Activation for axial scaling factor (G51)			BOOLEAN	PowerOn	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/2	M

Description: This MD enables axial scaling.
Meaning:
0: Axial scaling not possible
1: Axial scaling possible -> MD DEFAULT_SCALE_FACTOR_AXIS is active
Related to:
SD43120 \$SA_DEFAULT_SCALE_FACTOR_AXIS

22920	EXTERN_FIXED_FEEDRATE_F1_ON			EXP, C01, C11	-	
-	Activation of fixed feedrates F1 - F9			BOOLEAN	PowerOn	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/2	M

Description: This MD is used to activate the fixed feedrates set in SD42160 \$SC_EXTERN_FIXED_FEEDRATE_F1_F9[].
Meaning:
0: no fixed feedrates with F1 - F9
1: the feedrates set in SD42160 \$SC_EXTERN_FIXED_FEEDRATE_F1_F9[] become active when F1 - F9 are programmed.

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22930	EXTERN_PARALLEL_GEOAX			EXP, C01, C11	-	
-	Assignment of a parallel channel axis to the geometry axis			BYTE	PowerOn	
-						
-	3	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0...	0	20	7/2	M

Description:

Assignment table of the axes positioned parallel to the geometry axes.

This table can be used to assign channel axes positioned parallel to the geometry axes. The parallel axes can then be activated as geometry axes in ISO mode using the G functions of plane selection (G17 - G19) and the axis name of the parallel axis.

The axis is then replaced by the axis defined via MD20050

\$MC_AXCONF_GEOAX_ASSIGN_TAB[].

Prerequisite:

The channel axes used must be active. (list position assigned in AXCONF_MACHAX_USED). Entering zero deactivates the corresponding parallel geometry axis:

24000	FRAME_ADD_COMPONENTS			C03	K2	
-	Frame components for G58 and G59			BOOLEAN	PowerOn	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/7	U

Description:

Additive programmable frame components can be separately programmed and modified.

0: Additive translations which have been programmed with ATRANS are stored in the frame together with the absolute translation (prog. with TRANS).

G58 and G59 are not possible.

1: The sum of the additive translations are stored in the fine offset of the programmable frame. The absolute and the additive translations can be changed independently of one another.

G58 and G59 are possible.

24002	CHBFRAME_RESET_MASK			C03	K2	
-	Active channel-specific base frames after reset			UDWORD	Reset	
-						
-	-	0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF...	0	0xFFFF	7/2	M

Description:

Bit mask for the reset setting of the channel-specific base frames which are included in the channel.

The following apply:

If MD20110 \$MC_RESET_MODE_MASK bit0 = 1 and BIT14 = 1

the entire base frame is determined on reset by chaining the base frame field elements, whose bit is 1 in the bit mask.

If MD20110 \$MC_RESET_MODE_MASK bit0 = 1 and BIT14 = 0

the entire base frame is deselected on reset.

24004	CHBFRAME_POWERON_MASK			C03	K2	
-	Reset channel-specific base frames after power on			UDWORD	PowerOn	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0	0xFFFF	7/2	M

Description: This machine data defines whether channel-specific base frames are reset in the data management on Power On.

That is

- Offsets and rotations are set to 0,
- Scalings are set to 1.
- Mirror image machining is disabled.

The selection can be made separately for individual base frames.

Bit 0 means base frame 0, bit 1 base frame 1 etc.

Value=0: Base frame is retained on Power On

Value=1: Base frame is reset in the data management on Power On.

Related to:

MD10615 \$MN_NCBFRAME_POWERON_MASK

24006	CHSFRAME_RESET_MASK			C03	K2	
-	Active system frames after reset			UDWORD	Reset	
-						
-	-	0x1, 0x1, 0x1, 0x1, 0x1, 0x1, 0x1, 0x1...	0	0x00000FFF	7/2	M

Description: Bit mask used for the reset setting of the channel-specific system frames included in the channel.

Bit 0: System frame for actual value setting and scratching is active after reset.

Bit 1: System frame for external work offset is active after reset.

Bit 2: Reserved, for TCARR and PAROT see MD20150 \$MC_GCODE_RESET_VALUES[].

Bit 3: Reserved, for TOROT and TOFRAME see MD20150 \$MC_GCODE_RESET_VALUES[].

Bit 4: System frame for workpiece reference points is active after reset.

Bit 5: System frame for cycles is active after reset.

Bit 6: Reserved; reset behavior dependent on MD20110 \$MC_RESET_MODE_MASK.

Bit 7: System frame \$P_ISO1FR (ISO G51.1 Mirror) is active after reset.

Bit 8: System frame \$P_ISO2FR (ISO G68 2DROT) is active after reset.

Bit 9: System frame \$P_ISO3FR (ISO G68 3DROT) is active after reset.

Bit 10: System frame \$P_ISO4FR (ISO G51 Scale) is active after reset.

Bit 11: System frame \$P_RELFR is active after reset.

Related to:

MD28082 \$MC_MM_SYSTEM_FRAME_MASK

24007	CHSFRAME_RESET_CLEAR_MASK			C03	K2	
-	Deletion of system frames after reset			UDWORD	Reset	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0	0x00000FFF	7/2	M

Description: Bit mask used to delete channel-specific system frames from the data management on reset.

Bit 0: System frame for actual value setting and scratching is deleted on reset.

Bit 1: System frame for external work offset is deleted on reset.

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Bit 2: Reserved, for TCARR and PAROT, see MD20150 \$MC_GCODE_RESET_VALUES[].
 Bit 3: Reserved, for TOROT and TOFRAME, see MD20150 \$MC_GCODE_RESET_VALUES[].
 Bit 4: System frame for workpiece reference points is deleted on reset.
 Bit 5: System frame for cycles is deleted on reset.
 Bit 6: Reserved; reset behavior depends on MD20110 \$MC_RESET_MODE_MASK.
 Bit 7: System frame \$P_ISO1FR (ISO G51.1 Mirror) is deleted on reset.
 Bit 8: System frame \$P_ISO2FR (ISO G68 2DROT) is deleted on reset.
 Bit 9: System frame \$P_ISO3FR (ISO G68 3DROT) is deleted on reset.
 Bit 10: System frame \$P_ISO4FR (ISO G51 Scale) is deleted on reset.
 Bit 11: System frame \$P_RELFR is deleted on reset.

24008	CHSFRAME_POWERON_MASK			C03	K2	
-	Reset channel system frames after power on			UDWORD	PowerOn	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0	0x00000FFF	7/2	M

Description: This machine data defines whether channel-specific system frames are reset in the data management on Power On. That is offsets and rotations are set to 0, scalings to 1. Mirroring is disabled.

The selection can be made separately for individual system frames.

Bit 0: System frame for set actual value and scratching is deleted after Power On.
 Bit 1: System frame for external work offset is deleted after Power On.
 Bit 2: System frame for TCARR and PAROT is deleted after Power On.
 Bit 3: System frame for TOROT and TOFRAME is deleted after Power On.
 Bit 4: System frame for work piece reference points deleted after Power On.
 Bit 5: System frame for cycles retained after Power On.
 Bit 6: System frame for transformations deleted after Power On.
 Bit 7: System frame \$P_ISO1FR (ISO G51.1 Mirror) is deleted after power ON.
 Bit 8: System frame \$P_ISO2FR (ISO G68 2DROT) is deleted after power ON.
 Bit 9: System frame \$P_ISO3FR (ISO G68 3DROT) is deleted after power ON.
 Bit 10: System frame \$P_ISO4FR (ISO G51 Scale) is deleted after power ON.
 Bit 11: System frame \$P_RELFR is deleted after power ON.

Related to:

MD28082 \$MC_MM_SYSTEM_FRAME_MASK

24010	PFRAME_RESET_MODE			C03	K2	
-	Reset mode for programmable frame			DWORD	Reset	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	1	7/2	M

Description: 0: Programmable frame is deleted at reset.
1: Programmable frame remains active at reset.

24020	FRAME_SUPPRESS_MODE			C03	K2	
-	Positions for frame suppression			UDWORD	PowerOn	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0	0x0000003	7/2	M

Description: Bit mask for configuring the positions for frame suppressions (SUPA, G153, G53).
The following rule applies:
Bit 0: Positions for display (OPI) without frame suppression

Bit 1: Position variables without frame suppression

24030	FRAME_ACS_SET			C03	K2	
-	Adjustment of SZS coordinate system			DWORD	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	1	7/2	M

Description:

0: SZS results from the Work transformed with \$P_CYCFRAME and \$P_PFRAME.
 1: SZS results from the Work transformed with the \$P_CYCFRAME.

24040	FRAME_ADAPT_MODE			C03	K2	
-	Adaptation of active frames			UDWORD	PowerOn	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0. 0x0. 0x0. 0x0...	0	0x0000007	7/2	M

Description:

Bit mask for adapting the active frames or axis configuration
 The following applies:
 Bit 0:
 Rotations in active frames that rotate coordinate axes for which there are no geometry axes are deleted from the active frames.
 Bit 1:
 Shear angles in active frames are orthogonalized.
 Bit 2:
 Scalings of all geometry axes in the active frames are set to value 1.

24050	FRAME_SAA_MODE			C03	-	
-	Saving and activating of data management frames			UDWORD	PowerOn	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0	0x0000003	7/2	M

Description:

Bit mask for saving and activating data management frames.
 The following applies:
 Bit 0:
 Data management frames are only activated by programming the bit masks \$P_CHBFRMASK, \$P_NCBFRMASK and \$P_CHSFRMASK. G500..G599 only activate the relevant settable frame, GFRAME0..GFRAME100 only activate the corresponding grinding frame. The reset behavior is independent of this.
 Bit 1:
 Data handling frames are not written implicitly by system functions such as TOROT, PAROT, ext. work offset, transformations.

24080	USER_FRAME_POWERON_MASK			N01	-	
-	Parameterize properties for settable frame			UDWORD	PowerOn	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0. 0x0. 0x0. 0x0...	0	0x1	7/2	M

Description:

Setting the following bits activates certain properties of the settable frame:
 Bit 0 = 0: default behavior.
 Bit 0 = 1: if MD20152 \$MC_GCODE_RESET_MODE[7] = 1, the last active settable frame is selected again according to G code group 8 after power up of the control.

2.3 NC machine data

24100	TRAFO_TYPE_1	C07	F2, TE4, M1, K1, W1
-	Definition of transformation 1 in channel	DWORD	NEW CONF
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	- - 7/7 U

Description:

This MD specifies the first available transformation in each channel.

The 4 low-value bits identify the specific transformation of a specific transformation group. The transformation group is identified by a number starting with the 5th bit.

Meaning:

0 No transformation

ab 16

5-axis transformation with turnable tool

ab 32

5-axis transformation with turnable workpiece

ab 48

5-axis transformation with turnable tool and turnable workpiece

72

Generic 5-axis transformation. Type and kinematic data are determined by an associated, orientable toolholder.

see:

MD24582 \$MC_TRAFO5_TCARR_NO_1

MD24682 \$MC_TRAFO5_TCARR_NO_2

The 4 low-value bits have the following meaning for a 5-axis transformation:

0 axis sequence AB

1 axis sequence AC

2 axis sequence BA

3 axis sequence BC

4 axis sequence CA

5 axis sequence CB

8 Generic orientation transformation (3- 5 axes)

ab 256

TRANSMIT transformation

ab 512

TRACYL transformation

ab 1024

TRAANG transformation

2048

TRACLG: centerless transformation

ab 4096 bis 4098

OEM transformation

ab 8192

TRACON: cascaded transformations

Example:

A 5-axis transformation with turnable tool and axis sequence CA (i.e. C axis turns A axis) has number 20 (= 16 + 4)

Notice:

Not all combinations of group numbers and axis sequence numbers are allowed. An error message is output if a number for a non-existent transformation is entered.

Corresponds with:

MD24200 \$MC_TRAFO_TYPE_2, MD24300 \$MC_TRAFO_TYPE_3, ... MD24460 \$MC_TRAFO_TYPE_8

References:

/FB/, F2, "5-Axis Transformation"

24110	TRAFO_AXES_IN_1			C07	F2, TE4, M1, K1, W1	
-	Axis assignment for the 1st transformation in the channel			BYTE	NEW CONF	
-						
-	20	1, 2, 3, 4, 5, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,, ...	0	20	7/7	U

Description:

Axis assignment at input point of 1st transformation

The index input at the nth position states which axis is mapped internally from the transformation to axis n.

Not relevant:

No transformation

Related to:

MD24200 \$MC_TRAFO_TYPE_2, MD24300 \$MC_TRAFO_TYPE_3, ...

MD24460 \$MC_TRAFO_TYPE_8

References:

/FB/, F2, "5-Axis Transformation"

24120	TRAFO_GEOAX_ASSIGN_TAB_1			C07	F2, TE4, TE4, M1, K1, W1	
-	Assignment of the geometry axes to channel axes for transformation 1			BYTE	NEW CONF	
-						
-	3	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0...	0	20	7/7	U

Description:

This MD states the channel axes on which the axes of the cartesian coordinate system are mapped for active transformation 1.

Not relevant:

No transformation

Related to:

MD20050 \$MC_AXCONF_GEOAX_ASSIGN_TAB, if no transformation is active.

References:

/FB/, K2, "Coordinate Systems, Axis Types, Axis Configurations, Workpiece-Related Actual Value System, External Work Offset"

24130	TRAFO_INCLUDES_TOOL_1			C07	-	
-	Tool handling with active 1st transformation			BOOLEAN	NEW CONF	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description:

This machine data states for each channel whether the tool is handled during the 1st transformation or externally.

This machine data is evaluated only with specific transformations.

It is evaluated on the condition that the orientation of the tool with reference to the Basic Coordinate System cannot be changed by the transformation. In standard transformations, only the "inclined-axis transformation" fulfills this condition.

If this machine data is set, the Basic Coordinate System (BCS) refers to the tool reference point even with active transformations. Otherwise, it refers to the tool tip (Tool Center Point - TCP).

2.3 NC machine data

The method of operation of protection zones and working area limitations varies correspondingly.

24200	TRAFO_TYPE_2			C07	F2, M1	
-	Definition of the 2nd transformation in the channel			DWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-	-	7/7	U

Description: This MD states the second available transformation in each channel.
 Same as TRAFO_TYPE_1, but for the second available transformation in the channel.
 References:
 /FB/, F2, "5-Axis Transformation"

24210	TRAFO_AXES_IN_2			C07	F2, M1	
-	Axis assignment for transformation 2			BYTE	NEW CONF	
-						
-	20	1, 2, 3, 4, 5, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, ...	0	20	7/7	U

Description: TRAFO_AXES_IN_2 (n)
 Axis assignment at input of 2nd to 8th transformation.
 Same meaning as for TRAFO_AXES_IN_1.

24220	TRAFO_GEOAX_ASSIGN_TAB_2			C07	F2, M1	
-	Assignment of geometry axes to channel axes for transformation 2			BYTE	NEW CONF	
-						
-	3	0, 0				

Description: This MD states the channel axes on which the axes of the cartesian coordinate system are mapped for active transformation 2.
 Otherwise the meaning corresponds to TRAFO_GEOAX_ASSIGN_TAB_1.

24230	TRAFO_INCLUDES_TOOL_2			C07	-	
-	Tool handling with active 2nd transformation			BOOLEAN	NEW CONF	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description: This machine data states for each channel whether the tool is handled during the 2nd transformation or externally.
 This machine data is evaluated only with specific transformations.
 It is evaluated on the condition that the orientation of the tool with reference to the Basic Coordinate System cannot be changed by the transformation. In standard transformations, only "inclined-axis transformation" fulfills this condition.
 If this machine data is set, the Basic Coordinate System (BCS) refers to the tool reference point even with active transformations. Otherwise, it refers to the tool tip (Tool Center Point - TCP).
 The method of operation of protection zones and working area limitations varies correspondingly.

24300	TRAFO_TYPE_3			C07	M1	
-	Definition of the 3rd transformation in the channel			DWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-	-	7/7	U

Description: This MD states the third available transformation in each channel.
 Same as TRAFO_TYPE_1, but for the third available transformation in the channel.
 References:
 /FB/, F2, "5-Axis Transformation"

24310	TRAFO_AXES_IN_3			C07	M1	
-	Axis assignment for transformation 3			BYTE	NEW CONF	
-						
-	20	1, 2, 3, 4, 5, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,, ...	0	20	7/7	U

Description: Axis assignment at the input point of the 3rd transformation in the channel.
 Meaning is the same as TRAFO_AXES_IN_1, but for the third available transformation in the channel.

24320	TRAFO_GEOAX_ASSIGN_TAB_3			C07	M1	
-	Assignment of geometry axes to channel axes for transformation 3			BYTE	NEW CONF	
-						
-	3	0, 0,				

Description: This MD states the channel axes on which the axes of the cartesian coordinate system are mapped for active transformation 3.
 Otherwise the meaning corresponds to TRAFO_GEOAX_ASSIGN_TAB_1.

24330	TRAFO_INCLUDES_TOOL_3			C07	-	
-	Tool handling with active 3rd transformation			BOOLEAN	NEW CONF	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description: This machine data states for each channel whether the tool is handled during the 3rd transformation or externally.
 This machine data is evaluated only with specific transformations.
 It is evaluated on the condition that the orientation of the tool with reference to the Basic Coordinate System cannot be changed by the transformation. In standard transformations, only "inclined-axis transformation" fulfills this condition.
 If this machine data is set, the Basic Coordinate System (BCS) refers to the tool reference point even with active transformations. Otherwise, it refers to the tool tip (Tool Center Point - TCP).
 The method of operation of protection zones and working area limitations varies correspondingly.

2.3 NC machine data

24400	TRAFO_TYPE_4			C07	M1	
-	Definition of the 4th transformation in the channel			DWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-	-	7/7	U

Description: This MD states the fourth available transformation in each channel.
 Same as TRAFO_TYPE_1, but for the fourth available transformation in the channel.
 References:
 /FB/, F2, "5-Axis Transformation"

24410	TRAFO_AXES_IN_4			C07	F2, M1	
-	Axis assignment for the 4th transformation in the channel			BYTE	NEW CONF	
-						
-	20	1, 2, 3, 4, 5, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, ...	0	20	7/7	U

Description: Axis assignment at the input point of the 4th transformation in the channel.
 Meaning is the same as TRAFO_AXES_IN_1, but for the fourth available transformation in the channel.

24420	TRAFO_GEOAX_ASSIGN_TAB_4			C07	M1	
-	Assignment of geometry axes to channel axes for transformation 4			BYTE	NEW CONF	
-						
-	3	0, 0,				

Description: This MD states the channel axes on which the axes of the cartesian coordinate system are mapped for active transformation 4.
 Otherwise the meaning corresponds to TRAFO_GEOAX_ASSIGN_TAB_1.

24426	TRAFO_INCLUDES_TOOL_4			C07	-	
-	Tool handling with active 4th transformation			BOOLEAN	NEW CONF	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description: This machine data states for each channel whether the tool is handled during the 4th transformation or externally.
 This machine data is evaluated only with specific transformations.
 It is evaluated on the condition that the orientation of the tool with reference to to the Basic Coordinate System cannot be changed by the transformation. In standard transformations, only "inclined-axis transformation" fulfills this condition.
 If this machine data is set, the Basic Coordinate System (BCS) refers to the tool reference point even with active transformations. Otherwise, it refers to the tool tip (Tool Center Point - TCP).
 The method of operation of protection zones and working area limitations varies correspondingly.

24430	TRAFO_TYPE_5			C07	M1	
-	Type of transformation 5 in the channel			DWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-	-	7/7	U

Description: Type of transformation available as the fifth in the channel. See MD24100 \$MC_TRAFO_TYPE_1 for explanation.

24432	TRAFO_AXES_IN_5			C07	F2	
-	Axis assignment for transformation 5			BYTE	NEW CONF	
-						
-	20	1, 2, 3, 4, 5, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, ...	0	20	7/7	U

Description: Axis assignment at the input point of the 5th transformation. See TRAFO_AXES_IN_1 for explanation.

24434	TRAFO_GEOAX_ASSIGN_TAB_5			C07	M1	
-	Assignment of geometry axes to channel axes for transformation 5			BYTE	NEW CONF	
-						
-	3	0, 0				

Description: This MD states the channel axes on which the axes of the cartesian coordinate system are mapped for active transformation 5.
Otherwise the meaning corresponds to TRAFO_GEOAX_ASSIGN_TAB_1.

24436	TRAFO_INCLUDES_TOOL_5			C07	-	
-	Tool handling with active 5th transformation			BOOLEAN	NEW CONF	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description: This machine data states for each channel whether the tool is handled during the 5th transformation or externally.
This machine data is evaluated only with specific transformations.
It is evaluated on the condition that the orientation of the tool with reference to the Basic Coordinate System cannot be changed by the transformation. In standard transformations, only "inclined-axis transformation" fulfills this condition.
If this machine data is set, the Basic Coordinate System (BCS) refers to the tool reference point even with active transformations. Otherwise, it refers to the tool tip (Tool Center Point - TCP).
The method of operation of protection zones and working area limitations varies correspondingly.

24440	TRAFO_TYPE_6			C07	-	
-	Type of transformation 6 in the channel			DWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-	-	7/7	U

Description: Type of transformation available as the sixth in the channel. See MD24100 \$MC_TRAFO_TYPE_1 for explanation.

2.3 NC machine data

24442	TRAFO_AXES_IN_6			C07	-	
-	Axis assignment for transformation 6			BYTE	NEW CONF	
-						
-	20	1, 2, 3, 4, 5, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, ...	0	20	7/7	U

Description: Axis assignment at the input point of the 6th transformation. See TRAFO_AXES_IN_1 for explanation.

24444	TRAFO_GEOAX_ASSIGN_TAB_6			C07	-	
-	Assignment of geometry axes to channel axes for transformation 6			BYTE	NEW CONF	
-						
-	3	0, 0,				

Description: This MD states the channel axes on which the axes of the cartesian coordinate system are mapped for active transformation 6.

Otherwise the meaning corresponds to TRAFO_GEOAX_ASSIGN_TAB_1.

24446	TRAFO_INCLUDES_TOOL_6			C07	-	
-	Tool handling with active 6th transformation			BOOLEAN	NEW CONF	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description: This machine data states for each channel whether the tool is handled during the 6th transformation or externally.

This machine data is evaluated only with specific transformations.

It is evaluated on the condition that the orientation of the tool with reference to the Basic Coordinate System cannot be changed by the transformation. In standard transformations, only "inclined-axis transformation" fulfills this condition.

If this machine data is set, the Basic Coordinate System (BCS) refers to the tool reference point even with active transformations. Otherwise, it refers to the tool tip (Tool Center Point - TCP).

The method of operation of protection zones and working area limitations varies correspondingly.

24450	TRAFO_TYPE_7			C07	-	
-	Type of transformation 7 in the channel			DWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-	-	7/7	U

Description: Type of transformation available as the seventh in the channel. See MD24100 \$MC_TRAFO_TYPE_1 for explanation.

24452	TRAFO_AXES_IN_7			C07	-	
-	Axis assignment for transformation 7			BYTE	NEW CONF	
-						
-	20	1, 2, 3, 4, 5, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, ...	0	20	7/7	U

24454	TRAFO_GEOAX_ASSIGN_TAB_7			C07	-	
-	Assignment of geometry axes to channel axes for transformation 7			BYTE	NEW CONF	
-						
-	3	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0...	0	20	7/7	U

24456	TRAFO_INCLUDES_TOOL_7			C07	-	
-	Tool handling with active 7th transformation			BOOLEAN	NEW CONF	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

24460	TRAFO_TYPE_8			C07	F2, TE4, M1	
-	Type of transformation 8 in the channel			DWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-	-	7/7	U

24462	TRAFO_AXES_IN_8			C07	F2	
-	Axis assignment for transformation 8			BYTE	NEW CONF	
-						
-	20	1, 2, 3, 4, 5, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,, ...	0	20	7/7	U

Machine data and parameters
List Manual, 05/2017, A5E40870388

Description: This MD states the channel axes on which the axes of the cartesian coordinate system are mapped for active transformation 8.
Otherwise the meaning corresponds to TRAFO_GEOAX_ASSIGN_TAB_1.

Description: This machine data states for each channel whether the tool is handled during the 8th transformation or externally.

This machine data is evaluated only with specific transformations.

It is evaluated on the condition that the orientation of the tool with reference to the Basic Coordinate System cannot be changed by the transformation. In standard transformations, only "inclined-axis transformation" fulfills this condition.

If this machine data is set, the Basic Coordinate System (BCS) refers to the tool reference point even with active transformations. Otherwise, it refers to the tool tip (Tool Center Point - TCP).

The method of operation of protection zones and working area limitations varies correspondingly.

Description:	Type of transformation available as the ninth in the channel. See MD24100 \$MC_TRAFO_TYPE_1 for explanation.

Description:	Axis assignment at the input point of the 9th transformation. See TRAFO_AXES_IN_1 for explanation.

Machine data and parameters
List Manual, 05/2017, A5E40870388

Description: This MD states the channel axes on which the axes of the cartesian coordinate system are mapped for active transformation 9.

24476	TRAFO_INCLUDES_TOOL_9			C07	-	
-	Treatment of tool with active 9th transformation			BOOLEAN	NEW CONF	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description: Same as TRAFO_INCLUDES_TOOL_1, but for the 9th transformation.

24480	TRAFO_TYPE_10			C07	F2, M1	
-	Transformation 10 in channel			DWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-	-	7/7	U

Description: Same as TRAFO_TYPE_1, but for the tenth available transformation in the channel.

24482	TRAFO_AXES_IN_10			C07	F2, M1	
-	Axis assignment for transformation 10			BYTE	NEW CONF	
-						
-	20	1, 2, 3, 4, 5, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, ...	0	20	7/7	U

Description: Axis assignment at the input of the 10th transformation. See TRAFO_AXES_IN_1 for explanation.

24484	TRAFO_GEOAX_ASSIGN_TAB_10			C07	M1	
-	Assignment of geometry axes to channel axes for transformation 10			BYTE	NEW CONF	
-						
-	3	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0. 0. 0. 0...	0	20	7/7	U

Description: Assignment table of geometry axes with transformation 10
Same as AXCONF_GEOAX_ASSIGN_TAB, but only effective when transformation 10 is active.

24486	TRAFO_INCLUDES_TOOL_10			C07	-	
-	Treatment of tool with active 10th transformation			BOOLEAN	NEW CONF	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description: Same as TRAFO_INCLUDES_TOOL_1, but for the 10th transformation.

24500	TRAFO5_PART_OFFSET_1			C07	F2, M1	
mm	Offset vector of 5-axis transformation 1			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

2.3 NC machine data

Description:

This machine data designates an offset of the workpiece carrier for the first (MD24500 \$MC_TRAFO5_PART_OFFSET_1) or second (MD24600 \$MC_TRAFO5_PART_OFFSET_2) 5-axis transformation of a channel, and has a specific meaning for the different machine types:

Machine type 1 (two-axis swivel head for tool):

Vector from machine reference point to zero point of workpiece table. This will generally be a zero vector if both coincide.

Machine type 2 (two-axis rotary table for workpiece):

Vector from the second rotary joint of workpiece rotary table to zero point of table.

Machine type 3 (single-axis rotary table for workpiece and single-axis swivel head for tool):

Vector from rotary joint of workpiece table to zero point of table.

MD irrelevant:

if the "5-Axis Transformation" option is not installed.

24510	TRAFO5_ROT_AX_OFFSET_1			C07	F2, M1	
degrees	Position offset of rotary axes 1/2/3 for 5-axis transformation 1			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0,...	-	-	7/7	U

Description:

This machine data designates the angular offset of the first or second rotary axis in degrees for the first 5-axis transformation of a channel.

MD irrelevant:

if the "5-Axis Transformation" option is not installed.

24520	TRAFO5_ROT_SIGN_IS_PLUS_1			C07	F2, M1	
-	Sign of rotary axis 1/2/3 for 5-axis transformation 1			BOOLEAN	NEW CONF	
-						
-	3	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description:

This machine data designates the sign with which the two rotary axes are included in the first 5-axis transformation of a channel.

MD = 0 (FALSE):

Sign is reversed.

MD = 1 (TRUE) :

Sign is not reversed and the traversing direction is defined according to MD32100 \$MA_AX_MOTION_DIR.

This machine data does not mean that the rotational direction of the rotary axis concerned is to be reversed, but specifies whether its motion is in the mathematically positive or negative direction when the axis is moving in the positive direction.

The result of a change to this machine data is not therefore a change in the rotational direction, but a change in the compensatory motion of the linear axes.

However, if a directional vector and thus, implicitly, a compensatory motion is specified, the result is a change in the rotational direction of the rotary axis concerned.

On a real machine, therefore, the machine data may be set to FALSE (or zero) only if the rotary axis is turning in an anti-clockwise direction when moving in a positive direction.

MD irrelevant:

if the "5-Axis Transformation" option is not installed.

24530	TRAFO5_NON_POLE_LIMIT_1			C07	F2	
degrees	Definition of pole range for 5-axis transformation 1			DOUBLE	NEW CONF	
-						
-	-	2.0, 2.0, 2.0, 2.0, 2.0, 2.0, 2.0, 2.0...	-	-	7/7	U

Description: This MD designates a limit angle for the fifth axis of the first 5-axis transformation with the following properties: if the path runs below this angle past the pole, the traverse will pass through the pole.

For the 5-axis transformation, the two orientation axes of the tool form a coordinate system of length and width circles on a spherical surface. If orientation programming (that is the orientation vector lies in a plane) leads the path so close past the pole that the angle defined by the MD is undershot then there is a deviation from the defined interpolation such that the interpolation runs through the pole.

Alarm 14112 is output if this modification of the path gives a deviation greater than a tolerance defined by MD24540 TRAFO5\$MC_TRAFO5_POLE_LIMIT_1.

MD irrelevant:

If the "5-Axis Transformation" option is not installed.

Also irrelevant with programming in the machine coordinate system ORIMKS.

Related to:

MD: TRAFO5_POLE_LIMIT_n

24540	TRAFO5_POLE_LIMIT_1			C07	F2, M1	
degrees	End angle tolerance with interpolation through pole for 5-axis transf.			DOUBLE	NEW CONF	
-						
-	-	2.0, 2.0, 2.0, 2.0, 2.0, 2.0, 2.0, 2.0...	-	-	7/7	U

Description: This MD designates an end angle tolerance for the fifth axis of the first 5-axis transformation with the following properties:

With the interpolation through the pole point, only the fifth axis moves, the fourth axis retains its starting position. If a motion is programmed that does not run exactly through the pole point but is to run near the pole within the area given by MD: TRAFO5_NON_POLE_LIMIT_n then there is a deviation from the defined path as the interpolation runs exactly through the pole point. This results in a deviation in the position of the end point of the fourth axis (the polar axis) from the programmed value.

This MD defines the angle by which the polar axis may deviate from the programmed value with 5-axis transformation when switching from the programmed interpolation to the interpolation through the pole point.

Alarm 14112 is output if there is a greater deviation and the interpolation is not executed.

MD irrelevant:

If the "5-Axis Transformation" option is not installed.

Also irrelevant with programming in the machine coordinate system ORIMKS.

Related to:

MD2.... \$MC_TRAFO5_NON_POLE_LIMIT_n

24542	TRAFO5_POLE_TOL_1			C07	-	
degrees	End angle tolerance for tool orientation			DOUBLE	NEW CONF	
-						
-	-	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	0.0	-	7/7	U

2.3 NC machine data

Description: End angle tolerance for interpolation through the pole for the 1st 5/6-axis transformation.

This MD is evaluated only by the generic 5/6-axis transformation.

If the programmed end orientation lies within the body cone and within the tolerance cone specified by this MD, the pole axis does not move and retains its starting positions. The other rotary axis, however, moves to the programmed angle.

This results in the end orientation deviating from the programmed orientation.

Another function of this MD is the handling of the programmed end orientation with non-orthogonal kinematics. As a rule, not all tool orientations can be set with these machine kinematics.

Alarm 14112 is output if an orientation is programmed that lies outside the settable range of the orientation cone (the programmed orientation path is not possible).

However, if the programmed orientation still lies within the range defined by MD24542 \$MC_TRAFO5_POLE_TOL, an alarm is not output, and the programmed orientation is accepted.

However, the programmed orientation is corrected so that the orientation remains stationary at the edge of the settable range.

The maximum active value of this MD is the value of MD TRAF05_POLE_LIMIT_1, which is used to define the body cone.

24550	TRAFO5_BASE_TOOL_1			C07	F2, M1, W1	
mm	Vector of base tool on activation of 5-axis transformation 1			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: This MD specifies the vector of the base tool which takes effect when the first transformation is activated without a length compensation being selected. Programmed length compensations have an additive effect with respect to the base tool.

MD irrelevant:
if the "5-Axis Transformation" option is not installed.

24558	TRAFO5_JOINT_OFFSET_PART_1			C07	F2, M1, W1	
mm	Vector of kinematic table offset			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: This machine data is only evaluated for generic 5-axis transformations with rotatable workpiece and rotatable tool (TRAFO_TYPE = 56, mixed kinematics).

It indicates the part of the vector between table and turning head assigned to the table.

Only the sum of this MD and MD TRAF05_JOINT_OFFSET is entered in the transformation equations.

A difference results only when reading the whole tool length using the function GETTCOR. In this case, only the MD TRAF05_JOINT_OFFSET is considered.

On a machine with mixed kinematics, this machine data can be used to assign the machine data of the 5-axis transformation and the parameters of the orientable tool holder uniquely to one another as follows:

Orientable tool holder	5-axis transformation (1st transformation)
1	TRAF05_JOINT_OFFSET_1
2	TRAF05_BASE_TOOL_1
3	TRAF05_JOINT_OFFSET_PART_1
4	TRAF05_PART_OFFSET_1

24560	TRAF05_JOINT_OFFSET_1			C07	F2, W1	
mm	Vector of the kinem.offset of the 1st 5-axis transf. in channel			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: This machine data designates the vector between first and second rotary joint for the first transformation of a channel and has a specific meaning for the various machine types:

Machine type 1 (two-axis swivel head for tool) and:

Machine type 2 (two-axis rotary table for workpiece):

Vector between first and second rotary joint of tool rotary head or workpiece rotary table.

Machine type 3 (single-axis rotary table for workpiece and single-axis swivel head for tool):

Vector from machine reference point to joint of workpiece table.

MD irrelevant:

if the "5-Axis Transformation" option is not installed. The same applies for 3-axis and 4-axis transformations.

24561	TRAF06_JOINT_OFFSET_2_3_1			C07	F2	
mm	Vector of kinematic offset			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: In the case of 6-axis transformations, defines the offset between the 2nd and third rotary axes for the 1st transformation of each channel.

24562	TRAF05_TOOL_ROT_AX_OFFSET_1			C07	M1	
mm	Offset of swivel point of 1st rotary axis on 5-axis transform. 1			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: In the case of a 5-axis transformation with a swiveling linear axis, the value indicates the offset of the rotary axis which swivels the linear axis with reference to machine zero for the 1st transformation.

MD irrelevant for:

other 5-axis transformations

Related to:

MD24662 \$MC_TRAFO5_TOOL_ROT_AX_OFFSET_2

2.3 NC machine data

24564	TRAFO5_NUTATOR_AX_ANGLE_1			C07	M1	
degrees	Nutating head angle in 5-axis transformation			DOUBLE	NEW CONF	
-						
-	-	45.0, 45.0, 45.0, 45.0, 45.0, 45.0, 45.0, 45.0...	-89.	89.	7/7	U

Description: Angle between the second rotary axis and the axis corresponding to it in the rectangular coordinate system

MD irrelevant for: Transformation type other than "universal milling head".

Related to:

MD2.... \$MC_TRAFO_TYPE_n...

24566	TRAFO5_NUTATOR_VIRT_ORIAX_1			C07	M1	
-	Virtual orientation axes			BOOLEAN	NEW CONF	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/7	U

Description: The MD has the following values:

0: The axis angles of the orientation axes are machine axis angles.

1: Virtual orientation axes are defined that form a rectangular coordinate system and the axis angles are rotations around these virtual axes.

24570	TRAFO5_AXIS1_1			C07	F2, M1, W1	
-	Direction of 1st rotary axis			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: The MD indicates the vector that describes the direction of the first rotary axis in the general 5-axis transformation (TRAFO_TYPE_* = 24).

The vector can have any magnitude.

Example:

Both with (0, 1, 0) and with (0, 7.21, 0), the same axis is described (in the direction of the 2nd geometry axis, i.e. usually Y).

Valid for the first transformation of a channel.

24572	TRAFO5_AXIS2_1			C07	F2, M1, W1	
-	Direction of 2nd rotary axis			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: Indicates the vector that describes the direction of the second rotary axis in the general 5-axis transformation (TRAFO_TYPE_* = 24, 40, 56).

The vector can have any magnitude except zero.

Example:

Both with (0, 1, 0) and with (0, 7.21, 0), the same axis is described (in the direction of the 2nd geometry axis, i.e. usually Y).

Valid for the first transformation of a channel.

24573	TRAFO5_AXIS3_1			C07	F2	
-	Direction of the 3rd rotary axis			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: Indicates the vector which defines the direction of the third rotary axis in the case of the general 6-axis transformation (TRAFO_TYPE_* = 24, 40, 56, 57).

The vector may have any value except zero.

Example:

The same axis is defined with both (0, 1, 0) and (0, 7.21, 0) (in the direction of the 2nd geometry axis, that is as a rule Y).

Valid for the first orientation transformation of a channel.

24574	TRAFO5_BASE_ORIENT_1			C07	F2, M1	
-	Vector of the tool base orientation for 5-axis transformation			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: Indicates the vector of the tool orientation in the general 5-axis transformation (TRAFO_TYPE_* = 24, 40, 56) if this is not defined on the transformation call or read from a programmed tool.

The vector can have any magnitude except zero.

24576	TRAFO6_BASE_ORIENT_NORMAL_1			C07	F2	
-	Normal tool vector in 6-axis transformation			DOUBLE	NEW CONF	
-						
-	3	0.0, 1.0 , 0.0, 0.0, 1.0 , 0.0, 0.0, 1.0 , 0.0, 0.0, 1.0 , 0.0, ...	-	-	7/7	U

Description: Indicates a vector that is perpendicular to the tool orientation (TRAFO5_BASE_ORIENTATION_1) in the case of the general 6-axis transformation (TRAFO_TYPE_* = 24, 40, 56, 57).

If TRAFO6_BASE_ORIENT_NORMAL_1 and TRAFO5_BASE_ORIENTATION_1 are neither orthogonal nor parallel, then the two vectors are orthogonalized by modifying the normal vector. The two vectors must not be parallel.

The vector may have any value other than zero.

Valid for the first orientation transformation of a channel.

24580	TRAFO5_TOOL_VECTOR_1			C07	F2	
-	Direction of orientation vector for the first 5-axis transf.			BYTE	NEW CONF	
-						
-	-	2, 2, 2, 2, 2, 2, 2, 2...	0	2	7/2	M

Description: Indicates the direction of the orientation vector for the first 5-axis transformation for each channel.

0: Tool vector in x direction

1: Tool vector in y direction

2: Tool vector in z direction

2.3 NC machine data

24582	TRAFO5_TCARR_NO_1			C07	F2	
-	TCARR number for the 1st 5-axis transformation			DWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-	-	7/7	U

Description: If the value of this machine data is not zero and if MD2.... \$MC_TRAFO_TYPE..., which points to the first orientation transformation, has the value 72, then the kinematics data (offsets etc.) that parameterize the first 5-axis transformation, will not be read from the machine data, but from the data of the orientable tool carrier to which this machine data refers.

24585	TRAFO5_ORIAX_ASSIGN_TAB_1			C07	F2, M1	
-	Orientation axis / channel axis assignment transformation 1			BYTE	NEW CONF	
-						
-	3	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0...	0	20	7/2	M

Description: Assignment table of the orientation axes for 5-axis transformation 1
Only active with active 5-axis transformation 1.

24590	TRAFO5_ROT_OFFSET_FROM_FR_1			C01, C07	F2	
-	Offset of transformation rotary axes from WO.			BOOLEAN	NEW CONF	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/2	M

Description: The programmable offset for orientation axes is automatically accepted from the work offset active for the orientation axes on switch-on of an orientation transformation.

24594	TRAFO7_EXT_ROT_AX_OFFSET_1			C07	F2	
degrees	Position offset of the external rotary axes for 7-axis transformation 1			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0,...	-	-	7/7	U

Description: This machine data designates the angular offset of the external rotary axis in degrees for the first 7-axis transformation of a channel.
MD irrelevant:
if the "5-Axis Transformation" option is not installed.

24595	TRAFO7_EXT_AXIS1_1			C07	F2	
-	Direction of the 1st external rotary axis			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: The MD indicates the vector that describes the direction of the first external rotary axis in the general 5/6-axis transformation (TRAFO_TYPE_* = 24).
The vector can have any magnitude.
Example:

Both with (0, 1, 0) and with (0, 7.21, 0), the same axis is described (in the direction of the 2nd geometry axis, i.e. usually Y).

Valid for the first transformation of a channel.

24600	TRAFO5_PART_OFFSET_2			C07	M1	
mm	Offset vector of the 2nd 5-axis transformation in the channel			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: This machine data designates an offset of the workpiece carrier for the first (MD24500 \$MC_TRAFO5_PART_OFFSET_1) or second (MD24600 \$MC_TRAFO5_PART_OFFSET_2) 5-axis transformation of a channel, and has a specific meaning for the different machine types:

Machine type 1 (two-axis swivel head for tool):

Vector from machine reference point to zero point of workpiece table. This will generally be a zero vector if both coincide.

Machine type 2 (two-axis rotary table for workpiece):

Vector from second joint of workpiece rotary table to zero point of table.

Machine type 3 (single-axis rotary table for workpiece and single-axis swivel head for tool):

Vector from joint of workpiece table to zero point of table.

MD irrelevant:

if the "5-Axis Transformation" option is not installed.

24610	TRAFO5_ROT_AX_OFFSET_2			C07	M1	
degrees	Position offset of rotary axes 1/2/3			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0,...	-	-	7/7	U

Description: Indicates the offset for each channel of the rotary axes in degrees for the second orientation transformation.

24620	TRAFO5_ROT_SIGN_IS_PLUS_2			C07	F2, M1	
-	Sign of rotary axis 1/2/3 for 5-axis transformation 2			BOOLEAN	NEW CONF	
-						
-	3	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description: This machine data designates the sign with which the two rotary axes are included in the second 5-axis transformation of a channel.

MD = 0 (FALSE):

Sign is reversed.

MD = 1 (TRUE):

Sign is not reversed and the traversing direction is defined according to MD32100 \$MA_AX_MOTION_DIR.

This machine data does not mean that the rotational direction of the rotary axis concerned is to be reversed, but specifies whether its motion is in the mathematically positive or negative direction when the axis is moving in the positive direction.

The result of a change to this data is not therefore a change in the rotational direction, but a change in the compensatory motion of the linear axes.

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However, if a directional vector and thus, implicitly, a compensatory motion is specified, the result is a change in the rotational direction of the rotary axis concerned.

On a real machine, therefore, the machine data may be set to FALSE (or zero) only if the rotary axis is turning in an anti-clockwise direction when moving in a positive direction.

MD irrelevant:

if the "5-Axis Transformation" option is not installed.

24630	TRAFO5_NON_POLE_LIMIT_2			C07	F2, M1	
degrees	Definition of pole range for 5-axis transformation 2			DOUBLE	NEW CONF	
-						
-	-	2.0, 2.0, 2.0, 2.0, 2.0, 2.0, 2.0, 2.0...	-	-	7/7	U

Description:

This MD designates a limit angle for the fifth axis of the second 5-axis transformation with the following properties: if the path runs past the pole below this angle, the traverse passes through the pole.

In a 5-axis transformation, the two orientation axes of the tool form a coordinate system of length and width circles on a spherical surface. If orientation programming (that is the orientation vector lies in a plane) leads the path so closely past the pole that the angle defined by this MD is undershot, then there is a deviation from the defined interpolation such that the interpolation runs through the pole.

Alarm 14112 is output if this modification of the path results in a deviation greater than a tolerance defined by MD24640 \$MC_TRAFO5_POLE_LIMIT_2.

MD irrelevant:

If the "5-Axis Transformation" option is not installed.

Also irrelevant with programming in the machine coordinate system ORIMKS.

Related to:

MD2.... \$MC_TRAFO5_POLE_LIMIT...

24640	TRAFO5_POLE_LIMIT_2			C07	F2, M1	
degrees	End angle tolerance for tool orientation			DOUBLE	NEW CONF	
-						
-	-	2.0, 2.0, 2.0, 2.0, 2.0, 2.0, 2.0, 2.0...	-	-	7/7	U

Description:

This MD designates an end angle tolerance for the fifth axis of the second 5-axis transformation with the following properties:

With the interpolation through the pole point, only the fifth axis moves, the fourth axis retains its starting position. If a motion is programmed that does not run exactly through the pole point but is to run near the pole within the area given by MD: TRAF05_NON_POLE_LIMIT_n then there is a deviation from the defined path as the interpolation runs exactly through the pole point. This results in a deviation in the position of the end point of the fourth axis (the polar axis) from the programmed value.

This MD defines the angle by which the polar axis may deviate from the programmed value with 5-axis transformation when switching from the programmed interpolation to the interpolation through the pole point.

An error message (alarm 14112) is output if there is a greater deviation and the interpolation is not executed.

MD irrelevant:

If the "5-Axis Transformation" option is not installed.

Also irrelevant with programming in the machine coordinate system ORIMKS.

Related to:

MD24530 \$MC_TRAFO5_NON_POLE_LIMIT_1

24642	TRAFO5_POLE_TOL_2			C07	-	
degrees	End angle tolerance for pole interpolation			DOUBLE	NEW CONF	
-						
-	-	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	0.0	-	7/7	U

Description: End angle tolerance for interpolation through the pole for the 2nd 5/6-axis transformation.

This MD is evaluated only by the generic 5/6-axis transformation.

If the programmed end orientation lies within the body cone and within the tolerance cone specified by this MD, the pole axis does not move and retains its starting positions. However, the other rotary axis moves to the programmed angle.

This results in the end orientation deviating from the programmed orientation.

Another function of this MD is the handling of the programmed end orientation with non-orthogonal kinematics. As a rule, not all tool orientations can be set with these machine kinematics.

Alarm 14112 is output if an orientation is programmed that lies outside the settable range of the orientation cone (the programmed orientation path is not possible).

However, if the programmed orientation still lies within the range defined by MD24542 \$MC_TRAFO5_POLE_TOL, an alarm is not output, and the programmed orientation is accepted.

However, the programmed orientation is corrected so that the orientation remains stationary at the edge of the settable range.

The maximum active value of this MD is the value of MD TRAFO5_POLE_LIMIT_1, which is used to define the body cone.

24650	TRAFO5_BASE_TOOL_2			C07	M1, W1	
mm	Vector of base tool on activation of 5-axis transformation 2			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: This MD indicates the vector of the base tool which takes effect when the second transformation is activated without a length compensation being selected. Programmed length compensations have an additive effect with respect to the base tool.

MD irrelevant:
if the "5-Axis Transformation" option is not installed.

24658	TRAFO5_JOINT_OFFSET_PART_2			C07	M1, W1	
mm	Vector of kinematic table offset			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: Same as MD24558 \$MC_TRAFO5_JOINT_OFFSET_PART_1, but for the second transformation.

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24660	TRAFO5_JOINT_OFFSET_2			C07	W1	
mm	Vector of the kinem.offset of the 2nd 5-axis transformation			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: This machine data designates the vector between first and second rotary joint for the first transformation of a channel and has a specific meaning for the various machine types:

Machine type 1 (two-axis swivel head for tool) and:
Machine type 2 (two-axis rotary table for workpiece):
Vector between first and second rotary joint of tool rotary head or workpiece rotary table.

Machine type 3 (single-axis rotary table for workpiece and single-axis swivel head for tool):
Vector from machine reference point to joint of workpiece table.

MD irrelevant:
if the "5-Axis Transformation" option is not installed. The same applies for 3-axis and 4-axis transformations.

24661	TRAFO6_JOINT_OFFSET_2_3_2			C07	-	
mm	Vector of kinematic offset			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: As TRAF06_JOINT_OFFSET_2_3_1 but for the second transformation.

24662	TRAFO5_TOOL_ROT_AX_OFFSET_2			C07	M1	
mm	Offset swivel point of 2nd 5-axis transformation (swivelled linear axis)			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: In the case of 5-axis transformation with swiveled linear axis, the value indicates the offset of the rotary axis which swivels the linear axis with reference to machine zero for the 2nd transformation.

MD irrelevant for:
other 5-axis transformations

Related to:
MD24562 \$MC_TRAFO5_TOOL_ROT_AX_OFFSET_1

24664	TRAF05_NUTATOR_AX_ANGLE_2			C07	M1	
degrees	Nutating head angle			DOUBLE	NEW CONF	
-						
-	-	45.0, 45.0, 45.0, 45.0, 45.0, 45.0, 45.0, 45.0...	-89.	89.	7/7	U

Description: Angle between the second rotary axis and the axis corresponding to it in the rectangular coordinate system

MD irrelevant for:

Transformation type other than "universal milling head"

Related to:

MD24564 \$MC_TRAFO5_NUTATOR_AX_ANGLE_1

24666	TRAFO5_NUTATOR_VIRT_ORIAX_2			C07	M1	
-	Virtual orientation axes			BOOLEAN	NEW CONF	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/7	U

Description:

The MD has the following values:

0: The axis angles of the orientation axes are machine axis angles.

1: Virtual orientation axes are defined that form a rectangular coordinate system and the axis angles are rotations around these virtual axes.

24670	TRAFO5_AXIS1_2			C07	F2, M1	
-	Direction of 1st rotary axis			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0. ...	-	-	7/7	U

Description:

As for TRAFO5_AXIS1_1 but for the second orientation transformation of a channel.

24672	TRAFO5_AXIS2_2			C07	M1	
-	Direction of 2nd rotary axis			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description:

As for TRAFO5_AXIS2_1 but for the second transformation of a channel.

24673	TRAFO5_AXIS3_2			C07	-	
-	Direction of the 3rd rotary axis			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description:

As TRAFO5_AXIS3_1 but for the second orientation transformation of a channel.

24674	TRAFO5_BASE_ORIENT_2			C07	F2, M1	
-	Basic tool orientation			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description:

As for TRAFO5_BASE_ORIENT_1 but for the second transformation of a channel.

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24676	TRAFO6_BASE_ORIENT_NORMAL_2			C07	-	
-	Normal tool vector			DOUBLE	NEW CONF	
-						
-	3	0.0, 1.0 , 0.0, 0.0, 1.0 , 0.0, 0.0, 1.0 , 0.0, 0.0, 1.0 , 0.0, ...	-	-	7/7	U

Description: As TRAF06_BASE_ORIENT_NORMAL_1 but for the second orientation transformation

24680	TRAFO5_TOOL_VECTOR_2			C07	F2	
-	Direction of orientation vector			BYTE	NEW CONF	
-						
-	-	2, 2, 2, 2, 2, 2, 2...	0	2	7/2	M

Description: Indicates the direction of the orientation vector for the second 5-axis transformation for each channel.

0: Tool vector in x direction

1: Tool vector in y direction

2: Tool vector in z direction

24682	TRAFO5_TCARR_NO_2			C07	F2	
-	TCARR number for the 2nd 5-axis transformation			DWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-	-	7/7	U

Description: Same as TRAF05_TCARR_NO_1, but for the second orientation transformation.

24685	TRAFO5_ORIAX_ASSIGN_TAB_2			C07	F2	
-	Orientation axis / channel axis assignment transformation 1			BYTE	NEW CONF	
-						
-	3	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0...	0	20	7/2	M

Description: Assignment table of the orientation axes for 5-axis transformation 2
Only active with active 5-axis transformation 2.

24690	TRAF05_ROT_OFFSET_FROM_FR_2			C01, C07	-	
-	Offset of transformation rotary axes from WO.			BOOLEAN	NEW CONF	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/2	M

Description: Same as TRAF05_ROT_OFFSET_FROM_FR_1, but for the 2nd transformation of a channel

24694	TRAFO7_EXT_ROT_AX_OFFSET_2			C07	F2	
degrees	Position offset of the external rotary axes for 7-axis transformation 2			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0,...	-	-	7/7	U

Description: This machine data designates the angular offset of the external rotary axis in degrees for the second 7-axis transformation of a channel.
MD irrelevant:
if the "5-Axis Transformation" option is not installed.

24695	TRAFO7_EXT_AXIS1_2			C07	F2	
-	Direction of the 1st external rotary axis			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: The MD indicates the vector that describes the direction of the second external rotary axis in the general 5/6-axis transformation (TRAFO_TYPE_* = 24).
The vector can have any magnitude.
Example:
Both with (0, 1, 0) and with (0, 7.21, 0), the same axis is described (in the direction of the 2nd geometry axis, i.e. usually Y).
Valid for the first transformation of a channel.

24700	TRAANG_ANGLE_1			C07	M1	
degrees	Angle between Cartesian axis and real (inclined) axis			DOUBLE	NEW CONF	
-						
-	-	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	-	-	7/7	U

Description: Indicates for the first agreed TRAANG transformation of the channel the angle of the inclined axis in degrees between the 1st machine axis and the 1st basic axis while TRAANG is active. The angle is measured positively clockwise.
Related to:
MD24750 \$MC_TRAANG_ANGLE_2

24710	TRAANG_BASE_TOOL_1			C07	M1	
mm	Vector of base tool for 1st TRAANG transformation			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: Indicates a basic offset of the tools zero for the 1st TRAANG transformation. The offset is referenced to the geometry axes valid when TRAANG is active. The basic offset is included with and without selection of the tool length compensation. Programmed length corrections have an additive effect with respect to the basic tool.
The index i takes the values 0, 1, 2 for the 1st to 3rd geometry axes.
Related to:
MD24760 \$MC_TRAANG_BASE_TOOL_2

24720	TRAANG_PARALLEL_VELO_RES_1			C07	M1	
-	Velocity margin for 1st TRAANG transformation			DOUBLE	NEW CONF	
-						
-	-	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	0.0	1.0	7/7	U

Description: Indicates the axis velocity reserve for jog, positioning and oscillating movements for each channel for the first TRAANG transformation which is held ready on the parallel axis (see MD2.... \$MC_TRAFO_AXES_IN_...[1]) for the compensating movement.

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Velocity reserve to be provided for jog, positioning and oscillating movements on the parallel axis to handle the compensating movement as a consequence of the inclined axis.

0.0 means that the control or the transformation itself determines the reserve according to the angle of the inclined axis and the velocity capacity of the inclined and parallel axes. - The criterion for this is that the same velocity limit has to be maintained in the direction of the parallel axis and the (virtual) axis at right-angles to it.

>0.0 means that a fixed reserve has been set (MD24720 \$MC_TRAANG_PARALLEL_VELO_RES_1 * MD32000 \$MA_MAX_AX_VELO of the parallel axis). The velocity capacity in the virtual axis is determined by this. The lower MD24720 \$MC_TRAANG_PARALLEL_VELO_RES_1 has been set, the lower it is

Related to:

MD24771 \$MC_TRAANG_PARALLEL_ACCEL_RES_2

24721	TRAANG_PARALLEL_ACCEL_RES_1			C07	M1	
-	Acceleration margin of parallel axis for the 1st TRAANG transf.			DOUBLE	NEW CONF	
-						
-	-	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	0.0	1.0	7/7	U

Description: Indicates the acceleration margin for jog, positioning and oscillating movements for each channel for the first TRAANG transformation which is held ready on the parallel axis (see MD2.... \$MC_TRAFO_AXES_IN_...[1]) for the compensating movement.

Related to:

MD24720 \$MC_TRAANG_PARALLEL_VELO_RES_1

24750	TRAANG_ANGLE_2			C07	M1	
degrees	Angle between Cartesian axis and real (inclined) axis			DOUBLE	NEW CONF	
-						
-	-	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	-	-	7/7	U

Description: Indicates for the second agreed TRAANG transformation of the channel the angle of the inclined axis in degrees between the 1st machine axis and the 1st basic axis while TRAANG is active. The angle is measured positively clockwise.

Related to:

MD24700 \$MC_TRAANG_ANGLE_1

24760	TRAANG_BASE_TOOL_2			C07	M1	
mm	Vector of base tool for 2nd TRAANG transformation			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: Indicates a basic offset of the tools zero for the 2nd TRAANG transformation. The offset is referenced to the geometry axes valid when TRAANG is active. The basic offset is included with and without selection of the tool length compensation. Programmed length corrections have an additive effect with respect to the basic tool.

The index i takes the values 0, 1, 2 for the 1st to 3rd geometry axes.

Related to:

MD24710 \$MC_TRAANG_BASE_TOOL_1

24770	TRAANG_PARALLEL_VELO_RES_2			C07	M1	
-	Velocity margin for 2nd TRAANG transformation			DOUBLE	NEW CONF	
-						
-	-	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	0.0	1.0	7/7	U

Description: Indicates the axis velocity reserve for jog, positioning and oscillating movements for each channel for the second TRAANG transformation which is held ready on the parallel axis (see MD2.... \$MC_TRAFO_AXES_IN_...[1]) for the compensating movement.

Related to:
MD24771 \$MC_TRAANG_PARALLEL_ACCEL_RES_2

24771	TRAANG_PARALLEL_ACCEL_RES_2			C07	M1	
-	Acceler. margin of parallel axis for the 2nd TRAANG transform.			DOUBLE	NEW CONF	
-						
-	-	0.0, 0.0, 0.0, 0.0, 0.0, 0.0. 0.0. 0.0...	0.0	1.0	7/7	U

Description: Indicates the axis acceleration margin for jog, positioning and oscillating movements which is held ready on the parallel axis (see MD2.... \$MC_TRAFO_AXES_IN_...[1]) for the compensatory movement; MD setting applies to the second TRAANG transformation for each channel.

Related to:
\$MC_TRAANG_PARALLEL_RES_1

24800	TRACYL_ROT_AX_OFFSET_1			C07	M1, K2	
degrees	Offset of rotary axis for the 1st TRACYL transformation			DOUBLE	NEW CONF	
-						
-	-	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	-	-	7/7	U

Description: Indicates the offset of the rotary axis for the first agreed TRACYL transformation in degrees in relation to the neutral position while TRACYL is active.

Related to:
MD24850 \$MC_TRACYL_ROT_AX_OFFSET_2

24805	TRACYL_ROT_AX_FRAME_1			C07	M1	
-	Rotary axis offset TRACYL 1			BYTE	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	2	7/7	U

Description:

- 0: axial rotary axis offset is not considered.
- 1: axial rotary axis offset is considered.
- 2: axial rotary axis offset is considered until SZS.

SZS frames include transformed axial rotary axis offsets.

24806	TRACYL_BASE_TOOL_COMP_1			C07	M1, K2	
-	Compensation of the BASE_TOOL in the TRACYL frame 1			UBYTE	NEW CONF	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0x0	0x7	7/7	U

Description: Components of the base tool can be compensated by using this bit-coded machine data via the transformation frame so that for transformation selection, no change is made in the Work

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component.

Bit0: MD24820 \$MC_TRACYL_BASE_TOOL_1[0] is compensated using \$P_TRAFRAME.

Bit1: MD24820 \$MC_TRACYL_BASE_TOOL_1[1] is compensated using \$P_TRAFRAME.

Bit2: MD24820 \$MC_TRACYL_BASE_TOOL_1[2] is compensated using \$P_TRAFRAME.

This function is only available if the system frame \$P_TRAFRAME has been configured using MD28082 \$MC_MM_SYSTEM_FRAME_MASK bit6.

24808	TRACYL_DEFAULT_MODE_1			C07	M1	
-	TRACYL mode selection			BYTE	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	1	7/7	U

Description:

Default setting of TRACYL type 514:

0: without groove side offset (i.e. TRACYL type 514 - equals 512)

1: with groove side offset (i.e. TRACYL type 514 - equals 513)

MD2.... \$MC_TRAFO_TYPE... = 514 can be used to decide, via the selection parameters, whether calculation is made with or without groove side offset. The parameter defines the variable to be selected if no selection is made in the call parameters.

If MD24808 \$MC_TRACYL_DEFAULT_MODE_1 = 1, it is sufficient to program TRACYL(30) in the part program instead of TRACYL(30,1,1).

24810	TRACYL_ROT_SIGN_IS_PLUS_1			C07	M1	
-	Sign of rotary axis for 1st TRACYL transformation			BOOLEAN	NEW CONF	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description:

Indicates the sign with which the rotary axis is taken into account in the TRACYL transformation for the first agreed TRACYL transformation.

Related to:

MD24860 \$MC_TRACYL_ROT_SIGN_IS_PLUS_2

24820	TRACYL_BASE_TOOL_1			C07	M1	
mm	Vector of base tool for 1st TRACYL transformation			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description:

Indicates a basic offset of the tools zero for the 1st TRACYL transformation. The offset is referenced to the geometry axes valid when TRACYL is active. The basic offset is included with and without selection of the tool length compensation. Programmed length corrections have an additive effect with respect to the basic tool.

The index i takes the values 0, 1, 2 for the 1st to 3rd geometry axes.

Related to:

MD24870 \$MC_TRACYL_BASE_TOOL_2

24850	TRACYL_ROT_AX_OFFSET_2			C07	M1	
degrees	Offset of rotary axis for the 2nd TRACYL transformation			DOUBLE	NEW CONF	
-						
-	-	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	-	-	7/7	U

Description:

Indicates the offset of the rotary axis in degrees in relation to the neutral position for the 2nd agreed TRACYL transformation for each channel.

MD irrelevant:

If no TRACYL is active

Related to:

MD24800 \$MC_TRACYL_ROT_AX_OFFSET_1

24855	TRACYL_ROT_AX_FRAME_2	C07	M1, K2
-	Rotary axis offset TRACYL 2	BYTE	NEW CONF
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 2 7/7 U

Description:

- 0: axial rotary axis offset is not considered.
- 1: axial rotary axis offset is considered.
- 2: axial rotary axis offset is considered until SZS.

SZS frames include transformed axial rotary axis offsets.

24856	TRACYL_BASE_TOOL_COMP_2	C07	M1, K2
-	Compensation of the BASE_TOOL in the TRACYL frame 2	UBYTE	NEW CONF
-			
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0x0 0x7 7/7 U

Description:

Components of the base tool can be compensated by using this bit-coded machine data via the transformation frame so that for transformation selection, no change is made in the Work component.

Bit0: MD24870 \$MC_TRACYL_BASE_TOOL_2[0] is compensated using \$P_TRAFRAME.
 Bit1: MD24870 \$MC_TRACYL_BASE_TOOL_2[1] is compensated using \$P_TRAFRAME.
 Bit2: MD24870 \$MC_TRACYL_BASE_TOOL_2[2] is compensated using \$P_TRAFRAME.

This function is only available if the system frame \$P_TRAFRAME has been configured using MD28082 \$MC_MM_SYSTEM_FRAME_MASK bit6.

24858	TRACYL_DEFAULT_MODE_2	C07	M1
-	TRACYL mode selection	BYTE	NEW CONF
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 1 7/7 U

Description:

Default setting of TRACYL type 514 for the 2nd TRACYL:

- 0: without groove side offset (i.e. TRACYL type 514 - equals 512)
- 1: with groove side offset (i.e. TRACYL type 514 - equals 513)

MD2.... \$MC_TRAFO_TYPE... = 514 can be used to decide, via the selection parameters, whether calculation is made with or without groove side offset. The parameter defines the variable to be selected if no selection is made in the call parameters.

If MD24858 \$MC_TRACYL_DEFAULT_MODE_2 = 1, it is sufficient to program TRACYL(30,2) in the part program instead of TRACYL(30,2,1).

24860	TRACYL_ROT_SIGN_IS_PLUS_2	C07	-
-	Sign of rotary axis for 2nd TRACYL transformation	BOOLEAN	NEW CONF
-			
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0 - 7/7 U

Description:

Indicates the sign with which the rotary axis is taken into account in the TRACYL transformation for the 2nd agreed TRACYL transformation for each channel.

Related to:

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MD24810 \$MC_TRACYL_ROT_SIGN_IS_PLUS_1

24870	TRACYL_BASE_TOOL_2			C07	M1	
mm	Vector of base tool for 2nd TRACYL transformation			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: Indicates a basic offset of the tools zero for the 2ndTRACYL transformation. The offset is referenced to the geometry axes valid when TRACYL is active. The basic offset is included with and without selection of the tool length compensation. Programmed length corrections have an additive effect with respect to the basic tool.

The index i takes the values 0, 1, 2 for the 1st to 3rd geometry axes.

Related to:

MD24820 \$MC_TRACYL_BASE_TOOL_1

24900	TRANSMIT_ROT_AX_OFFSET_1			C07	M1	
degrees	Offset of rotary axis for the 1st TRANSMIT transformation			DOUBLE	NEW CONF	
-						
-	-	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	-	-	7/7	U

Description: Indicates the offset of the rotary axis for the first agreed TRANSMIT transformation in degrees in relation to the neutral position while TRANSMIT is active.

Related to:

MD24950 \$MC_TRANSMIT_ROT_AX_OFFSET_2

24905	TRANSMIT_ROT_AX_FRAME_1			C07	M1, K2	
-	Rotary axis offset TRANSMIT 1			BYTE	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	2	7/7	U

Description:

- 0: axial rotary axis offset is not considered.
- 1: axial rotary axis offset is considered.
- 2: axial rotary axis offset is considered until SZS.

SZS frames include transformed rotations around the rotary axis.

24906	TRANSMIT_BASE_TOOL_COMP_1			C07	M1, K2	
-	Compensation of the BASE_TOOL in the TRANSMIT frame 1			UBYTE	NEW CONF	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0x0	0x7	7/7	U

Description: Components of the base tool can be compensated by using this bit-coded machine data via the transformation frame so that for transformation selection, no change is made in the Work

component.

Bit0: MD24920 \$MC_TRANSMIT_BASE_TOOL_1[0] is compensated using \$P_TRAFRAME.

Bit1: MD24920 \$MC_TRANSMIT_BASE_TOOL_1[1] is compensated using \$P_TRAFRAME.

Bit2: MD24920 \$MC_TRANSMIT_BASE_TOOL_1[2] is compensated using \$P_TRAFRAME.

This function is only available if the system frame \$P_TRAFRAME has been configured using MD28082 \$MC_MM_SYSTEM_FRAME_MASK bit6.

24910	TRANSMIT_ROT_SIGN_IS_PLUS_1			C07	M1	
-	Sign of rotary axis for 1st TRANSMIT transformation			BOOLEAN	NEW CONF	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description: Indicates the sign with which the rotary axis is taken into account in the TRANSMIT transformation for the first agreed TRANSMIT transformation for each channel.

Related to:

MD24960 \$MC_TRANSMIT_ROT_SIGN_IS_PLUS_2

24911	TRANSMIT_POLE_SIDE_FIX_1			C07	M1	
-	Restriction of working range in front of / behind the pole, 1. TRANSMIT			BYTE	NEW CONF	
-						
-	-	0. 0. 0. 0. 0. 0. 0. 0...	0	2	7/7	U

Description: Restriction of the working area in front of/behind pole or no restriction, i.e. traversal through the pole.

The assigned values have the following meanings:

- 1: Working area of linear axis for positions ≥ 0 ,
(if tool length compensation parallel to linear axis equals 0)
- 2: Working area of linear axis for positions ≤ 0 ,
(if tool length compensation parallel to linear axis equals 0)
- 0: No restriction of working area. Traversal through pole.

24920	TRANSMIT_BASE_TOOL_1			C07	M1	
mm	Vector of base tool for 1st TRANSMIT transformation			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: Indicates a basic offset of the tools zero for the 1st TRANSMIT transformation. The offset is referenced to the geometry axes valid when TRANSMIT is active. The basic offset is included with and without selection of the tool length compensation. Programmed length corrections have an additive effect with respect to the basic tool. The index i takes the values 0, 1, 2 for the 1st to 3rd geometry axes.

Related to:

MD24970 \$MC_TRANSMIT_BASE_TOOL_2

24950	TRANSMIT_ROT_AX_OFFSET_2			C07	M1	
degrees	Offset of rotary axis for the 2nd TRANSMIT transformation			DOUBLE	NEW CONF	
-						
-	-	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	-	-	7/7	U

Description: Indicates the offset of the rotary axis for the second agreed TRANSMIT transformation in degrees in relation to the neutral position while TRANSMIT is active.

Related to:

MD24900 \$MC_TRANSMIT_ROT_AX_OFFSET_1

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24955	TRANSMIT_ROT_AX_FRAME_2	C07	M1
-	Rotary axis offset TRANSMIT 2	BYTE	NEW CONF
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 2 7/7 U

Description:

- 0: axial rotary axis offset is not considered.
- 1: axial rotary axis offset is considered.
- 2: axial rotary axis offset is considered until SZS.

SZS frames include transformed rotations around the rotary axis.

24956	TRANSMIT_BASE_TOOL_COMP_2	C07	M1, K2
-	Compensation of the BASE_TOOL in the TRANSMIT frame 2	UBYTE	NEW CONF
-			
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0x0 0x7 7/7 U

Description:

Components of the base tool can be compensated by using this bit-coded machine data via the transformation frame so that for transformation selection, no change is made in the Work component.

Bit0: MD24970 \$MC_TRANSMIT_BASE_TOOL_2[0] is compensated using \$P_TRAFRAME.
 Bit1: MD24970 \$MC_TRANSMIT_BASE_TOOL_2[1] is compensated using \$P_TRAFRAME.
 Bit2: MD24970 \$MC_TRANSMIT_BASE_TOOL_2[2] is compensated using \$P_TRAFRAME.

This function is only available if the system frame \$P_TRAFRAME has been configured using MD28082 \$MC_MM_SYSTEM_FRAME_MASK bit6.

24960	TRANSMIT_ROT_SIGN_IS_PLUS_2	C07	M1
-	Sign of rotary axis for 2nd TRANSMIT transformation	BOOLEAN	NEW CONF
-			
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0 - 7/7 U

Description:

Indicates the sign with which the rotary axis is taken into account in the TRANSMIT transformation for the second agreed TRANSMIT transformation for each channel.

Related to:

MD24910 \$MC_TRANSMIT_ROT_SIGN_IS_PLUS_1

24961	TRANSMIT_POLE_SIDE_FIX_2	C07	M1
-	Restriction of working range before/behind the pole, 2. TRANSMIT	BYTE	NEW CONF
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 2 7/7 U

Description:

Restriction of working area in front of/behind pole or no restriction, i.e. traversal through pole.

The assigned values have the following meanings:

- 1: Working area of linear axis for positions ≥ 0 ,
(if tool length compensation parallel to linear axis equals 0)
- 2: Working area of linear axis for positions ≤ 0 ,
(if tool length compensation parallel to linear axis equals 0)
- 0: No restriction of working area. Traversal through pole.

Description:	Indicates a basic offset of the tools zero for the 2nd TRANSMIT transformation. The offset is referenced to the geometry axes valid when TRANSMIT is active. The basic offset is included with and without selection of the tool length compensation. Programmed length corrections have an additive effect with respect to the basic tool. The index i takes the values 0, 1, 2 for the 1st to 3rd geometry axes. Related to: MD24920 \$MC TRANSMIT BASE TOOL 1

Description:

Transformation chain of the first concatenated transformation.

In the table, the numbers of the transformations which are to be concatenated are given in the order in which the transformation has to be executed from BCS into MCS.

Example:

A machine can be operated optionally either as a 5-axis machine or as a transmit machine. A linear axis is not arranged at a right-angles to the other linear axes (inclined axis).

5 transformations must be set via the machine data, e.g.

TRAFO_TYPE_1 =	16	(5-axis transformation)
TRAFO_TYPE_2 =	256	(Transmit)
TRAFO_TYPE_3 =	1024	(Inclined axis)
TRAFO_TYPE_4 =	8192	(Concatenated transformation)
TRAFO_TYPE_5 =	8192	(Concatenated transformation)

If the 4th transformation concatenates the 5-axis transformation / inclined axis and the 5th transformation concatenates the transmit / inclined axis, then (1, 3, 0, 0) is entered in the first table TRACON_CHAIN_1, and (2, 3, 0, 0) in the table TRACON_CHAIN_2. The entry 0 means no transformation.

The order in which the transformations are assigned (TRAFO_TYPE_1 to TRAFO_TYPE_20) is arbitrary. The linked transformations do not have to be the last. However, they must always stand behind all the transformations which occur in a transformation chain. In the previous example, this means that, e.g. the third and fourth transformations must not be switched.

However, it would be possible to define a further, sixth transformation, if this does not go into a linked transformation.

Transformations cannot be linked with one another at will.

The following limitations apply in SW version 5:

The first transformation in the chain must be an orientation transformation (3- , 4- , 5-axis transformation, nutator) transmit or peripheral curve transformation. The second transformation must be an inclined axis transformation.

No more than two transformations may be linked.

24996	TRACON_CHAIN_2			C07	M1	
-	Transformation grouping			DWORD	NEW CONF	
-						
-	4	0, 0, 0 ,0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0 ,0, 0, 0...	0	20	7/7	U

Description:

Transformation chain of the first concatenated transformation.

In the table, the numbers of the transformations which are to be concatenated are given in the order in which the transformation has to be executed from BCS into MCS.

Example:

A machine can be operated optionally either as a 5-axis machine or as a transmit machine. A linear axis is not arranged at a right-angles to the other linear axes (inclined axis).

Transformation chain of the second concatenated transformation.

Example: 5 transformations must be set via the machine data

TRAFO TYPE 1 = 16 (5-axis transformation)

TRAFO TYPE 2 = 256 (Transmit)

TRAFO TYPE 3 = 1024 (Inclined axis)

TRAFO TYPE 4 = 8192 (Concatenated transformation)

TRAFO TYPE 5 = 8192 (Concatenated transformation)

If the 4th transformation concatenates the 5-axis transformation / inclined axis and the 5th transformation concatenates the transmit / inclined axis, then (1, 3, 0, 0) is entered in the first table TRACON_CHAIN_1, and (2, 3, 0, 0) in the table TRACON_CHAIN 2. The entry 0 means no transformation.

The order in which the transformations are assigned (TRAFO_TYPE_1 to TRAFO_TYPE_20) is arbitrary. The concatenated transformations do not have to be the last. However, they must always follow all the transformations which occur in a transformation chain. In the previous example, this means that, e.g. the third and fourth transformations must not be switched.

However, it would be possible to define a further, sixth transformation, if this does not go into a concatenated transformation.

Transformations cannot be concatenated with one another at will.

The following limitations apply in SW version 5:

The first transformation in the chain must be an orientation transformation (3-, 4-, 5-axis transformation, nutator) transmit or peripheral curve transformation.

The second transformation must be an inclined axis transformation.

No more than two transformations may be concatenated.

24997	TRACON_CHAIN_3			C07	M1	
-	Transformation grouping			DWORD	NEW CONF	
-						
-	4	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0...	0	20	7/7	U

Description:

Transformation chain of the third concatenated transformation.

See TRACON CHAIN 1 for documentation.

Description:	Transformation chain of the fourth concatenated transformation. See TRACON CHAIN 1 for documentation.

Description:	This MD defines for each channel, which transformation is available as 11th transformation in the channel. Other than that it has the same meaning as TRAFO TYPE 1.

Description:	Axis assignment at the input of the 11th transformation. See TRAFO AXES IN 1 for explanation.

Description:	This MD states the channel axes on which the axes of the cartesian coordinate system are mapped for active transformation 11. Otherwise the meaning corresponds to TRAFO GEOAX ASSIGN TAB 1.

Description:	This MD defines for each channel, whether the tool is treated in the 11th transformation or externally. Other than that it has the same meaning as TRAFO INCLUDES TOOL 1.

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25110	TRAFO_TYPE_12			C07	F2	
-	Definition of the 12th transformation in the channel			DWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-	-	7/7	U

Description: This MD defines for each channel, which transformation is available as 12th transformation in the channel.
Other than that it has the same meaning as TRAFO_TYPE_1.

25112	TRAFO_AXES_IN_12			C07	F2	
-	Axis assignment for transformation 12			BYTE	NEW CONF	
-						
-	20	1, 2, 3, 4, 5, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, ...	0	20	7/7	U

Description: Axis assignment at the input of the 12th transformation.
See TRAFO_AXES_IN_1 for explanation.

25114	TRAFO_GEOAX_ASSIGN_TAB_12			C07	F2	
-	Assignment of geometry axes to channel axes for transformation 12			BYTE	NEW CONF	
-						
-	3	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0...	0	20	7/7	U

Description: This MD states the channel axes on which the axes of the cartesian coordinate system are mapped for active transformation 12.
Otherwise the meaning corresponds to TRAFO_GEOAX_ASSIGN_TAB_1.

25116	TRAFO_INCLUDES_TOOL_12			C07	M1, F2	
-	Tool handling with active 12th transformation			BOOLEAN	NEW CONF	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description: This MD defines for each channel, whether the tool is treated in the 12th transformation or externally.
Other than that it has the same meaning as TRAFO_INCLUDES_TOOL_1.

25120	TRAFO_TYPE_13			C07	F2	
-	Definition of the 13th transformation in the channel			DWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-	-	7/7	U

Description: This MD defines for each channel, which transformation is available as 13th transformation in the channel.
Other than that it has the same meaning as TRAFO_TYPE_1.

25122	TRAFO_AXES_IN_13			C07	F2	
-	Axis assignment for transformation 13			BYTE	NEW CONF	
-						
-	20	1, 2, 3, 4, 5, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,, ...	0	20	7/7	U

Description: Axis assignment at the input of the 13th transformation.
See TRAFO_AXES_IN_1 for explanation.

25124	TRAFO_GEOAX_ASSIGN_TAB_13			C07	F2	
-	Assignment of geometry axes to channel axes for transformation 13			BYTE	NEW CONF	
-						
-	3	0, 0,				

Description: This MD states the channel axes on which the axes of the cartesian coordinate system are mapped for active transformation 13.
Otherwise the meaning corresponds to TRAFO_GEOAX_ASSIGN_TAB_1.

25126	TRAFO_INCLUDES_TOOL_13			C07	M1, F2	
-	Tool handling with active 13th transformation			BOOLEAN	NEW CONF	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description: This MD defines for each channel, whether the tool is treated in the 13th transformation or externally.
Other than that it has the same meaning as TRAFO_INCLUDES_TOOL_1.

25130	TRAFO_TYPE_14			C07	F2	
-	Definition of the 14th transformation in the channel			DWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-	-	7/7	U

Description: This MD defines for each channel, which transformation is available as 14th transformation in the channel.
Other than that it has the same meaning as TRAFO_TYPE_1.

25132	TRAFO_AXES_IN_14			C07	F2	
-	Axis assignment for transformation 14			BYTE	NEW CONF	
-						
-	20	1, 2, 3, 4, 5, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,, ...	0	20	7/7	U

Description: Axis assignment at the input of the 14th transformation.
See TRAFO_AXES_IN_1 for explanation.

Description:	This MD states the channel axes on which the axes of the cartesian coordinate system are mapped for active transformation 14. Otherwise the meaning corresponds to TRAFO GEOAX ASSIGN TAB 1.

Description:	This MD defines for each channel, whether the tool is treated in the 14th transformation or externally. Other than that it has the same meaning as TRAFO INCLUDES TOOL 1.

Description:	This MD defines for each channel, which transformation is available as 15th transformation in the channel. Other than that it has the same meaning as TRAFO TYPE 1.

Description: Axis assignment at the input of the 15th transformation.
See TRAFO AXES IN 1 for explanation.

Description: This MD states the channel axes on which the axes of the cartesian coordinate system are mapped for active transformation 15.
Otherwise the meaning corresponds to TRAFO GEOAX ASSIGN TAB 1.

25146	TRAFO_INCLUDES_TOOL_15			C07	M1, F2	
-	Tool handling with active 15th transformation			BOOLEAN	NEW CONF	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description: This MD defines for each channel, whether the tool is treated in the 15th transformation or externally.

Other than that it has the same meaning as TRAFO_INCLUDES_TOOL_1.

25150	TRAFO_TYPE_16			C07	F2	
-	Definition of the 16th transformation in the channel			DWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-	-	7/7	U

Description: This MD defines for each channel, which transformation is available as 16th transformation in the channel.

Other than that it has the same meaning as TRAFO_TYPE_1.

25152	TRAFO_AXES_IN_16			C07	F2	
-	Axis assignment for transformation 16			BYTE	NEW CONF	
-						
-	20	1, 2, 3, 4, 5, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,, ...	0	20	7/7	U

Description: Axis assignment at the input of the 16th transformation.

See TRAFO_AXES_IN_1 for explanation.

25154	TRAFO_GEOAX_ASSIGN_TAB_16			C07	F2	
-	Assignment of geometry axes to channel axes for transformation 16			BYTE	NEW CONF	
-						
-	3	0, 0,				

Description: This MD states the channel axes on which the axes of the cartesian coordinate system are mapped for active transformation 16.

Otherwise the meaning corresponds to TRAFO_GEOAX_ASSIGN_TAB_1.

25156	TRAFO_INCLUDES_TOOL_16			C07	M1, F2	
-	Tool handling with active 16th transformation			BOOLEAN	NEW CONF	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description: This MD defines for each channel, whether the tool is treated in the 16th transformation or externally.

Other than that it has the same meaning as TRAFO_INCLUDES_TOOL_1.

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25160	TRAFO_TYPE_17			C07	F2	
-	Definition of the 17th transformation in the channel			DWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-	-	7/7	U

Description: This MD defines for each channel, which transformation is available as 17th transformation in the channel.
Other than that it has the same meaning as TRAFO_TYPE_1.

25162	TRAFO_AXES_IN_17			C07	F2	
-	Axis assignment for transformation 17			BYTE	NEW CONF	
-						
-	20	1, 2, 3, 4, 5, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, ...	0	20	7/7	U

Description: Axis assignment at the input of the 17th transformation.
See TRAFO_AXES_IN_1 for explanation.

25164	TRAFO_GEOAX_ASSIGN_TAB_17			C07	F2	
-	Assignment of geometry axes to channel axes for transformation 17			BYTE	NEW CONF	
-						
-	3	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0...	0	20	7/7	U

Description: This MD states the channel axes on which the axes of the cartesian coordinate system are mapped for active transformation 17.
Otherwise the meaning corresponds to TRAFO_GEOAX_ASSIGN_TAB_1.

25166	TRAFO_INCLUDES_TOOL_17			C07	M1, F2	
-	Tool handling with active 17th transformation			BOOLEAN	NEW CONF	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description: This MD defines for each channel, whether the tool is treated in the 17th transformation or externally.
Other than that it has the same meaning as TRAFO_INCLUDES_TOOL_1.

25170	TRAFO_TYPE_18			C07	F2	
-	Definition of the 18th transformation in the channel			DWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-	-	7/7	U

Description: This MD defines for each channel, which transformation is available as 18th transformation in the channel.
Other than that it has the same meaning as TRAFO_TYPE_1.

25172	TRAFO_AXES_IN_18			C07	F2	
-	Axis assignment for transformation 18			BYTE	NEW CONF	
-						
-	20	1, 2, 3, 4, 5, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,, ...	0	20	7/7	U

Description: Axis assignment at the input of the 18th transformation.
See TRAFO_AXES_IN_1 for explanation.

25174	TRAFO_GEOAX_ASSIGN_TAB_18			C07	F2	
-	Assignment of geometry axes to channel axes for transformation 18			BYTE	NEW CONF	
-						
-	3	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0...	0	20	7/7	U

Description: This MD states the channel axes on which the axes of the cartesian coordinate system are mapped for active transformation 18.
Otherwise the meaning corresponds to TRAFO_GEOAX_ASSIGN_TAB_1.

25176	TRAFO_INCLUDES_TOOL_18			C07	M1, F2	
-	Tool handling with active 18th transformation			BOOLEAN	NEW CONF	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description: This MD defines for each channel, whether the tool is treated in the 18th transformation or externally.
Other than that it has the same meaning as TRAFO_INCLUDES_TOOL_1.

25180	TRAFO_TYPE_19			C07	F2	
-	Definition of the 19th transformation in the channel			DWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-	-	7/7	U

Description: This MD defines for each channel, which transformation is available as 19th transformation in the channel.
Other than that it has the same meaning as TRAFO_TYPE_1.

25182	TRAFO_AXES_IN_19			C07	F2	
-	Axis assignment for transformation 19			BYTE	NEW CONF	
-						
-	20	1, 2, 3, 4, 5, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,, ...	0	20	7/7	U

Description: Axis assignment at the input of the 19th transformation.
See TRAFO_AXES_IN_1 for explanation.

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25184	TRAFO_GEOAX_ASSIGN_TAB_19			C07	F2	
-	Assignment of geometry axes to channel axes for transformation 19			BYTE	NEW CONF	
-						
-	3	0, 0				

Description: This MD states the channel axes on which the axes of the cartesian coordinate system are mapped for active transformation 19.

Otherwise the meaning corresponds to TRAFO_GEOAX_ASSIGN_TAB_1.

25186	TRAFO_INCLUDES_TOOL_19			C07	M1, F2	
-	Tool handling with active 19th transformation			BOOLEAN	NEW CONF	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description: This MD defines for each channel, whether the tool is treated in the 19th transformation or externally.

Other than that it has the same meaning as TRAFO_INCLUDES_TOOL_1.

25190	TRAFO_TYPE_20			C07	F2	
-	Definition of the 20th transformation in the channel			DWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-	-	7/7	U

Description: This MD defines for each channel, which transformation is available as 20th transformation in the channel.

Other than that it has the same meaning as TRAFO_TYPE_1.

25192	TRAFO_AXES_IN_20			C07	F2	
-	Axis assignment for transformation 20			BYTE	NEW CONF	
-						
-	20	1, 2, 3, 4, 5, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, ...	0	20	7/7	U

Description: Axis assignment at the input of the 20th transformation.

See TRAFO_AXES_IN_1 for explanation.

25194	TRAFO_GEOAX_ASSIGN_TAB_20			C07	F2	
-	Assignment of geometry axes to channel axes for transformation 20			BYTE	NEW CONF	
-						
-	3	0, 0				

Description: This MD states the channel axes on which the axes of the cartesian coordinate system are mapped for active transformation 20.

Otherwise the meaning corresponds to TRAFO_GEOAX_ASSIGN_TAB_1.

25196	TRAFO_INCLUDES_TOOL_20			C07	M1, F2	
-	Tool handling with active 20th transformation			BOOLEAN	NEW CONF	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description: This MD defines for each channel, whether the tool is treated in the 20th transformation or externally.

Other than that it has the same meaning as TRAFO_INCLUDES_TOOL_1.

25200	TRAFO5_PART_OFFSET_3			C07	F2	
mm	Offset vector of 5-axis transformation 3			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: This machine data designates an offset of the workpiece holder for the 3rd 5-axis transformation of a channel and has a special meaning for each of the various machine types:

Other than that it has the same meaning as TRAFO5_PART_OFFSET_1.

25210	TRAFO5_ROT_AX_OFFSET_3			C07	F2	
degrees	Position offset of rotary axes 1/2/3 for 5-axis transformation 3			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0,...	-	-	7/7	U

Description: This machine data designates the angular offset of the first or second rotary axis in degrees for the 3rd 5-axis transformation of a channel.

Other than that it has the same meaning as TRAFO5_ROT_AX_OFFSET_1.

25220	TRAFO5_ROT_SIGN_IS_PLUS_3			C07	F2	
-	Sign of rotary axis 1/2/3 for 5-axis transformation 3			BOOLEAN	NEW CONF	
-						
-	3	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description: This machine data designates the sign with which the two rotary axes enter the 3rd 5-axis transformation of a channel.

Other than that it has the same meaning as TRAFO5_ROT_SIGN_IS_PLUS_1.

25230	TRAFO5_NON_POLE_LIMIT_3			C07	F2	
degrees	Definition of pole range for 5-axis transformation 3			DOUBLE	NEW CONF	
-						
-	-	2.0, 2.0, 2.0, 2.0, 2.0, 2.0, 2.0, 2.0...	-	-	7/7	U

Description: This machine data designates a limit angle for the fifth axis of the 3rd 5-axis transformation.

Other than that it has the same meaning as TRAFO5_NON_POLE_LIMIT_1.

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25240	TRAFO5_POLE_LIMIT_3			C07	F2	
degrees	End angle tolerance with interpolation through pole for 5-axis transf.			DOUBLE	NEW CONF	
-						
-	-	2.0, 2.0, 2.0, 2.0, 2.0, 2.0, 2.0, 2.0...	-	-	7/7	U

Description: This machine data designates an end angle tolerance for the fifth axis of the 3rd 5-axis transformation with the following properties:
Other than that it has the same meaning as TRAFO5_POLE_LIMIT_1.

25242	TRAFO5_POLE_TOL_3			C07	-	
degrees	End angle tolerance for tool orientation			DOUBLE	NEW CONF	
-						
-	-	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	0.0	-	7/7	U

Description: End angle tolerance for interpolation through the pole for 5/6-axis transformation 3.
Other than that it has the same meaning as TRAFO5_POLE_TOL_1.

25250	TRAFO5_BASE_TOOL_3			C07	F2	
mm	Vector of base tool on activation of 5-axis transformation 3			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: This MD indicates the vector of the base tool which takes effect when the third transformation is activated without a length compensation being selected. Programmed length compensations have an additive effect with respect to the base tool.
MD irrelevant:
if the "5-axis transformation" option is not installed.

25258	TRAFO5_JOINT_OFFSET_PART_3			C07	F2	
mm	Vector of kinematic table offset			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: This machine data is only evaluated in generic 5-axis transformations with rotatable workpiece and rotatable tool (TRAFO_TYPE = 56, mixed kinematics).
Other than that it has the same meaning as TRAFO5_JOINT_OFFSET_PART_1.

25260	TRAFO5_JOINT_OFFSET_3			C07	F2	
mm	Vector of the kinem.offset of the 3rd 5-axis transf. in channel			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: This machine data designates the vector from the first to the second rotary joint for the 3rd transformation of a channel.
Other than that it has the same meaning as TRAFO5_JOINT_OFFSET_1.

25261	TRAFO6_JOINT_OFFSET_2_3_3			C07	-	
mm	Vector of kinematic offset			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: In the case of 6-axis transformations, defines the offset between the 2nd and third rotary axes for the 3rd transformation of each channel.

25262	TRAFO5_TOOL_ROT_AX_OFFSET_3			C07	F2	
mm	Offset of swivel point of the rotary axis on the 3rd 5-axis transformation			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: In the case of a 5-axis transformation with a swiveling linear axis, the value indicates the offset of the rotary axis which swivels the linear axis with reference to machine zero for the 3th transformation.
Other than that it has the same meaning as >TRAFO5_TOOL_ROT_AX_OFFSET_1.

25264	TRAFO5_NUTATOR_AX_ANGLE_3			C07	F2	
degrees	Nutating head angle in 5-axis transformation			DOUBLE	NEW CONF	
-						
-	-	45.0, 45.0, 45.0, 45.0, 45.0, 45.0, 45.0, 45.0...	-89.	89.	7/7	U

Description: Angle between the second rotary axis and the axis corresponding to it in the rectangular coordinate system
Other than that it has the same meaning as TRAFO5_NUTATOR_AX_ANGLE_1.

25266	TRAFO5_NUTATOR_VIRT_ORIAX_3			C07	-	
-	Virtual orientation axes			BOOLEAN	NEW CONF	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/7	U

Description: It has the same meaning as TRAFO5_NUTATOR_VIRT_ORIAX_1.

25270	TRAFO5_AXIS1_3			C07	F2	
-	Direction of 1st rotary axis			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: The MD designates the vector that describes the direction of the first rotary axis with the general 5-axis transformation (TRAFO_TYPE_* = 24).
Other than that it has the same meaning as TRAFO5_AXIS1_1.

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25272	TRAFO5_AXIS2_3			C07	F2	
-	Direction of 2nd rotary axis			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: The MD designates the vector that describes the direction of the second rotary axis with the general 5-axis transformation (TRAFO_TYPE_* = 24, 40, 56).
Other than that it has the same meaning as TRAFO5_AXIS2_1.

25273	TRAFO5_AXIS3_3			C07	-	
-	Direction of the 3rd rotary axis			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: The MD designates the vector that describes the direction of the third rotary axis with the general 6-axis transformation (TRAFO_TYPE_* = 24, 40, 56, 57).
Other than that it has the same meaning as TRAFO5_AXIS3_1.

25274	TRAFO5_BASE_ORIENT_3			C07	-	
-	Vector of the tool base orientation for 5-axis transformation			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: Indicates the vector of the tool orientation in the general 5-axis transformation (TRAFO_TYPE_* = 24, 40, 56) if this is not defined on the transformation call or not read from a programmed tool.
Other than that it has the same meaning as TRAFO5_BASE_ORIENT_1.

25276	TRAFO6_BASE_ORIENT_NORMAL_3			C07	-	
-	Normal tool vector in 6-axis transformation			DOUBLE	NEW CONF	
-						
-	3	0.0, 1.0 , 0.0, 0.0, 1.0 , 0.0, 0.0, 1.0 , 0.0, 0.0, 1.0 , 0.0, ...	-	-	7/7	U

Description: Indicates the vector that stands vertically on the tool orientation (TRAFO5_BASE_ORIENTATION_1) in general 6-axis transformation (TRAFO_TYPE_* = 24, 40, 56, 57).
Other than that it has the same meaning as TRAFO6_BASE_ORIENT_NORMAL_1.

25280	TRAFO5_TOOL_VECTOR_3			C07	F2	
-	Direction of orientation vector for the first 5-axis transf.			BYTE	NEW CONF	
-						
-	-	2, 2, 2, 2, 2, 2, 2, 2...	0	2	7/2	M

Description: Indicates the direction of the orientation vector for the first 5-axis transformation for each channel.
Other than that it has the same meaning as TRAFO5_TOOL_VECTOR_1.1.

25282	TRAFO5_TCARR_NO_3			C07	-	
-	TCARR number for the 3rd 5-axis transformation			DWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-	-	7/7	U

Description: It has the same meaning as TRAFO5_TCARR_NO_1.

25285	TRAFO5_ORIAX_ASSIGN_TAB_3			C07	F2	
-	Orientation axis / channel axis assignment transformation 3			BYTE	NEW CONF	
-						
-	3	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0...	0	20	7/2	M

Description: Assignment table of the orientation axes for 5-axis transformation 3
Other than that it has the same meaning as TRAFO5_ORIAX_ASSIGN_TAB_1.

25290	TRAFO5_ROT_OFFSET_FROM_FR_3			C01, C07	-	
-	Offset of transformation rotary axes from WO.			BOOLEAN	NEW CONF	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/2	M

Description: It has the same meaning as TRAFO5_ROT_OFFSET_FROM_FR_1.

25294	TRAFO7_EXT_ROT_AX_OFFSET_3			C07	F2	
degrees	Position offset of the external rotary axes for 7-axis transformation 3			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0,				

Description: This machine data designates the angular offset of the external rotary axis in degrees for the third 7-axis transformation of a channel.
MD irrelevant:
if the "5-Axis Transformation" option is not installed.

25295	TRAFO7_EXT_AXIS1_3			C07	F2	
-	Direction of the 1st external rotary axis			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: The MD indicates the vector that describes the direction of the first external rotary axis in the third general 5/6-axis transformation (TRAFO_TYPE_* = 24).
The vector can have any magnitude.
Example:
Both with (0, 1, 0) and with (0, 7.21, 0), the same axis is described (in the direction of the 2nd geometry axis, i.e. usually Y).
Valid for the first transformation of a channel.

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25300	TRAFO5_PART_OFFSET_4			C07	F2	
mm	Offset vector of 5-axis transformation 4			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: This machine data designates an offset of the workpiece holder for the 4th 5-axis transformation of a channel and has a special meaning for each of the various machine types:
Other than that it has the same meaning as TRAFO5_PART_OFFSET_1.

25310	TRAFO5_ROT_AX_OFFSET_4			C07	F2	
degrees	Position offset of rotary axes 1/2/3 for 5-axis transformation 4			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0,...	-	-	7/7	U

Description: This machine data designates the angular offset of the first or second rotary axis in degrees for the 4th 5-axis transformation of a channel.
Other than that it has the same meaning as TRAFO5_ROT_AX_OFFSET_1.

25320	TRAFO5_ROT_SIGN_IS_PLUS_4			C07	F2	
-	Sign of rotary axis 1/2/3 for 5-axis transformation 4			BOOLEAN	NEW CONF	
-						
-	3	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description: This machine data designates the sign with which the two rotary axes enter the 4th 5-axis transformation of a channel.
Other than that it has the same meaning as TRAFO5_ROT_SIGN_IS_PLUS_1.

25330	TRAFO5_NON_POLE_LIMIT_4			C07	F2	
degrees	Definition of pole range for 5-axis transformation 4			DOUBLE	NEW CONF	
-						
-	-	2.0, 2.0, 2.0, 2.0, 2.0, 2.0, 2.0, 2.0...	-	-	7/7	U

Description: This machine data designates a limit angle for the fifth axis of the 4th 5-axis transformation.
Other than that it has the same meaning as TRAFO5_NON_POLE_LIMIT_1.

25340	TRAFO5_POLE_LIMIT_4			C07	F2	
degrees	End angle tolerance with interpolation through pole for 5-axis transf.			DOUBLE	NEW CONF	
-						
-	-	2.0, 2.0, 2.0, 2.0, 2.0, 2.0, 2.0, 2.0...	-	-	7/7	U

Description: This machine data designates an end angle tolerance for the fifth axis of the 4th 5-axis transformation with the following properties:
Other than that it has the same meaning as TRAFO5_POLE_LIMIT_1.

25342	TRAFO5_POLE_TOL_4			C07	-	
degrees	End angle tolerance for tool orientation			DOUBLE	NEW CONF	
-						
-	-	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	0.0	-	7/7	U

Description: End angle tolerance for interpolation through the pole for 5/6-axis transformation 4. Other than that it has the same meaning as TRAFO5_POLE_TOL_1.

25350	TRAFO5_BASE_TOOL_4			C07	F2	
mm	Vector of base tool on activation of 5-axis transformation 4			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: This MD indicates the vector of the base tool which takes effect when the first transformation is activated without a length compensation being selected. Programmed length compensations have an additive effect with respect to the base tool.

MD irrelevant:

if the "5-axis transformation" option is not installed.

25358	TRAFO5_JOINT_OFFSET_PART_4			C07	F2	
mm	Vector of kinematic table offset			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: This machine data is only evaluated in generic 5-axis transformations with rotatable workpiece and rotatable tool (TRAFO_TYPE = 56, mixed kinematics).

Other than that it has the same meaning as TRAFO5_JOINT_OFFSET_PART_1.

25360	TRAFO5_JOINT_OFFSET_4			C07	F2	
mm	Vector of the kinem.offset of the 4th 5-axis transf. in channel			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: This machine data designates the vector from the first to the second rotary joint for the 4th transformation of a channel.

Other than that it has the same meaning as TRAFO5_JOINT_OFFSET_1.

25361	TRAFO6_JOINT_OFFSET_2_3_4			C07	-	
mm	Vector of kinematic offset			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0. ...	-	-	7/7	U

Description: In the case of 6-axis transformations, defines the offset between the 2nd and third rotary axes for the 4th transformation of each channel.

2.3 NC machine data

25362	TRAF05_TOOL_ROT_AX_OFFSET_4			C07	F2	
mm	Offset of swivel point of the rotary axis on the 4th 5-axis transformation			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: In the case of a 5-axis transformation with a swiveling linear axis, the value indicates the offset of the rotary axis which swivels the linear axis with reference to machine zero for the 4th transformation.

Other than that it has the same meaning as >TRAF05_TOOL_ROT_AX_OFFSET_1.

25364	TRAF05_NUTATOR_AX_ANGLE_4			C07	F2	
degrees	Nutating head angle in 5-axis transformation			DOUBLE	NEW CONF	
-						
-	-	45.0, 45.0, 45.0, 45.0, 45.0, 45.0, 45.0, 45.0...	-89.	89.	7/7	U

Description: Angle between the second rotary axis and the axis corresponding to it in the rectangular coordinate system

Other than that it has the same meaning as TRAF05_NUTATOR_AX_ANGLE_1.

25366	TRAFO5_NUTATOR_VIRT_ORIAX_4			C07	-	
-	Virtual orientation axes			BOOLEAN	NEW CONF	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/7	U

Description: It has the same meaning as TRAF05_NUTATOR_VIRT_ORIAX_1.

25370	TRAF05_AXIS1_4			C07	F2	
-	Direction of 1st rotary axis			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: The MD designates the vector that describes the direction of the first rotary axis with the general 5-axis transformation (TRAF0_TYPE_* = 24).

Other than that it has the same meaning as TRAF05_AXIS1_1.

25372	TRAF05_AXIS2_4			C07	F2	
-	Direction of 2nd rotary axis			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: The MD designates the vector that describes the direction of the second rotary axis with the general 5-axis transformation (TRAF0_TYPE_* = 24, 40, 56).

Other than that it has the same meaning as TRAF05_AXIS2_1.

25373	TRAFO5_AXIS3_4			C07	-	
-	Direction of the 3rd rotary axis			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: The MD designates the vector that describes the direction of the third rotary axis with the general 6-axis transformation (TRAFO_TYPE_* = 24, 40, 56, 57).
Other than that it has the same meaning as TRAFO5_AXIS3_1.

25374	TRAFO5_BASE_ORIENT_4			C07	-	
-	Vector of the tool base orientation for 5-axis transformation			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: Indicates the vector of the tool orientation in the general 5-axis transformation (TRAFO_TYPE_* = 24, 40, 56) if this is not defined on the transformation call or not read from a programmed tool.
Other than that it has the same meaning as TRAFO5_BASE_ORIENT_1.

25376	TRAFO6_BASE_ORIENT_NORMAL_4			C07	-	
-	Normal tool vector in 6-axis transformation			DOUBLE	NEW CONF	
-						
-	3	0.0, 1.0 , 0.0, 0.0, 1.0 , 0.0, 0.0, 1.0 , 0.0, 0.0, 1.0 , 0.0, ...	-	-	7/7	U

Description: Indicates the vector that stands vertically on the tool orientation (TRAFO5_BASE_ORIENTATION_1) in general 6-axis transformation (TRAFO_TYPE_* = 24, 40, 56, 57).
Other than that it has the same meaning as TRAFO6_BASE_ORIENT_NORMAL_1.

25380	TRAFO5_TOOL_VECTOR_4			C07	F2	
-	Direction of orientation vector for the first 5-axis transf.			BYTE	NEW CONF	
-						
-	-	2, 2, 2, 2, 2, 2, 2, 2...	0	2	7/2	M

Description: Indicates the direction of the orientation vector for the first 5-axis transformation for each channel.
Other than that it has the same meaning as TRAFO5_TOOL_VECTOR_1.1.

25382	TRAFO5_TCARR_NO_4			C07	-	
-	TCARR number for the 4th 5-axis transformation			DWORD	NEW CONF	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-	-	7/7	U

Description: It has the same meaning as TRAFO5_TCARR_NO_1.

2.3 NC machine data

25385	TRAFO5_ORIAX_ASSIGN_TAB_4			C07	F2	
-	Orientation axis / channel axis assignment transformation 4			BYTE	NEW CONF	
-						
-	3	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0...	0	20	7/2	M

Description: Assignment table of the orientation axes for 5-axis transformation 4
Other than that it has the same meaning as TRAFO5_ORIAX_ASSIGN_TAB_1.

25390	TRAFO5_ROT_OFFSET_FROM_FR_4			C01, C07	-	
-	Offset of transformation rotary axes from WO.			BOOLEAN	NEW CONF	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/2	M

Description: It has the same meaning as TRAFO5_ROT_OFFSET_FROM_FR_1.

25394	TRAFO7_EXT_ROT_AX_OFFSET_4			C07	F2	
degrees	Position offset of the external rotary axes for 7-axis transformation 4			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0,...	-	-	7/7	U

Description: This machine data designates the angular offset of the external rotary axis in degrees for the fourth 7-axis transformation of a channel.
MD irrelevant:
if the "5-Axis Transformation" option is not installed.

25395	TRAFO7_EXT_AXIS1_4			C07	F2	
-	Direction of the 1st external rotary axis			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, 0.0, 0.0 , 0.0, ...	-	-	7/7	U

Description: The MD indicates the vector that describes the direction of the first external rotary axis in the fourth general 5/6-axis transformation (TRAFO_TYPE_* = 24).
The vector can have any magnitude.
Example:
Both with (0, 1, 0) and with (0, 7.21, 0), the same axis is described (in the direction of the 2nd geometry axis, i.e. usually Y).
Valid for the first transformation of a channel.

25495	TRACON_CHAIN_5			C07	M1	
-	Transformation grouping			DWORD	NEW CONF	
-						
-	4	0, 0				

Description: Transformation chain of the 5th concatenated transformation.

See TRACON_CHAIN_1 for documentation.

25496	TRACON_CHAIN_6			C07	M1	
-	Transformation grouping			DWORD	NEW CONF	
-						
-	4	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0...	0	20	7/7	U

Description: Transformation chain of the 6th concatenated transformation.
See TRACON_CHAIN_1 for documentation.

25497	TRACON_CHAIN_7			C07	M1	
-	Transformation grouping			DWORD	NEW CONF	
-						
-	4	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0...	0	20	7/7	U

Description: Transformation chain of the 7th concatenated transformation.
See TRACON_CHAIN_1 for documentation.

25498	TRACON_CHAIN_8			C07	M1	
-	Transformation grouping			DWORD	NEW CONF	
-						
-	4	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0...	0	20	7/7	U

Description: Transformation chain of the 8th concatenated transformation.
See TRACON_CHAIN_1 for documentation.

26000	PUNCHNIB_ASSIGN_FASTIN			C01, C09	N4	
-	Hardware assignment for input byte for stroke control			UDWORD	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	0x7FFFFFFF	7/2	M

Description: Assignment of the high-speed input byte for "punching and nibbling"

Bit 0-7: Number of the input byte used

Bit 8-15: Free

Bit 16-23: Inversion mask for writing the hardware byte

Bit 24-30: Free

This data defines which input byte is to be used for the signal "travel active".

= 1:

On-board inputs (4 high-speed NC inputs) are used.

2, 3, 4, 5

The external digital NC inputs are used

128-129:

Comparator byte (results from high-speed analog inputs or VDI specification)

Related to:

MD26006 \$MC_NIBBLE_PUNCH_INMASK[n]

References:

/FB/, A4, Digital and Analog NC I/Os

2.3 NC machine data

The signal is high active as default from software 3.2. That is there is wire break monitoring. If the signal is low active then, e.g., the MD must be set to the value MD="H 0001 0001" for the outboard inputs.

26002	PUNCHNIB_ASSIGN_FASTOUT			C01, C09	N4	
-	Hardware assignment for output byte for stroke control			UDWORD	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	0x7FFFFFFF	7/2	M

Description: This data defines which output byte is to be used for the stroke control.

Number of the high-speed output byte for "punching and nibbling"

Bit 0-7: Number of the output byte used

Bit 8-15: Free

Bit 16-23: Inversion mask for writing the hardware byte

Bit 24-30: Free

Possible inputs:

1:

840D on-board outputs (4 high-speed + 4 bits via VDI specification)

2, 3, 4, 5

External digital outputs (high-speed NC O/I or VDI specification)

Related to:

MD26004 \$MC_NIBBLE_PUNCH_OUTMASK[n]

References:

/FB/, A4, Digital and Analog NC I/Os

26004	NIBBLE_PUNCH_OUTMASK			C01, C09	N4	
-	Mask for fast output bits			UBYTE	PowerOn	
-						
-	8	1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0...	0	-	7/2	M

Description: Mask for high-speed output bits for punching and nibbling.

Byte 1: Contains the bit for stroke release

Bytes 2-8: Currently free

Special cases:

Only NIBBLE_PUNCH_OUTMASK[0] is significant.

This is used to define the output bit for the signal "Release stroke".

Related to:

MD26002 \$MC_PUNCHNIB_ASSIGN_FASTOUT

26006	NIBBLE_PUNCH_INMASK			C01, C09	N4	
-	Mask for fast input bits			UBYTE	PowerOn	
-						
-	8	1, 0,				

Description: This data can define up to 8 byte masks for the output of the high-speed bits.

The standard assignment of this data is as follows:

NIBBLE_PUNCH_INMASK[0]=1:

2° = first bit for the first punch interface (SPIF1)

NIBBLE_PUNCH_INMASK[1]=4:

Second punch interface (SPIF2), not available as standard

NIBBLE_PUNCH_INMASK[2]=0

...

NIBBLE_PUNCH_INMASK[7]=0

Note:

-

Special cases:

Only NIBBLE_PUNCH_INMASK[0] is relevant. This is used to define the input bit for the signal "Stroke active".

Related to:

MD26000 \$MC_PUNCHNIB_ASSIGN_FASTIN

26008	NIBBLE_PUNCH_CODE			C09	H2, K1	
-	Definition of M functions			DWORD	PowerOn	
-						
-	8	0,23,22, 25, 26, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,...	-	-	7/2	M

Description: This data defines the special M functions for punching and nibbling.

	Standard value	Example
NIBBLE_PUNCH_CODE[0] = 0	20	End punching, nibbling with M20
NIBBLE_PUNCH_CODE[1] = 23	23	End punching, nibbling with M23
NIBBLE_PUNCH_CODE[2] = 22	22	Start nibbling
NIBBLE_PUNCH_CODE[3] = 25	25	Start punching
NIBBLE_PUNCH_CODE[4] = 26	26	Activate dwell time
NIBBLE_PUNCH_CODE[5] =122	122	Start nibbling with pretension, stroke control at servo level
NIBBLE_PUNCH_CODE[6] =125	125	Start punching with pretension, stroke control at servo level
NIBBLE_PUNCH_CODE[7] = 0	0	Not used (in preparation)

Special cases:

If MD26012 \$MC_PUNCHNIB_ACTIVATION = 2 (M functions are interpreted directly by the software), then MD26008 \$MC_NIBBLE_PUNCH_CODE[0] =20 has to be set.

Related to:

MD26012 \$MC_PUNCHNIB_ACTIVATION

26010	PUNCHNIB_AXIS_MASK			C09	N4	
-	Definition of punching and nibbling axes			UDWORD	PowerOn	
-						
-	-	7, 0, 0, 0, 0, 0, 0, 0...	0	0x7FFFFFFF	7/2	M

Description: Defines the axes involved in punching and nibbling. That is all the axes defined here must be at rest during punching and nibbling.

Related to:

MD26016 \$MC_PUNCH_PARTITION_TYPE

26012	PUNCHNIB_ACTIVATION			C09	K1	
-	Activation of punching and nibbling functions			DWORD	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-	-	7/2	M

2.3 NC machine data

Description:

This MD defines the ways in which punching and nibbling functions can be activated:

PUNCHNIB_ACTIVATION = 0

None of the punching or nibbling functions can be activated. The automatic path segmentation is the only exception - if it is enabled via MD26014

\$MC_PUNCH_PATH_SPLITTING.

PUNCHNIB_ACTIVATION = 1

The functions are activated via language commands. If M functions are to be used, then they must be programmed using macros.

PUNCHNIB_ACTIVATION = 2

The M functions are interpreted directly by the software. Language commands can still be used.

Note:

This option is intended only as a temporary solution.

Related to:

MD26014 \$MC_PUNCH_PATH_SPLITTING

MD26008 \$MC_NIBBLE_PUNCH_CODE[n]

26014	PUNCH_PATH_SPLITTING			C09	N4	
-	Activation of automatic path segmentation			DWORD	PowerOn	
-						
-	-	2, 2, 2, 2, 2, 2, 2...	-	-	7/2	M

Description:

Activation data for automatic path segmentation.

Value Significance

0 =

Automatic path segmentation only active with punching and nibbling.

1 =

Automatic path segmentation can also be activated without punching and nibbling functions;

that is, it is programmable and be used NC internally

2 =

Automatic path segmentation can only be used NC internally;

that is it cannot be programmed.

26016	PUNCH_PARTITION_TYPE			C09	N4	
-	Behavior of individual axes with automatic path segmentation			DWORD	PowerOn	
-						
-	-	1, 0, 0, 0, 0, 0, 0, 0...	-	-	7/2	M

Description:

This machine data defines how single axes that are also nibbling axes within the meaning of MD26010 \$MC_PUNCHNIB_AXIS_MASK are to behave.

In this case, there are the following options for the behavior of the single axes during automatic path segmentation and stroke control:

PUNCH_PARTITION_TYPE = 0

No special behavior during automatic path segmentation. If the single axes are programmed together with path axes in one block, then their total traversing path is split up corresponding to the path axes. That is the pure geometric relationship between the single axes and path axes is identical to the undivided motion. If the single axes are programmed without the path axes but with SPN=<value>, then the path is divided according to the programmed SPN value.

PUNCH_PARTITION_TYPE = 1

In this case, the path of the single axes, if they are programmed together with path axes, are generally traversed in the first section (that is independently of the currently active type of interpolation).

PUNCH_PARTITION_TYPE = 2

In this case, the single axes behave with linear interpolation in the same way as with PUNCH_PARTITION_TYPE = 1, and with all other types of interpolation in the same way as with PUNCH_PARTITION_TYPE = 0.

Related to:

MD26010 \$MC_PUNCHNIB_AXIS_MASK

26018	NIBBLE_PRE_START_TIME			C09	N4	
s	Delay time for nibbling/punching with G603			DOUBLE	PowerOn	
-						
-	-	0., 0., 0., 0., 0., 0., 0., 0....	-	-	7/2	M

Description:

To minimize any dead times due to the reaction time of the punching unit, it is possible to release the stroke before reaching the in-position window of the axes. The reference time for this is the interpolation end. Since there is normally a delay of some interpolation cycles after reaching the interpolation end (depending on the machine dynamics) until the axes actually come into position, the prestart time is a delay time with respect to reaching the interpolation end.

The function is therefore coupled to G603 (block change at the end of interpolation). The time can be set via the machine data NIBBLE_PRE_START_TIME).

Example:

With an interpolation cycle of 5 ms, a stroke shall be released 2 cycles after reaching the interpolation end. In this case, the value 0.010 s must be selected for NIBBLE_PRE_START_TIME. If a value that is not integrally divisible by the set interpolation time is selected, then the stroke is initiated in the interpolation cycle following the set time.

26020	NIBBLE_SIGNAL_CHECK			C09	N4	
-	Alarm on chattering punching signal			DWORD	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-	-	7/2	M

Description:

When stroke active signal is set, for example by punch overshoots between the strokes, then the interpolation is stopped. It is also possible to generate the message "unclean punch signal" as a function of machine data NIBBLE_SIGNAL_CHECK.

0: No error message when the punching signal is irregular

1: Alarm, when the punching signal is irregular between strokes

27100	ABSBLOCK_FUNCTION_MASK			N01	K1, P1	
-	Parameterize basic blocks with absolute values			UDWORD	PowerOn	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0	0x1	7/2	M

Description:

Parameterization of the "basic blocks with absolute values" function

Bit 0 = 1 :

The position values of the transverse axis are always displayed as diameter values.

Transverse axes can be applied using MD20100 \$MC_DIAMETER_AX_DEF or MD30460 \$MA_BASE_FUNCTION_MASK, bit 2.

Description: A version information freely available to the user
(is indicated in the version screen)

Description:

The program run time is measured using system variables and can be read out. It provides a means of outputting the current progress of the processing of a part program. This MD can be used to make the following settings on a channel-specific basis:

Bit 0 = 0

\$AC_ACT_PROG_NET_TIME is not deleted on a jump to the start of the program with GOTOS

Bit 0 = 1

\$AC_ACT_PROG_NET_TIME is deleted on a jump to the start of the program with GOTOS, the value is saved in \$AC_OLD_PROG_NET_TIMES, and the program counter \$AC_OLD_PROG_NET_TIME_COUNT is incremented.

Bit 1 = 0

\$AC_ACT_PROG_NET_TIME ceases to be increased if override = 0 is set; in other words, the program run time is measured without the time for which the override was set to 0.

Bit 1 = 1

\$AC_ACT_PROG_NET_TIME is increased if override = 0; in other words, the program run time is measured with the time for which the override was set to 0.

Bits 2 to 31

Reserved

Description:	Timers are provided as system variables under the function program runtime. While the NCK-specific timers are always activated (for time measurements since the last control power on), the channel-specific timers have to be started via this machine data. Meaning: Bit 0 = 0 No measurement of total operating time for any part program Bit 0 = 1 Measurement of total operating time is active for all part programs (\$AC_OPERATING_TIME) Bit 1 = 0 No measurement of current program runtime

Bit 1 = 1
 Measurement of current program runtime is active (\$AC_CYCLE_TIME)
 Bit 2 = 0
 No measurement of tool operating time
 Bit 2 = 1
 Measurement of tool operating time is active (\$AC_CUTTING_TIME)
 Bit 3
 Reserved
 Bits 4,5 only when bit 0, 1, 2 = 1:
 Bit 4 = 0 No measurement with active dry run feed
 Bit 4 = 1 Measurement also with active dry run feed
 Bit 5 = 0 No measurement with program test
 Bit 5 = 1 Measurement also with program test
 Bit 6 only when Bit 1 = 1:
 Bit 6 = 0
 Delete \$AC_CYCLE_TIME also with start by ASUB and PROG_EVENTS
 Bit 6 = 1
 \$AC_CYCLE_TIME is not deleted on start by ASUB and PROG_EVENTS.
 Bit 7 only when bit 2 = 1:
 Bit 7 = 0 \$AC_CUTTING_TIME counts only with active tool
 Bit 7 = 1 \$AC_CUTTING_TIME counts irrespective of tool
 Bits 8 only when bit 1 = 1
 Bit 8 = 0
 \$AC_CYCLE_TIME is not deleted on jumping to program start with GOTOS
 Bit 8 = 1
 \$AC_CYCLE_TIME is deleted on jumping to program start with GOTOS.
 Bit 9 only when bits 0, 1 = 1:
 Bit 9 = 0
 \$AC_OPERATING_TIME, \$AC_CYCLE_TIME: No measurement with override = 0.
 Bit 9 = 1
 \$AC_OPERATING_TIME, \$AC_CYCLE_TIME: Measurement also with override = 0.
 Bits 10 to 31
 Reserved

27880	PART_COUNTER			C09	K1	
-	Activation of workpiece counter			UDWORD	Reset	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0	0x0FFFFFFF	7/2	M

Description:

The part counters can be configured with this machine data.

Note: with bit 0 = 1 and \$AC_REQUIRED_PARTS less than 0, all workpiece counts activated in this MD are frozen at the status reached.

Meaning of the individual bits:

Bits 0 - 3: Activating \$AC_REQUIRED_PARTS

 Bit 0 = 1: Counter \$AC_REQUIRED_PARTS is activated

Further meaning of bits 1-3 only when bit 0 =1 and \$AC_REQUIRED_PARTS > 0:

Bit 1 = 0: Alarm/VDI output if \$AC_ACTUAL_PARTS corresponds to \$AC_REQUIRED_PARTS

Bit 1 = 1: Alarm/VDI output if \$AC_SPECIAL_PARTS corresponds to \$AC_REQUIRED_PARTS

2.3 NC machine data

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Bit 2      Reserved!
Bit 3      Reserved!
Bits 4 - 7:   Activating $AC_TOTAL_PARTS
-----

Bit 4 = 1:    Counter $AC_TOTAL_PARTS is active
Further meaning of bits 5-7 only when bit 4 =1 and $AC_REQUIRED_PARTS > 0:
Bit 5 = 0:    Counter $AC_TOTAL_PARTS is incremented by 1 with a VDI output of M02/M30
Bit 5 = 1:    Counter $AC_TOTAL_PARTS is incremented by 1 with output of the M command
from MD PART_COUNTER_MCODE[0]
Bit 6 = 0:    $AC_TOTAL_PARTS also active with program test/block search
Bit 6 = 1:    No machining $AC_TOTAL_PARTS with program test/block search
Bit 7 = 1:    Counter $AC_TOTAL_PARTS is incremented by 1 on a return with GOTOS
Bits 8 - 11:   Activating $AC_ACTUAL_PARTS
-----

Bit 8 = 1:    Counter $AC_ACTUAL_PARTS is active
Further significance of bits 9-11 only when bit 8 =1 and $AC_REQUIRED_PARTS > 0:
Bit 9 = 0:    Counter $AC_ACTUAL_PARTS is incremented by 1 with a VDI output of M02/M30
Bit 9 = 1:    Counter $AC_ACTUAL_PARTS is incremented by 1 with output of the M command
from MD PART_COUNTER_MCODE[1]
Bit 10 = 0:   $AC_ACTUAL_PARTS also active with program test/block search
Bit 10 = 1:   No machining $AC_ACTUAL_PARTS with program test/block search
Bit 11 = 1:   Counter $AC_ACTUAL_PARTS is incremented by 1 on a return with GOTOS
Bit 12 - 15:   Activating $AC_SPECIAL_PARTS
-----

Bit 12 = 1:    Counter $AC_SPECIAL_PARTS is active
Further significance of bits 13-15 only when bit 12 =1 and $AC_REQUIRED_PARTS > 0:
Bit 13 = 0:    Counter $AC_SPECIAL_PARTS is incremented by 1 with a VDI output of M02/
M30
Bit 13 = 1:    Counter $AC_SPECIAL_PARTS is incremented by 1 with output of the M
command from MD PART_COUNTER_MCODE[2]
Bit 14 = 0:    $AC_SPECIAL_PARTS also active with program test/block search
Bit 14 = 1:    No machining $AC_SPECIAL_PARTS with program test/block search
Bit 15 = 1:    Counter $AC_SPECIAL_PARTS is incremented by 1 on a return with GOTOS
Bit 16 - 19:   Extension $AC_TOTAL_PARTS
-----

Meaning of the bits 16-19 applies only if Bit4 =1 and $AC_REQUIRED_PARTS > 0:
Bit 16 = 0:    $AC_TOTAL_PARTS is active in MDI mode
Bit 16 = 1:    No machining $AC_TOTAL_PARTS in MDI mode
Bit 17      Reserved!
Bit 18      Reserved!
Bit 19      Reserved!
Bit 20 - 23:   Extension $AC_ACTUAL_PARTS
-----

Meaning of bits 20-23 only if bit8 =1 and $AC_REQUIRED_PARTS > 0:
Bit 20 = 0:    $AC_ACTUAL_PARTS is active in MDI mode
Bit 20 = 1:    No machining $AC_ACTUAL_PARTS in MDI mode
Bit 21      Reserved!
Bit 22      Reserved!
Bit 23      Reserved!
Bit 24 - 27:   Extension $AC_SPECIAL_PARTS

```

MD27882 \$MC PART COUNTER MCODE

MD27882 \$MC PART COUNTER MCODE[2] for \$AC SPECIAL PARTS399

2.3 NC machine data

28000	MM_REORG_LOG_FILE_MEM			EXP, C02	V2, K1	
-	Memory space for REORG (DRAM)			DWORD	PowerOn	
-						
-	-	50, 50, 50, 50, 50, 50, 50, 50...	1	500	7/2	M

Description: Definition of the size (in kbyte) of the dynamic memory for the REORG-LOG data. The size of the memory determines the quantity of the data available for the function REORG.

References:

/FB/, K1, "Mode Groups, Channel, Program Operation"

28010	MM_NUM_REORG_LUD_MODULES			EXP, C02	V2, K1	
-	Number of blocks for local user variables in REORG (DRAM)			DWORD	PowerOn	
-						
-	-	8, 8, 8, 8, 8, 8, 8, 8...	0	SLMAXNUMBE ROF_USERMO DULES	7/2	M

Description: Defines the number of additional LUD data blocks available for the function REORG (see Description of Functions, Channels, Mode Groups, Program Operation (K1)).

This value can be 0 if the function REORG is not used. The CNC always opens 12 LUD data blocks, of which 8 are used for NC programs and 4 for the ASUBs.

An LUD data block is needed for each NC program and ASUB in which a local user variable is defined. This value may have to be increased for the function REORG if a large IPO buffer is present and a large number of short NC programs in which LUD variables are defined are active (prepared NC blocks of the programs are located in the IPO buffer).

An LUD data block is needed for each of these programs. The size of the reserved memory is affected by the number of LUDs per NC program and their individual memory requirements. The LUD data blocks are stored in the dynamic memory.

The memory requirement for managing the blocks for local user variables with REORG can be determined as follows:

The size of the LUD blocks depends on the number of active LUDs and their data type. The memory for the LUD blocks is limited by the MD28000 \$MC_MM_REORG_LOG_FILE_MEM (memory size for REORG).

28020	MM_NUM_LUD_NAMES_TOTAL			C02	V2, K1	
-	Number of local user variables (DRAM)			DWORD	PowerOn	
-						
-	-	4000, 4000, 4000, 4000, 4000, 4000, 4000, 4000...	4000	32000	7/3	U

Description: Defines the number of variables for the local user data (LUD) which are permitted to exist in the active sections of the program. Approximately 150 bytes of memory per variable are reserved for the names of the variables and the variable values. The memory required for the variable value is equal to the size of the data type. If the total of the local user variables from the active main program and the related subprograms is larger than the defined limit, the variables which are over the limit are not accepted during execution of the program. Dynamic memory is used for the variable names and variable values.

Overview of the memory used by the data types:

Data type	Memory used
REAL	8 bytes
INT	4 bytes
BOOL	1 byte

CHAR	1 byte
STRING	1 byte per character, 200 characters per string are possible
AXIS	4 bytes
FRAME	400 bytes

28040	MM_LUD_VALUES_MEM			C02	V2, K1	
-	Memory space for local user variables (DRAM)			DWORD	PowerOn	
-						
-	-	250, 250, 250, 250, 250, 250, 250, 250...	250	32000	7/3	U

Description: This MD defines the amount of memory space available for LUD variables.
The maximum number of available LUDs is given by one of the limit values of MD28020 \$MC_MM_NUM_LUD_NAMES_TOTAL or MD28040 \$MC_MM_LUD_VALUES_MEM.
It should be remembered that several part programs requiring memory can be open simultaneously in the NCK. The number depends on the type of programming, the program length, and the size of the internal NCK block memory upwards of (MD28060 \$MC_MM_IPO_BUFFER_SIZE, MD28070 \$MC_MM_NUM_BLOCKS_IN_PREP).
Related to:
MD28020 \$MC_MM_NUM_LUD_NAMES_TOTAL
(number of local user variables (DRAM))

28050	MM_NUM_R_PARAM			C02	K1	
-	Number of channel-specific R variables (SRAM)			DWORD	PowerOn	
-						
-	-	100, 100, 100, 100, 100, 100, 100, 100...	0	32535	7/2	M

Description: Defines the number of R variables available in the channel. This machine data reserves 8 bytes of buffered user memory per R variable.

28060	MM_IPO_BUFFER_SIZE			C02	B1, K1	
-	Number of NC blocks in IPO buffer (DRAM)			DWORD	PowerOn	
-						
-	-	10, 10, 10, 10, 10, 10, 10, 10...	2	1000	7/2	M

Description: Defines the number of blocks for the interpolation buffer. This buffer contains prepared NC blocks available for the interpolation. A number of kbytes of the dynamic user memory are reserved for each NC block. The data also limits the number of blocks for look ahead consideration of speed limitation for the LookAhead function.
MD28060 \$MC_MM_IPO_BUFFER_SIZE is set by the system.
Related to:
MD28070 \$MC_MM_NUM_BLOCKS_IN_PREP
(number of blocks for block preparation)

28070	MM_NUM_BLOCKS_IN_PREP			EXP, C02	B1, K1	
-	Number of blocks for block preparation (DRAM)			DWORD	PowerOn	
-						
-	-	50, 50, 50, 50, 50, 50, 50, 50...	20	1000	7/2	M

Description: Defines the number of NC blocks available for NC block preparation. This figure is determined mainly by the system software and is used largely for optimization. Approximately 10 Kbytes of dynamic memory is reserved per NC block.
Related to:

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MD28060 \$MC_MM_IPO_BUFFER_SIZE
(number of NC blocks with IPO buffer)

28071	MM_NUM_SURF_LEVELS	EXP, C02	-
-	Dimensioning of the COMPSURF function (DRAM)	DWORD	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 10 7/1 M

Description: Defines the size of the internal data structures of the COMPSURF function. A larger value means a better surface finish is achieved but also that more CPU time and memory space are required.

With the value 0, the COMPSURF function is not present in a channel, and therefore occupies no memory space.

The machine data only has an effect if the Top Surface option is used.

28072	MM_MAXNUM_SURF_GROUPS	EXP, C02	-
-	Dimensioning of the COMPSURF function in respect of axis groups (DRAM)	DWORD	PowerOn
-			
-	-	1, 1, 1, 1, 1, 1, 1, 1...	1 3 7/2 M

Description: Defines the size of the internal data structures of the COMPSURF function in respect of various axis groups, such as geometry, orientation, and other axis types. Larger values mean better quality smoothing, but also more use of CPU time and memory space.

The machine data only has an effect if the Top Surface option is used.

Related to:

SD42473 \$SC_ACTNUM_SURF_GROUPS

28079	MM_NUM_G_FRAMES	C11, C02	K1, K2
-	Number of grinding frames (SRAM)	DWORD	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 100 7/2 M

Description: Specifies the number of predefined grinding frames.

The buffered data are lost when this machine data is changed!

28080	MM_NUM_USER_FRAMES	C11, C02	K1, K2
-	Number of settable frames (SRAM)	DWORD	PowerOn
-			
-	-	5, 5, 5, 5, 5, 5, 5, 5...	5 100 7/2 M

Description: Defines the number of predefined user frames. The standard system configuration provides four frames for G54 to G57 and one frame for G500.

The backup data are lost if this machine data is altered!

28081	MM_NUM_BASE_FRAMES	C02	M5, K2
-	Number of base frames (SRAM)	DWORD	PowerOn
-			
-	-	1, 1, 1, 1, 1, 1, 1, 1...	0 16 7/2 M

Description: Number of channel-specific base frames per channel.

The value corresponds to the number of field elements for the predefined field \$P_CHBFR[].

Buffered memory is reserved for this.

28082	MM_SYSTEM_FRAME_MASK			C02	M5, K2, W1	
-	System frames (SRAM)			UDWORD	PowerOn	
-						
-	-	0x21, 0x21, 0x21, 0x21, 0x21, 0x21, 0x21, 0x21...	0	0x00000FFF	7/2	S

Description: Bit mask for configuring channel-specific system frames included in the channel.

- Bit 0: System frame for setting actual value and scratching
- Bit 1: System frame for external work offset
- Bit 2: System frame for TCARR and PAROT
- Bit 3: System frame for TOROT and TOFRAME
- Bit 4: System frame for workpiece reference points
- Bit 5: System frame for cycles
- Bit 6: System frame for transformations
- Bit 7: System frame \$P_ISO1FR for ISO G51.1 Mirror
- Bit 8: System frame \$P_ISO2FR for ISO G68 2DROT
- Bit 9: System frame \$P_ISO3FR for ISO G68 3DROT
- Bit 10: System frame \$P_ISO4FR for ISO G51 Scale
- Bit 11: System frame \$P_RELFR for relative coordinate systems

28083	MM_SYSTEM_DATAFRAME_MASK			C02	-	
-	System frames (SRAM)			UDWORD	PowerOn	
-						
-	-	0xF9F, 0xF9F, 0xF9F, 0xF9F, 0xF9F, 0xF9F, 0xF9F, 0xF9F...	0	0x00000FFF	7/2	S

Description: Bit mask for configuring channel-specific system frames in the data storage (SRAM).

- Bit 0: System frame for setting actual value and scratching
- Bit 1: System frame for external work offset
- Bit 2: System frame for TCARR and PAROT
- Bit 3: System frame for TOROT and TOFRAME
- Bit 4: System frame for workpiece reference points
- Bit 5: System frame for cycles
- Bit 6: System frame for transformations
- Bit 7: System frame \$P_ISO1FR for ISO G51.1 Mirror
- Bit 8: System frame \$P_ISO2FR for ISO G68 2DROT
- Bit 9: System frame \$P_ISO3FR for ISO G68 3DROT
- Bit 10: System frame \$P_ISO4FR for ISO G51 Scale
- Bit 11: System frame \$P_RELFR for relative coordinate systems

28085	MM_LINK_TOA_UNIT			C02, C09	FBWsl, S7	
-	Assignment of a TO unit to a channel (SRAM)			DWORD	PowerOn	
-						
-	-	1, 2, 3, 4, 5, 6, 7, 8...	1	10	7/2	M

Description: The T0 area covers all tool, magazine, ... data blocks known to the NCK. The maximum number of units in the TO area is equal to the number of channels.

If MD28085 \$MC_MM_LINK_TOA_UNIT = default setting, then each channel is assigned a TO unit individually.

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If MD28085 \$MC_MM_LINK_TOA_UNIT = i, the channel is assigned TO unit i. This enables one TO unit to be assigned to multiple channels.

Notice

The upper limit does not indicate that this value is always practical or free of conflicts. If one channel (the first) is active in a system with a maximum of 2 channels, and the other is not, the MD on channel 1 can formally be given the value 2, but the NCK cannot work with it. This setting would mean that channel 1 did not have any blocks for tool offsets, as the channel with ID=2 did not exist.

The NCK detects this conflict at Power On and restart, and responds by autonomously changing the (incorrect) value to the default value of the MD.

28090	MM_NUM_CC_BLOCK_ELEMENTS	EXP, C02	TE1, TE7, TE8, K1
-	Number of block elements for compile cycles (DRAM)	DWORD	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 130 7/1 M

Description: The input value defines the number of block elements that can be used for compile cycles.

In the case of software version 2, approximately 1.2KB of dynamic memory is required per block element.

28100	MM_NUM_CC_BLOCK_USER_MEM	EXP, C02	TE1, TE7, TE8, K1
-	Size of block memory for compile cycles (DRAM), in KB	DWORD	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 64000 7/1 M

Description: The value defines the total capacity of block memory available to the user in the dynamic memory area for the compile cycles. The memory is allocated in staggered blocks of 128 bytes.

28105	MM_NUM_CC_HEAP_MEM	EXP, C02	TE7
-	Heap memory in kbytes for compile-cycle applications (DRAM)	DWORD	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 64000 7/2 M

Description: Size of the heap memory in kbytes which can be used by the compile cycle user.

Dynamic memory is reserved.

The memory is allocated in subdivisions of 128 byte groups.

The start address and the size of the reserved memory is made available via a binding, the management lies in the hands of the CC user.

28150	MM_NUM_VDIVAR_ELEMENTS	C02	A2, P3 pl, P3 sl
-	Number of elements for writing PLC variables	DWORD	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 32000 7/2 M

Description: The MD defines the number of elements which the user has available for writing PLC variables (\$A_DBx=...). This number also applies to block search, but not to synchronized actions.

The memory requirement is ca. 24 bytes per element.

One element is needed for each write action when writing PLC variables in quick succession.

If more writing actions are to be performed than elements are available, block transport must be guaranteed (trigger preprocessing stop, if required)

However, the number of elements can be reduced if the accessing actions are made separately (block transport has already been accomplished). Writing accesses (var=\$A_DBx) are unlimited.

28160	MM_NUM_LINKVAR_ELEMENTS			C02	B3	
-	Number of elements for writing NCU-link variables			DWORD	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	32000	7/2	M

Description: Defines the number of elements which the user has available for programming link variables (\$A_DLx=...). This number also applies to block search, but not to synchronized actions.

The memory requirement is approx. 24 bytes per element.

One element is needed for each write action when writing NCU-link variables in quick succession.

However, the number of elements can be reduced if the accessing actions are made separately (block transport has already been accomplished).

If more writing actions are to be performed than elements are available, block transport must be guaranteed (trigger preprocessing stop, if required).

28180	MM_MAX_TRACE_DATAPOINTS			EXP, C02, C06	-	
-	Length of the trace data buffer			DWORD	PowerOn	
NBUP						
-	-	100, 100, 100, 100, 100, 100, 100, 100...	0	20000	2/2	M

Description: MM_MAX_TRACE_DATAPOINTS defines the size of an internal data buffer which contains the trace recordings.

28200	MM_NUM_PROTECT_AREA_CHAN			C02, C06, C09	A3	
-	Number of channel-specific protection zones (SRAM)			DWORD	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	10	7/2	M

Description: This machine data defines how many channel-specific protection areas are set up.

Related to:

MD28210 \$MC_MM_NUM_PROTECT_AREA_ACTIVE (number of simultaneously active protection areas)

MD18190 \$MN_MM_NUM_PROTECT_AREA_NCK (number of control-specific protection areas (SRAM))

References:

/FB/, A3, "Axis/Contour Tunnel Monitoring, Protection Areas"

28210	MM_NUM_PROTECT_AREA_ACTIVE			C11, C02, C06, C09	A3	
-	Number of simultaneously active protection zones in one channel			DWORD	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	20	7/2	M

Description: This machine data defines the number of protection areas that may be activated simultaneously for each channel.

It is not practical to enter a numerical value greater than MD18190 \$MN_MM_NUM_PROTECT_AREA_NCK + MD28200 \$MC_MM_NUM_PROTECT_AREA_CHAN.

Related to:

MD28200 \$MC_MM_NUM_PROTECT_AREA_CHAN (Number of blocks for channel-specific protection areas)

MD18190 \$MN_MM_NUM_PROTECT_AREA_NCK (Number of control-specific protection areas (SRAM))

References:

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/FB1/ Function Manual Basic Functions; Axis Monitoring, Protection Areas (A3)

28212	MM_NUM_PROTECT_AREA_CONTOUR			C11, C02, C06, C09	A3	
-	Elements for active protection zones (DRAM)			DWORD	PowerOn	
-						
-	-	30, 30, 30, 30, 30, 30, 30, 30...	0	50	7/2	M

Description: This machine data defines for each channel how many internal contour elements in total are held available for active protection zones.

Dynamic memory is used.

The MD affects the memory requirements for the activated protection zones.

This machine data is active only if MD28210 \$MC_MM_NUM_PROTECT_AREA_ACTIVE is not equal to 0.

28240	MM_NUM_SYNC_DIAG_ELEMENTS			N05, C02	-	
-	Number of diagnostic elements for expressions in synchronized actions			DWORD	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	32000	7/2	M

Description: The values of the variables and machine data during diagnostics of the motion-synchronous actions are saved to memory elements for storage in the control. A motion-synchronous action uses up to the number of elements for as many variables as are set with MD28241 \$MC_MAXNUM_SYNC_DIAG_VAR.

The following are assigned:

- 1 element for each variable
- 1 element for each index

Example:

```
WHEN $R1 == 1 DO $R2 = $R[AC_MARKER[1]]
```

R1 = 2 elements, variable with written value 1 element, index "1" an element
R2 = 2 elements, variable with written value 1 Element, index "2" an element
AC_MARKER = 2 elements, variable with read value 1 element, index "1" an element
R = 2 elements, variable with written value 1 element, index "1" an element
Total 8 elements.

28241	MAXNUM_SYNC_DIAG_VAR			N05	-	
-	Maximum number of diagnostics variables per synchronized action			DWORD	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	10000	7/2	M

Description: Maximum number of diagnostics variables per synchronized action.

28250	MM_NUM_SYNC_ELEMENTS			C02	2.8, 6.1	
-	Number of elements for expressions in synchronized actions			DWORD	PowerOn	
-						
-	-	159, 159, 159, 159, 159, 159, 159, 159...	0	32000	7/2	M

Description: The expressions of the motion-synchronous actions are stored in memory elements in the control. A motion-synchronous action occupies at least 4 elements.

It occupies:

- 1 element for each operand in the condition
- ≥ 1 element for each action
- 2 elements for each assignment
- 1 element for each further operand in complex expressions.

One element occupies approx. 64 bytes.

The option "Synchronous actions stage 2" is required if the MD can be written to.

28251	MM_NUM_SAFE_SYNC_ELEMENTS			C02	-	
-	Number of elements for expressions in Safety synchr. actions			DWORD	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	32000	7/2	M

Description: The expressions of motion-synchronous actions are stored in memory elements of the control. A motion-synchronous action assigns at least 4 elements.

Assignments:

Each operand in the condition: 1 element

Each action: ≥ 1 element

Each assignment: 2 elements

Each additional operand in complex expressions: 1 element

Also see:

MD28250 \$MC_MM_NUM_SYNC_ELEMENTS

28252	MM_NUM_FCTDEF_ELEMENTS			C02	2.4, 2.8, 6.1	
-	Number of FCTDEF elements			DWORD	PowerOn	
-						
-	-	3, 3, 3, 3, 3, 3, 3, 3...	0	100	7/2	M

Description: Defines the number of FCTDEF elements.

28253	MM_NUM_SYNC_STRINGS			C02	-	
-	Number of strings for expressions in synchronized actions			DWORD	PowerOn	
-						
-	-	200, 200, 200, 200, 200, 200, 200, 200...	0	32000	7/2	M

Description: The expressions of motion-synchronous actions are saved in memory elements for storage in the control. Elements have to be reserved specifically for strings within expressions.

28254	MM_NUM_AC_PARAM			C02	-	
-	Dimension of \$AC_PARAM.			DWORD	PowerOn	
-						
-	-	50, 50, 50, 50, 50, 50, 50, 50...	0	20000	7/2	M

Description: Panel size of \$AC_PARAM.

28255	MM_BUFFERED_AC_PARAM			C02	2.3, 6.1	
-	\$AC_PARAM[] is stored in SRAM.			DWORD	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	1	7/2	M

Description: \$AC_PARAM[] is stored in SRAM.

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28256	MM_NUM_AC_MARKER	C02	2.3, 6.1
-	Dimension of \$AC_MARKER	DWORD	PowerOn
-			
-	-	8, 8, 8, 8, 8, 8, 8, 8...	0 20000 7/2 M

Description: Number of channel-specific markers \$AC_MARKER for motion-synchronous actions.
 DRAM or SRAM is required depending on MD28257 \$MC_MM_BUFFERED_AC_MARKER.

28257	MM_BUFFERED_AC_MARKER	C02	2.3, 6.1
-	\$AC_MARKER[] is stored in SRAM.	DWORD	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 1 7/2 M

Description: \$AC_MARKER[] is stored in SRAM.

28258	MM_NUM_AC_TIMER	C02	2.3, 2.4, 6.1
-	Number of time variables \$AC_TIMER (DRAM)	DWORD	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 10000 7/2 M

Description: Number of channel-specific time variables \$AC_TIMER for motion-synchronous actions (DRAM)

28260	NUM_AC_FIFO	C01	2.3, 2.4, 6.1
-	Number of FIFO variable for synchronized actions	DWORD	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 10 7/2 M

Description: Number of FIFO variables \$AC_FIFO1 - \$AC_FIFO10 for motion-synchronous actions.
 FIFO variables are used for product tracking. A piece of information (e.g. the product length) for each part on a conveyor belt can be temporarily stored in each FIFO variable.
 FIFO variables are stored in R variables.
 MD28262 \$MC_START_AC_FIFO defines the number of the R variable as from which the FIFO variables can be stored. All R variables with lower numbers can be used freely in the part program.
 R variables above the FIFO range cannot be written from the part program.
 The number of R variables must set via MD28050 \$MC_MM_NUM_R_PARAM so that all FIFO variables can be accommodated from the start of the R variables:

$$MD28050 \text{ \$MC\_MM\_NUM\_R\_PARAM} = MD28262 \text{ \$MC\_START\_AC\_FIFO} + MD28260 \text{ \$MC\_NUM\_AC\_FIFO} * (MD28264 \text{ \$MC\_LEN\_AC\_FIFO} + 6)$$

 The FIFO variables bear the names \$AC_FIFO1 to \$AC_FIFO_n.
 They are stored as arrays.
 The indices 0 - 5 have special meanings:
 n= 0:
 A new value is stored in the FIFO when writing with index 0.
 The oldest element is read and removed from the FIFO when writing with index 0.
 n=1: Access to the first element read in
 n=2: Access to the last element 1 read in
 n=3: Sum of all FIFO elements
 n=4: Number of elements available in the FIFO
 n=5: Current write index relative to FIFO start
 n=6: 1st element read in

28262	START_AC_FIFO	C01	2.3, 2.4, 6.1
-	FIFO variables store from R variable	DWORD	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 32535 7/2 M

Description: Number of the R variable as from which FIFO variables are stored. All R variables with lower numbers can be used freely in the part program. R variables above the FIFO range cannot be written from the part program.

The number of R variables must set via MD28050 \$MC_MM_NUM_R_PARAM so that all FIFO variables can be accommodated from the start of the R variables:

$$\text{MD28050 } \$\text{MC\_MM\_NUM\_R\_PARAM} = \text{MD28262 } \$\text{MC\_START\_AC\_FIFO} + \text{MD28260 } \$\text{MC\_NUM\_AC\_FIFO} * (\text{MD28264 } \$\text{MC\_LEN\_AC\_FIFO} + 6)$$

The FIFO variables bear the names \$AC_FIFO1 to \$AC_FIFO n . They are stored as arrays. The indices 0 - 5 have special meanings:

n= 0:

A new value is stored in the FIFO when writing with index 0.

The oldest element is read and removed from the FIFO when reading with index 0.

n=1: Access to the first element read in

n=2: Access to the last element read in

n=3: Sum of all FIFO elements

n=4: Number of elements available in the FIFO

n=5: Current write index relative to FIFO start

Related to:

MD28260 \$MC_NUM_AC_FIFO

28264	LEN_AC_FIFO	C01	2.3, 2.4, 6.1, M5
-	Length of FIFO variables \$AC_FIFO1-\$AC_FIFO10	DWORD	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 32535 7/2 M

Description: Length of the FIFO variables \$AC_FIFO1 to \$AC_FIFO10.

All FIFO variables are the same length.

28266	MODE_AC_FIFO	C01	2.3, 2.4, 6.1
-	Mode of FIFO processing	BYTE	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 - 7/2 M

Description: Mode of FIFO processing:

Bit 0 = 1:

The sum of all FIFO contents is updated at each write access.

Bit 0 = 0:

No summation

Related to:

MD28260 \$MC_NUM_AC_FIFO

28274	MM_NUM_AC_SYSTEM_PARAM	EXP, C02	-
-	Number of \$AC_SYSTEM_PARAM for motion-synchronous actions	DWORD	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 20000 7/2 M

Description: Number of \$AC_SYSTEM_PARAM parameters for motion-synchronous actions.

2.3 NC machine data

Depending on MD28255 \$MC_MM_BUFFERED_AC_PARAM, DRAM or SRAM is required.
Reserved for SIEMENS applications.

28276	MM_NUM_AC_SYSTEM_MARKER			EXP, C02	-	
-	Number of \$AC_SYSTEM_MARKER for motion-synchronous actions			DWORD	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	20000	7/2	M

Description: Number of \$AC_SYSTEM_MARKER markers for motion-synchronous actions.
Depending on MD28257 \$MC_MM_BUFFERED_AC_MARKER, DRAM or SRAM is required.
Reserved for SIEMENS applications.

28290	MM_SHAPED_TOOLS_ENABLE			C01, C08, C02	-	
-	Enable tool radius compensation for contour tools			BOOLEAN	PowerOn	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/2	M

Description: The function "Tool radius compensation for contour tools" is enabled with this tool.

28300	MM_PROTOD_USER_ACTIVE			C02	-	
-	Activation of logging for a user			BOOLEAN	PowerOn	
-						
-	10	TRUE, TRUE, FALSE, FALSE, FALSE, TRUE, TRUE, TRUE, FALSE,, T...	0	-	1/1	M

Description: Activation of recording for a user.
Users 0 and 1, and 5 to 9 are reserved for system functions.
Users 2, 3 and 4 can be used by OEM.
The individual values concern the users of the log function, the values are assigned to the following functions:
0: Reserved for system functions: simultaneous recording, simulation, synchronized action analysis
1: Reserved for system functions: determining program runtimes, multistep editor
2: Reserved for OEM applications
3: Reserved for OEM applications
4: Reserved for OEM applications
5: Reserved for system functions: Trace
6: Reserved for system functions: Trace
7: Reserved for system functions: Trace
8: Reserved for system functions: Trace
9: Reserved for system functions: Action log

28301	MM_PROTOD_NUM_ETP_OEM_TYP			C02	-	
-	Number of OEM event types ETP.			DWORD	PowerOn	
-						
-	10	0, 0,				

Description: Number of OEM event types in OPI module ETP.

The individual values concern the users of the log function, which are assigned to the following functions:

- 0: Reserved for system functions: simultaneous recording, simulation, synchronized action analysis
- 1: Reserved for system functions: determining program runtimes, multistep editor
- 2: Reserved for OEM applications
- 3: Reserved for OEM applications
- 4: Reserved for OEM applications
- 5: Reserved for system functions: Trace
- 6: Reserved for system functions: Trace
- 7: Reserved for system functions: Trace
- 8: Reserved for system functions: Trace
- 9: Reserved for system functions: Action log

28302	MM_PROTOD_NUM_ETP_STD_TYP			C02	-	
-	Number of standard event types ETP			DWORD	PowerOn	
-						
-	10	28, 6, 0, 0, 0, 20, 20, 20, 0, 3, 28, 6, 0, 0, 0, 20, 20, 20, 0,...	28, 6, 0, 0, 0, 20, 20, 20...	66, 66, 66, 66, 66, 66, 66, 66...	1/1	M

Description: Number of standard event types required in the ETP OPI block.

The individual values concern the users of the log function, which are assigned to the following functions:

- 0: Reserved for system functions: simultaneous recording, simulation, synchronized action analysis
- 1: Reserved for system functions: determining program runtimes, multistep editor
- 2: Reserved for OEM applications
- 3: Reserved for OEM applications
- 4: Reserved for OEM applications
- 5: Reserved for system functions: Trace
- 6: Reserved for system functions: Trace
- 7: Reserved for system functions: Trace
- 8: Reserved for system functions: Trace
- 9: Reserved for system functions: Action log

28400	MM_ABSBLOCK			EXP, C02	K1	
-	Activate basic blocks with absolute values			DWORD	PowerOn	
-						
-	-	1, 1, 1, 1, 1, 1, 1, 1...	0	512	7/2	M

Description: Value:

- 0: Basic blocks with absolute values deactivated.
- 1: Basic blocks with absolute values activated;

A display buffer of the following size is created:

(MD28257 \$MC_MM_BUFFERED_AC_MARKER + MD28070 \$MC_MM_NUM_BLOCKS_IN_PREP) * 256 bytes

>= 128: Basic blocks with absolute values activated.

A display buffer of the following size is created:

(MD28060 \$MC_MM_IPO_BUFFER_SIZE + MD28070 \$MC_MM_NUM_BLOCKS_IN_PREP) * <value>

2.3 NC machine data

28402	MM_ABSBLOCK_BUFFER_CONF			EXP, C02	K1	
-	Setting of upload buffer size			DWORD	PowerOn	
-						
-	2	2, 4, 2, 4, 2, 4, 2, 4, 2, 4, 2, 4, 2, 4, 2, 4, 2, 4...	0	32000	7/2	M

Description: Dimensioning the size of the upload buffer:

MD28402 \$MC_MM_ABSBLOCK_BUFFER_CONF[0] : Number of blocks before the current block

MD28402 \$MC_MM_ABSBLOCK_BUFFER_CONF[1] : Number of blocks after the current block

The machine data is tested for the following upper / lower limits during startup:

0 <= MD28402 \$MC_MM_ABSBLOCK_BUFFER_CONF[0] <= 8

0 <= MD28402 \$MC_MM_ABSBLOCK_BUFFER_CONF[1] <= (MD28060 \$MC_MM_IPO_BUFFER_SIZE + MD28070 \$MC_MM_NUM_BLOCKS_IN_PREP)

Alarm 4152 is issued when the limits are violated.

28450	MM_TOOL_DATA_CHG_BUFF_SIZE			, C02, C06	-	
-	Buffer for tool data changes (DRAM)			DWORD	PowerOn	
-						
-	-	400, 400, 400, 400, 400, 400, 400, 400...	0	2500	7/2	M

Description: Number of entries in the buffer for the OPI change service for tool data.

Dynamic memory is used.

This buffer is created only if bit 2 or bit 3 is set in MD17530 \$MN_TOOL_DATA_CHANGE_COUNTER.

28520	MM_MAX_AXISPOLY_PER_BLOCK			C02	B1	
-	Maximal number of axial polynomials per block			DWORD	PowerOn	
-						
-	-	3, 3, 3, 3, 3, 3, 3, 3...	1	15	7/2	M

Description: Maximum number of axis polynomials which can be contained in a block.

In the standard case, each block contains only one polynomial per axis, i.e. this data can be set to 1 immediately.

More polynomials are required in the following cases:

This data must have a value of at least 3 for smoothing with G642 to G645.

A value of 5 is recommended if COMPCAD (Advanced Surface) is used.

A value of 15 is recommended if COMPSURF is used.

28530	MM_PATH_VELO_SEGMENTS			C02	A2, B1	
-	Number of memory elements for path velocity limitation			DWORD	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	100	7/2	M

Description: Number of memory elements available for limiting the path velocity and changing it in the block.

0 : Each block is limited by a maximum path velocity.

> 0 : If required, a profile of the permissible path velocity

; and its modification options is generated and monitored

; in the block.

; This results in a smoother axis velocity progression and

; a shorter travel time.

; MD28530 \$MC_MM_PATH_VELO_SEGMENTS defines the average

; number of segments available in the block.
 ; The necessary setting essentially depends
 ; on the requirements.

The following values are recommended:

3: for G643 and G644, if only geometry axes are traversed
 5: for G643 and G644, if geometry and rotary axes are traversed
 5: for COMPCAD
 5: for dyn. transformation
 8: for COMPSURF

A value that is too low may lead to additional velocity limitations if a sufficient number of blocks cannot be made available for interpolation.

MD28530 \$MC_MM_PATH_VELO_SEGMENTS additionally increases the memory requirement of dyn. Look Ahead. Values higher than 8 are only practical in exceptional cases.

3 ... 8 :

Recommended setting.

28533	MM_LOOKAH_FFORM_UNITS	C02	-
-	Memory for extended LookAhead	DWORD	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 100000 7/2 M

Description:

The machine data is used to configure the work memory for extended LookAhead.

The MD scales the value defined internally through MD28060 \$MC_MM_IPO_BUFFER_SIZE, MD28520 \$MC_MM_MAX_AXISPOLY_PER_BLOCK, MD28530 \$MC_MM_PATH_VELO_SEGMENTS, MD28535 \$MC_MM_FEED_PROFILE_SEGMENTS, MD28540 \$MC_MM_ARCLENGTH_SEGMENTS).

Its practical size depends on the part program, the block lengths, the axis dynamics, and an active kinematic transformation.

The MD should only be set for those channels in which free-form surfaces are also machined.

0 : default LookAhead is active.

> 0 : extended LookAhead is active if switched on by MD20443 \$MC_LOOKAH_FFORM.

The set value for free-form surface applications is: 18.

28535	MM_FEED_PROFILE_SEGMENTS	C02	-
-	Number of memory element for feed profiles	DWORD	PowerOn
-			
-	-	1, 1, 1, 1, 1, 1, 1, 1...	1 10 7/2 M

Description:

Number of memory elements available for feed profile per block.

The default value 1 is adequate for a programmable feed profile (FLIN, FCUB, FPO()).

If compile cycle applications require more segments per block, this machine data must be increased accordingly.

If, for example, a feed profile is to be activated in which there is deceleration at both the beginning and the end of the block, 3 segments will be required for the feed profile in the block, i.e. this MD must have value 3.

28540	MM_ARCLENGTH_SEGMENTS	C02	B1
-	Number of memory elements for arc length function representation	DWORD	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 100 7/2 M

Description:

Number of memory elements available for the arc length function for parameterizing polynomials.

2.3 NC machine data

If this machine data is equal to zero, a fixed interval division is used to represent the arc length function. In this case, the calculated function is only tangent-continuous. This can lead to discontinuities in the axis accelerations.

If the function G643 or G644 is used for smoothing and/or COMPCAD or COMPSURF, this MD should be assigned a value of at least 10. In this case, the function also has a constant curvature which results in a smoother progression of the path velocity, as well as the axis velocities and accelerations.

A value of 10 is sufficient when using COMPSURF and 3-axis applications.

Up to 20 may be useful for COMPSURF and 5-axis applications.

Not only the value of MD28540 \$MC_MM_ARCLENGTH_SEGMENTS but also that of MD20262 \$MC_SPLINE_FEED_PRECISION are crucial for accuracy.

28560	MM_SEARCH_RUN_RESTORE_MODE			C02	K2	
-	Data restore after simulation			UDWORD	PowerOn	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0	0x00000001	7/2	M

Description: Bit mask to restore data after cancelation of a simulated program execution. The following applies:

Bit 0: All frames in the data storage are restored.

28580	MM_ORIPATH_CONFIG			C02	-	
-	Setting for ORIPATH path-relative orientation			BYTE	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	1	1/1	M

Description: This MD is used to configure the behavior with ORIPATH, that is path-relative interpolation of the tool orientation. Furthermore, orientation smoothing is enabled with the G codes OSD or OST.

The following options are available:

0: MD21094 \$MC_ORIPATH_MODE has no effect. G codes OSD and OST have no effect.

1: The "genuine" path-relative orientation interpolation can be activated with MD21094 \$MC_ORIPATH_MODE = 1. The reference of the tool orientation to the path tangent and to the vector normal to the surface programmed with LEAD/TILT is retained throughout the block.

Note:

Alarm 10980 is output if ORIPATH is programmed with MD21094 \$MC_ORIPATH_MODE = 1 or OSD or OST without MD28580 \$MC_MM_ORIPATH_CONFIG = 1.

28590	MM_ORISON_BLOCKS			C02	-	
-	Setting for orientation smoothing			DWORD	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	1000	1/1	M

Description: This MD is used to activate and reserve memory for the function "orientation smoothing with ORISON". If this data has a value of "zero", no orientation smoothing will be possible.

The value of this machine data indicates the maximum number of blocks over which the orientation is smoothed. The value of this MD should be at least high enough that the blocks to be averaged fit in the buffer. This is dependent upon the maximum set tolerance and the average distance traversed by the programmed blocks or the length of the part blocks generated (see MD20476 \$MC_ORISON_STEP_LENGTH).

.Setting this MD to higher values will significantly increase the memory requirement in the DRAM.

A value of 4 should be entered as a minimum.

If this MD is < 4 and if G code ORISON is programmed, alarm 10982 will be displayed.

28600	MM_NUM_WORKAREA_CS_GROUPS	C02	-
-	Number of coordinate system-specific operating range limits	DWORD	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 10 7/2 M

Description: Number of data sets in the channel that are created for coordinate system-specific operating range limits.

It indicates the maximum value of the 1st index of system variable \$P_WORKAREA_CS... [WALimNo, Ax]. It furthermore defines the number of the programmable G functions "WALCS1, WALCS2, ... WALCS10" as well as the maximum value of the system variable \$AC_WORKAREA_CS_GROUP".

= 0: Function "Monitoring of coordinate system-specific operating range limits" cannot be activated.

28610	MM_PREPDYN_BLOCKS	C02	-
-	Number of blocks for velocity preparation	BYTE	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 30 1/1 M

Description: This MD is used to define the number of blocks that are considered when defining the path velocity (velocity preparation). If the value of this MD is zero, only the relevant axis motions are considered in this block in order to define the maximum path velocity of a block. If the geometry in adjacent blocks is also considered when defining the path velocity, the path velocity will be more homogenous.

28620	MM_NUM_FEATURE_BLOCKS	C02	W1
-	No. blocks for look-ahead characteristic recognition e.g. slot recognition.	DWORD	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0, 0...	0 20 7/2 M

Description: Indicates the minimum number of blocks that are considered simultaneously for characteristic recognition.

29000	LOOKAH_NUM_CHECKED_BLOCKS	C01, C02, C09, C05	-
-	Option data	DWORD	PowerOn
-			
-	-	1, 1, 1, 1, 1, 1, 1, 1...	0 0x7FFFFFFF 7/1 M

Description: Data for path-related dynamic LookAhead:

(Maximum) number of blocks surveyed beyond the current block for look ahead consideration of speed limits.

The value defines an upper limit. The value should not be set too low in order to avoid unnecessary speed reductions.

Increasing the value above the maximum number of blocks in the IPO buffer (MM_IPO_BUFFER_SIZE) has no effect.

A LookAhead buffer is not set up for 0 (working memory is relieved).

If in this case LookAhead is activated by part program, then the speed is reduced to zero at the end of each block.

Unbuffered memory is needed.

Option data

2.3.3 Axis-specific machine data

30110	CTRLOUT_MODULE_NR			A01, A11	G2, S9	
-	Setpoint assignment: module number			BYTE	PowerOn	
-						
-	1	1, 2, 3, 4, 5, 6, 7, 8...	1	31	7/2	M

Description: In this MD, enter the number of the module within a bus segment through which the output is addressed.

For an axis on the PROFIBUS/PROFINET, the logical I/O address from MD13050 \$MN_DRIVE_LOGIC_ADDRESS[index] is assigned by entering index+1 in MD30110 \$MA_CTRLOUT_MODULE_NR.

30120	CTRLOUT_NR			EXP, A01	G2	
-	Setpoint assignment: Setpoint output on drive submodule/module			BYTE	PowerOn	
-						
-	1	1, 1, 1, 1, 1, 1, 1...	1	3	2/2	M

Description: Number of the output on a module which is used to address the setpoint output.
The value is always 1 for modular drives.

30130	CTRLOUT_TYPE			A01, A11	G2, M3, S9	
-	Output type of setpoint			BYTE	PowerOn	
-						
-	1	0	0	3	7/2	M

Description: The type of speed setpoint output is entered into this MD:

- 0: Simulation (no HW required)
- 1: Setpoint output active (differentiation via hardware configuration)
- 2: Semi servo -only when the hardware is available onboard
- 3: Reserved
- 4: Reserved

Note: instead of value 4, MD30132 \$MA_IS_VIRTUAL_AX should now be used.

30132	IS_VIRTUAL_AX			A01	M3, TE1, TE3	
-	Axis is a virtual axis			BOOLEAN	PowerOn	
CTEQ						
-	1	FALSE	0	-	7/2	M

Description: Virtual axis. An axis that is also interpolated in follow-up mode. (Electronic transfer technology; virtual and real master values.)
This MD is the successor to MD30130 \$MA_CTRLOUT_TYPE=4. MD30130 \$MA_CTRLOUT_TYPE=0 and MD30132 \$MA_IS_VIRTUAL_AX=1 must now be used instead of MD30130 \$MA_CTRLOUT_TYPE=4.
Related to:
MD30130 \$MA_CTRLOUT_TYPE

30134	IS_UNIPOLAR_OUTPUT			A01	G2	
-	Setpoint output is unipolar			BYTE	PowerOn	
-						
-	1	0	0	2	7/2	M

Description: Only for PROFIdrive, special application of analog additional drives:
Unipolar output driver (for unipolar analog drive actuator):

Only positive set speeds are supplied to the drive, the sign of the set speed is separately output in its own digital control signal.

Input value "0":

Bipolar output with pos./neg. set speed (this is the normal case)

Input value "1":

0. Digital bit = servo enable

1. Digital bit = neg. direction of travel

Input value "2": (linking of enable and direction of travel signals):

0. Digital bit = servo enable pos. direction of travel

1. Digital bit = servo enable neg. direction of travel

30200	NUM_ENCS			A01, A02	G2, R1, Z1	
-	Number of encoders			BYTE	PowerOn	
-						
-	-	1	0	2	7/2	M

Description: The number of encoders of the axis or spindle is to be entered in the MD for actual position value sensing (the differentiation between direct and indirect measuring systems, i.e. the locations at which these encoders are installed, is then specified, for example, in MD31040 \$MA_ENC_IS_DIRECT).
For simulation axes/spindles, MD30200 \$MA_NUM_ENCS > 0 must be specified for referencing.

30220	ENC_MODULE_NR			A01, A02, A11	G2	
-	Actual value assignment: Drive number/measuring circuit number			BYTE	PowerOn	
-						
-	2	1, 1, 2, 2, 3, 3, 4, 4, 5, 5, 6, 6, 7, 7, 8, 8...	1	31	7/2	M

Description: For an axis on the PROFIBUS/PROFINET, the logical I/O address from MD13050 \$MN_DRIVE_LOGIC_ADDRESS[index] is assigned by entering index+1 in MD30220 \$MA_ENC_MODULE_NR.
The index[n] of the machine data has the following coding:
[Encoder no.]: 0 or 1
Related to:
MD30110 \$MA_CTRLOUT_MODULE_NR (setpoint assignment)

30230	ENC_INPUT_NR			A01, A02, A11	G2, S9	
-	Actual value assignm.: Input on drive module/meas. circuit board			BYTE	PowerOn	
-						
-	2	1, 2, 1, 2, 1, 2, 1, 2, 1, 2, 1, 2, 1, 2...	1	2	7/2	M

Description: For PROFIdrive:
Number of the encoder within the PROFIdrive message frame through which the encoder is addressed.
For example telegram 103: 1 (=G1_ZSW etc.) or 2 (=G2_ZSW etc.).
The index[n] of the machine data has the following coding:
[Encoder no.]: 0 or 1
If an input is selected, to which no encoder is connected, alarm 300008 "Measuring circuit not available on drive" is output.

2.3 NC machine data

30240	ENC_TYPE			A01, A02, A11	A3,, G2, R1	
-	Encoder type of actual value acquisition (actual position value).			BYTE	PowerOn	
-						
-	2	0, 0	0	5	7/2	M

Description:

Encoder type:

- 0: Simulation
- 1: Raw signal encoder (high resolution)
- 2: Square-wave encoder - only when the onboard hardware is available
- 3: Encoder for semi servo - only when the onboard hardware is available
- 4: General absolute encoders (e.g. EnDat interface)
- 5: Reserved

Corresponds with

PROFIdrive parameter P979 (refer there)

30242	ENC_IS_INDEPENDENT			A02, A11	G2, R1	
-	Encoder is independent			BYTE	NEW CONF	
-						
-	2	0, 0	0	3	7/2	M

Description:

If actual value corrections performed by the NC on the encoder selected for position control are not to influence the actual value of any other encoder defined in the same axis, then the position control encoder must be declared to be "independent".

Actual value corrections include the following:

- Modulo treatment,
- Reference point approach,
- Measuring system calibration,
- PRESET

Example:

MD30200 \$MA_NUM_ENCS[AX1] = 2

MD30242 \$MA_ENC_IS_INDEPENDENT[0, AX1] = 0

MD30242 \$MA_ENC_IS_INDEPENDENT[1, AX1] = 1

When the VDI interface has selected the first encoder for position control, the above mentioned actual value corrections will be executed on this encoder only.

When the VDI interface has selected the second encoder for position control, the above mentioned actual value corrections will be executed on both encoders.

The machine data is therefore only valid for encoders that have not been selected by the VDI interface for position control (passive encoders).

As from SW5, the scope of functions has been extended:

MD30242 \$MA_ENC_IS_INDEPENDENT = 2

The passive encoder is dependent. The active encoder changes the actual encoder value. In combination with MD34102 \$MA_REFP_SYNC_ENCS = 1, the passive encoder is adjusted to the active encoder during reference point approach, but is NOT referenced.

In reference mode MD34200 \$MA_ENC_REFP_MODE = 3 (distance-coded reference marks), the passive encoder is automatically referenced with the next traversing movement after zero mark distance overtravel. This is done independently of the current mode setting.

MD30242 \$MA_ENC_IS_INDEPENDENT = 3

In contrast to MD30242 \$MA_ENC_IS_INDEPENDENT = 1, modulo actual value corrections are executed in the passive encoder of modulo rotary axes.

30244	ENC_MEAS_TYPE			A01, A02, A11	-	
-	Encoder measurement type			BYTE	PowerOn	
-						
-	2	1, 1	0	1	7/2	S

Description:

For PROFIdrive only:

In combination with the MD13210 \$MN_MEAS_TYPE = 1 (decentralized measurement), this MD can be used to set the type of axial measuring function for drives.

Encoder measurement type:

0: encoder measurement type central (global) measurement

1: encoder measurement type decentral (local) measurement

MEAS_TYPE ENC_MEAS_TYPE measuring sensor input used

0 0 central

0 1 central

1 0 central

1 1 decentralized

30250	ACT_POS_ABS			EXP, A02, A08	R1	
-	Internal encoder position			DOUBLE	PowerOn	
ODLD, -, -						
-	2	0.0, 0.0	-	-	7/2	I

Description:

The actual position (hardware counter status only without machine reference) is stored (in internal format display) in this MD.

At power ON (or encoder activation), it acts with:

- Absolute encoders:

To restore the current position (in combination with the position, possibly with several meanings, buffered in the encoder).

- Incremental encoders:

To buffer the actual value beyond power OFF when the functionality is activated MD34210 \$MA_ENC_REFP_STATE = 1 or. 2 (i.e. as a reference point replacement).

To buffer the actual value beyond power OFF when the functionality is activated MD34210 \$MA_ENC_REFP_STATE = 3 (i.e. as a restored position value).

Note:

This MD is changed internally by the control during traversing movements. Loading a previously saved MD data block can therefore destroy the encoder calibration (machine position reference) of absolute encoders.

For software conversions, we recommend removing the MD data block from the old software release prior to conversion and reloading it into the new software release without moving any axis in the meantime. Protection level 1 should be set for SW 3.6; protection level 2 suffices for SW 4 and higher. The encoder calibration must be explicitly verified (controlled, calibrated) after the software conversion.

30260	ABS_INC_RATIO			EXP, A01, A02	-	
-	Absolute encoder: Ratio of absolute to incremental resolution			DWORD	PowerOn	
-						
-	2	4, 4	0	-	7/2	M

Description:

Absolute track resolution in relation to the incremental signal resolution.

This MD only applies for absolute encoders:

- PROFIBUS drives:

Absolute information XIST2 related to incremental information XIST1.

2.3 NC machine data

In the case of plausible drive parameters (e.g. in PROFIdrive parameter P979) the value of this MD is automatically calculated and updated from drive parameters (if parameter read-out has not been deactivated with MD13070 \$MN_DRIVE_FUNCTION_MASK, bit2)

Implausible drive parameters (e.g. multiplication of absolute track higher than that of the incremental signal) are rejected and replaced by the value entered in the current MD.

Implausible input values in the current MD (e.g. value=0) are reset to the default value. In addition, alarm 26025 or 26002 is output to inform the user accordingly.

30270	ENC_ABS_BUFFERING			EXP, A01, A02	R1	
-	Absolute encoder: Traversing range extension			BYTE	PowerOn	
-						
-	2	0, 0	0	1	7/2	M

Description:

This MD defines the way in which the absolute encoder position is buffered, and whether a traversing range extension is active on software side (exceeding the limits of the absolute value encoder range that can be displayed on the hardware).

"0" = standard = traversing range extension (compare ACT_POS_ABS) is active.

"1" = traversing range extension on software side is inactive.

When using an absolute linear scale, there will not be a traversing range overflow for mechanical reasons. This MD is therefore only valid for rotary absolute value encoders.

For rotary absolute value encoders, the traversing range that can be clearly displayed on the encoder side, is stored in MD34220 \$MA_ENC_ABS_TURNS_MODULO. You can do without a traversing range extension without any problems (a hardware counter overflow that might be within the traversing range is concealed in the software via shortest-path decision):

a. in linear axes or limited rotary axes, if the actual traversing range on the load side is smaller than the traversing range on the load side that corresponds to MD34220 \$MA_ENC_ABS_TURNS_MODULO.

b. in endlessly turning rotary axes (ROT_IS_MODULO = TRUE), if the absolute encoder is connected on the load side (no gear to be considered) or if "without remainder" can be calculated:

Number of rotations on the load side = ENC_ABS_TURNS_MODULO * gear ratio

(Example: ENC_ABS_TURNS_MODULO = 4096 encoder rotations, gear 25:32, i.e. number of rotations on load side = 4096*(25/32)=3200).

Notice:

If you do not meet the conditions under a. or b., you run the risk of getting a wrong absolute encoder position at next Power ON or encoder activation after parking without prewarning if the traversing range extension is not working. Therefore, the traversing range extension remains active in the standard version.

Related to:

MD30240 \$MA_ENC_TYPE

MD30300 \$MA_IS_ROT_AX

MD30310 \$MA_ROT_IS_MODULO

MD30250 \$MA_ACT_POS_ABS

MD34220 \$MA_ENC_ABS_TURNS_MODULO

MD34090 \$MA_REFP_MOVE_DIST_CORR

30300	IS_ROT_AX			A01, A06, A11	G1, K3, R2, T1, G2, K2, R1, S1, V1	
-	Rotary axis / spindle			BOOLEAN	PowerOn	
SCAL, CTEQ						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	FALSE	TRUE	7/2	M

Description:

1: Axis: The axis is defined as a "rotary axis".

- The special functions of the rotary axis are active or can be activated by means of additional machine data according to the type of machine required (see below).
- The unit of measurement is degrees.
- The units of the axis-specific machine and setting data are interpreted as follows with the standard control setting:
 - Positions in "degrees"
 - Speeds in "rev/minute"
 - Acceleration in "rev/second²"
 - Jerk limitation in "rev/second³"

Spindle:

The machine data should always be set to "1" for a spindle, otherwise alarm 4210 "Rotary axis declaration missing" is output.

0: The axis is defined as a "linear axis".

Special cases:

- For an axis: Alarm 4200 if the axis is already defined as a geometry axis.
- For a spindle: Alarm 4210

Related to:

The following machine data are active only after activation of MD30300 \$MA_IS_ROT_AX = "1":

- MD30310 \$MA_ROT_IS_MODULO "Modulo conversion for rotary axis"
- MD30320 \$MA_DISPLAY_IS_MODULO "Position display is modulo"
- MD10210 \$MN_INT_INCR_PER_DEG "Calculation precision for angular positions"

30310	ROT_IS_MODULO			A01, A06, A11	TE3, K3, R2, T1, A3, R1, R2, S1	
-	Modulo conversion for rotary axis / spindle			BOOLEAN	PowerOn	
CTEQ						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	FALSE	TRUE	7/2	M

Description:

1: A modulo conversion is performed on the setpoints for the rotary axis. The software limit switches and the working area limitations are inactive; the traversing range is therefore unlimited in both directions. MD30300 \$MA_IS_ROT_AX must be set to "1"

0: No modulo conversion

MD irrelevant for:

MD30300 \$MA_IS_ROT_AX = "0" (linear axes)

Related to:

MD30320 \$MA_DISPLAY_IS_MODULO "Position display is modulo 360°"

MD30300 \$MA_IS_ROT_AX = 1 "Rotary axis"

MD36100 \$MA_POS_LIMIT_MINUS "Software limit switch minus"

MD36110 \$MA_POS_LIMIT_PLUS "Software limit switch plus"

SD43430 \$SA_WORKAREA_LIMIT_MINUS "Working area limitation minus"

SD43420 \$SA_WORKAREA_LIMIT_PLUS "Working area limitation plus"

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30320	DISPLAY_IS_MODULO			A01, A06, A11	R2, T1, K2	
-	Modulo 360 degrees displayed for rotary axis or spindle.			BOOLEAN	PowerOn	
CTEQ						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	FALSE	TRUE	7/2	M

Description:

1: "Modulo 360 degrees" position display is active:

The position display of the rotary axis or spindle (for basic or machine coordinate system) is defined as "Modulo 360 degrees". In the case of a positive direction of rotation, the control resets the position display internally to 0.000 degrees following each cycle of 359.999 degrees. The display range is always positive and lies between 0 and 359.999 degrees.

0: Absolute position display is active:

In contrast to the modulo 360 degrees position display, absolute positions are indicated by the absolute position display, e.g. +360 degrees after 1 rotation, and +720 degrees after 2 rotations, etc in the positive direction. In this case, the display range is limited by the control in accordance with the linear axes.

MD irrelevant for:

Linear axes MD30300 \$MA_IS_ROT_AX = "0"

Related to:

MD30300 \$MA_IS_ROT_AX = 1 "Axis is rotary axis"

30330	MODULO_RANGE			EXP, A01	R2, T1, R1	
degrees	Size of modulo range.			DOUBLE	Reset	
CTEQ						
-	-	360.0	1.0	3600000000.0	7/2	M

Description:

Defines the size of the modulo range. Default positions are accepted and displayed within this range. Useful modulo ranges are $n \cdot 360$ degrees with integer n . Other settings are equally possible in principle. Attention should be paid to having a useful relationship between the positions in the NC and the mechanics (ambiguity). Velocity definitions are not affected by settings in this MD.

30340	MODULO_RANGE_START			EXP, A01	R1, R2	
degrees	Modulo range start position			DOUBLE	Reset	
CTEQ						
-	-	0.0	-	-	7/2	M

Description:

Defines the start position for the modulo range.

Example:

Start = 0 degree -> modulo range 0 <-> 360 degrees

Start = 180 degrees -> modulo range 180 <-> 540 degrees

Start = -180 degrees -> modulo range -180 <-> 180 degrees

30350	SIMU_AX_VDI_OUTPUT			A01, A06	A2, G2, Z1	
-	Axis signals output for simulation axes			BOOLEAN	PowerOn	
CTEQ						
-	-	FALSE	FALSE	TRUE	7/2	M

Description:

The machine data defines whether axis-specific interface signals are output to the PLC while an axis is being simulated.

1: The axis-specific NC/PLC interface signals for a simulated axis are output to the PLC.

This means that the user PLC program can be tested without the drives having to be available.

0: The axis-specific NC/PLC interface signals for a simulated axis are not output to the PLC.

All axis-specific NC/PLC interface signals are set to "0".

Not relevant for:

MD30130 \$MA_CTRLOUT_TYPE (setpoint output type) = 1

30450	IS_CONCURRENT_POS_AX			EXP, A01	G1	
-	Default for reset: neutral/channel axis			BOOLEAN	Reset	
CTEQ						
-	-	FALSE	FALSE	TRUE	7/2	M

Description:

For SW4.3:

If FALSE: On RESET, a neutral axis is reassigned to the NC program.

If TRUE: On RESET, a neutral axis remains in the neutral axis state and an axis assigned to the NC program becomes a neutral axis

30455	MISC_FUNCTION_MASK			A06, A10	R2, S3, R1	
-	Axis functions			UDWORD	Reset	
CTEQ						
-	-	0x00	0	0x7FFF	7/2	M

Description:

Bit 0 = 0:

Modulo rotary axis/spindle: programmed positions must be in the modulo range. Otherwise an alarm is output.

Bit 0 = 1:

When programming positions outside the modulo range, an alarm is not signaled. The position is modulo-converted internally.

Example: B-5 has the same significance as B355, POS[A]=730 is identical to POS[A]=10 and SPOS=-360 behaves the same as SPOS=0 (modulo range 360 degrees)

Bit 1 = 0:

Determination of reference point position of rotary, distance-coded encoders analog (1:1) in relation to the mechanical absolute position.

Bit 1 = 1:

Determination of reference point position of rotary, distance-coded encoders within the configured modulo range.

For rotary axes with MD30310 \$MA_ROT_IS_MODULO=0, which use rotary, distance-coded encoder MD34200 \$MA_ENC_REFP_MODE=3, the reference point position is determined in response to MD30330 \$MA_MODULO_RANGE and MD30340 \$MA_MODULO_RANGE_START. This is automatically adapted to the traversing limits of the modulo range. For rotary axes with MD30310 \$MA_ROT_IS_MODULO=1, this bit has no significance, as the reference point position is always determined within the modulo range.

Bit 2 = 0:

Modulo rotary axis positioned at G90 with AC as default.

Bit 2 = 1:

Modulo rotary axis positioned at G90 with DC as default (shortest path).

Bit 3 = 0:

For spindle/axis disable \$VA_IM, \$VA_IM1, \$VA_IM2 supply the setpoint value.

Bit 3 = 1:

For spindle/axis disable \$VA_IM, \$VA_IM1, \$VA_IM2 supply the actual value.

Bit 4 = 0:

Synchronous spindle coupling, slave spindle: cancellation of feedrate enable will brake the coupled group.

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Bit 4 = 1:

Slave spindle: Feedrate enable only applies to the interpolation portion of the overlaid motion (SPOS, etc.) and has no impact on the coupling.

Bit 5 = 0:

Synchronous spindle coupling, slave spindle: Position control, feedforward control, and parameter block are set in response to the master spindle.

Bit 5 = 1:

Synchronous spindle coupling: The parameters of the slave spindle are set as they would be without coupling.

Bit 6 = 0:

Programming of FA, OVRA, ACC, and VELOLIM is applied separately to spindle and axis modes. The assignment is made by the programmed axis or spindle identifier.

Bit 6 = 1:

Programming of FA, OVRA, ACC, and VELOLIM is applied jointly to spindle and axis modes, irrespective of the programmed identifier.

Bit 7 = 0:

Synchronous spindle, correct synchronism error: Correction value \$AA_COUP_CORR[Sn] is continuously calculated as long as the NC/PLC interface signal DB31, ... DBX31.6 (Correct synchronism) is set and setpoint-related synchronism is present.

Bit 7 = 1:

Synchronous spindle, correct synchronism error: Correction value \$AA_COUP_CORR[Sn] is calculated only at the moment the NC/PLC interface signal DB31, ... DBX31.6 (Correct synchronism) is set from 0 to 1.

Bit 8 = 0:

Absolute encoders can only be readjusted in the enabled state MD34210
\$MA_ENC_REFP_STATE = 1.

Bit 8 = 1:

Absolute encoders can also be readjusted in the adjusted state MD34210
\$MA_ENC_REFP_STATE = 2.

Bit 9 = 0:

Coupled axes (e.g. gantry) jointly delete their pulse enable if an error occurs.

Bit 9 = 1:

Coupled axes (e.g. gantry) only delete their pulse enable for their own errors.

Bit 10 = 0:

The maximum dynamic performance of a TRAIL or TANGON axis limits the maximum dynamic path response.

Bit 10 = 1:

The maximum dynamic performance of a TRAIL or TANGON axis has no effect on the dynamic path response. This can result in a longer overtravel of the dependent axis.

Bit 11 = 0:

Deactivation of the CP software limit monitoring

Bit 11 = 1:

Activation of the CP software limit monitoring for the following slave axes/spindles:

- coupling, type CP with CPSETTYPE[FAx] = "CP"
- coupling, type CP, TRAIL, EG, LEAD, or COUP with a maximum of one active master axis/spindle

Bit 12 = 0:

When resetting the control enable of the stationary axis/spindle (in respect of this master axis/spindle), you must always switch over to actual value coupling, just as for a fast stop after resetting the control enable during motion (alarm 21612). This applies to generic couplings (with replacement cycles or for CP programming).

Bit 12 = 1:

When resetting the control enable of the stationary axis/spindle (in respect of this master axis/spindle), changeover to actual value coupling is inhibited. This applies to generic couplings (with replacement cycles or for CP programming).

Bit 13 = 0:

An axis-specific DRIVE setting by means of MD35240 \$MA_ACCEL_TYPE_DRIVE[] or by programming DRIVEA() of an axis is ignored by the path dynamic response if the relevant axis is interpolated with the path.

Bit 13 = 1:

An acceleration characteristic of an axis activated by MD35240 \$MA_ACCEL_TYPE_DRIVE[] or by programming of DRIVEA() is taken into account when defining the path dynamic response if the relevant axis is interpolated with the path.

Bit 14 = 0:

During cartesian PTP traversing, the "shortest path" strategy for software limit crossing of a rotary axis is retained.

Bit 14 = 1:

The "long path" strategy for avoiding the software limit crossing is used if a rotary axis were to cross the software limit switch during cartesian PTP traversing with the "shortest path" strategy.

30460	BASE_FUNCTION_MASK			A01	K5, P2, P1	
-	Axis functions			UDWORD	PowerOn	
CTEQ						
-	-	0x00	0	0x3FF	7/2	M

Description:

Axis-specific functions can be set using this MD.

The MD is bit-coded; the following bits are assigned:

Bit 0 = 0:

"Axis control" is not permissible.

Bit 0 = 1:

"Axis control" is permissible (the axis moves in the speed mode, if the NC/PLC interface signal DB31, ... DBX24.1 (Axis control) is set).

Bit 1:

Reserved for "Axis control".

Bit 2 = 0:

Axis-specific diameter programming not permitted.

Bit 2 = 1:

Axis-specific diameter programming permitted.

Bit 3:

Reserved for "Axis control".

Bit 4 = 0:

For control purposes, the axis can be used by NC and PLC.

Bit 4 = 1:

The axis is exclusively controlled by the PLC.

Bit 5 = 0:

The axis can be used by the NC and PLC.

Bit 5 = 1:

The axis is a permanently assigned PLC axis. However, the axis can be jogged and referenced.

Axis exchange between channels is not possible. The axis cannot be assigned to the NC program.

Bit 6 = 0:

The channel-specific interface signal DB21-30 DBX6.0 (feedrate disable) has an effect on the axis, even though it is a PLC-controlled axis.

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Bit 6 = 1:

The channel-specific interface signal DB21-30 DBX6.0 (feedrate disable) has no effect on the axis, if it is a PLC-controlled axis.

Bit 7 = 0:

The channel-specific interface signal DB21-30 DBX36.3 (all axes stationary) is set dependent on the axis, even though it is PLC-controlled.

Bit 7 = 1:

The channel-specific interface signal DB21-30 DBX36.3 (all axes stationary) is set independent of the axis, if this axis is PLC-controlled..

Bit 8 = 0:

The axis is an 'interpolating (full) axis' (path/GEO/additional path axis/GEOAX()/spindle for thread cutting/tapping)

Bit 8 = 1:

The axis is a positioning axis / auxiliary spindle

Bit 9 = 0:

The PRESETON is enabled. PRESETONS is inhibited.

Bit 9 = 1:

The PRESETON is inhibited. PRESETONS is enabled.

30465	AXIS_LANG_SUB_MASK			N01	K1	
-	Substitution of NC language commands			UDWORD	PowerOn	
-						
-	-	0x0	0x0	0xF	7/2	M

Description:

MD30465 \$MA_AXIS_LANG_SUB_MASK defines for the leading spindle(s) of a coupling (synchronous spindle coupling, electronic gear, coupled motion, master value coupling, master-slave) which language constructs/functions are to be substituted by the user program set by MD15700 \$MN_LANG_SUB_NAME / MD15702 \$MN_LANG_SUB_PATH (default: / _N_CMA_DIR/_N_LANG_SUB_SPF).

The substitution is executed only if a coupling is active for the relevant spindle and, in the case of a gear stage change, only if a gear stage change is actually pending.

Bit 0 and bit 1 are relevant for the axis coupling types: synchronous spindle coupling, electronic gear, coupled motion and master value coupling.

Bit 2 and bit 3 are relevant for the master-slave coupling

Bit 0 = 1:

Axis coupling: Automatic (M40) and direct (M41-M45) gear stage change

Bit 1 = 1:

Axis coupling: Spindle positioning with SPOS/SPOSA/M19

Bit 2 = 1:

Master-slave coupling: Automatic (M40) and direct (M41-M45) gear stage change

Bit 3 = 1:

Master-slave coupling: Spindle positioning with SPOS/SPOSA/M19

30500	INDEX_AX_ASSIGN_POS_TAB			A01, A10	T1, H1	
-	Axis is an indexing axis			BYTE	Reset	
-						
-	-	0	0	3	7/2	M

Description:

The axis is declared as an indexing axis by assignment of indexing position table 1 or 2.

0: The axis is not declared as an indexing axis

1: The axis is an indexing axis. The associated indexing positions are stored in table 1 (MD10910 \$MN_INDEX_AX_POS_TAB_1).

2: The axis is an indexing axis. The associated indexing positions are stored in table 2 (MD10930 \$MN_INDEX_AX_POS_TAB_2).

3: Equidistant indexing with SW 4.3 and higher (840D) and SW 2.3 and higher (810D)

>3: Alarm 17090 "Value violates upper limit"

Special cases:

Several axes can be assigned to an indexing position table on the condition that all these indexing axes are of the same type (linear axis, rotary axis, modulo 360° function). If they are not, alarm 4000 is output during power-up.

Alarm 17500 "Axis is not an indexing axis"

Alarm 17090 "Value violates upper limit"

Related to:

MD10910 \$MN_INDEX_AX_POS_TAB_1 (indexing position table 1)

MD10900 \$MN_INDEX_AX_LENGTH_POS_TAB_1

(no. of indexing positions used in table 1)

MD10930 \$MN_INDEX_AX_POS_TAB_2 (indexing position table 2)

MD10920 \$MN_INDEX_AX_LENGTH_POS_TAB_2

(no. of indexing positions used in table 2)

For equidistant indexings with value 3:

MD30501 \$MA_INDEX_AX_NUMERATOR Numerator

MD30502 \$MA_INDEX_AX_DENOMINATOR Denominator

MD30503 \$MA_INDEX_AX_OFFSET First indexing position

MD30505 \$MA_HIRTH_IS_ACTIVE Hirth tooth system

30501	INDEX_AX_NUMERATOR	A01, A10	T1
mm, degrees	Indexing axis equidistant positions numerator	DOUBLE	Reset
-			
-	-	0.0	0.0
-	-	-	7/2
-	-	-	M

Description: Defines the value of the numerator for calculating the distances between two indexing positions when the positions are equidistant. Modulo axes ignore this value and use MD30330 \$MA_MODULO_RANGE instead.

MD irrelevant for non-equidistant indexes in accordance with tables.

Related to:

MD30502 \$MA_INDEX_AX_DENOMINATOR,

MD30503 \$MA_INDEX_AX_OFFSET;

MD30500 \$MA_INDEX_AX_ASSIGN_POS_TAB

30502	INDEX_AX_DENOMINATOR	A01, A10	T1
-	Indexing axis equidistant positions denominator	DWORD	Reset
-			
-	-	1	1
-	-	-	7/2
-	-	-	M

Description: Defines the value of the denominator for calculating the distances between two indexing positions when the positions are equidistant. For modulo axes it therefore specifies the number of indexing positions.

MD irrelevant for non-equidistant indexes in accordance with tables.

Related to:

MD30501 \$MA_INDEX_AX_NUMERATOR,

MD30503 \$MA_INDEX_AX_OFFSET,

MD30500 \$MA_INDEX_AX_ASSIGN_POS_TAB

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30503	INDEX_AX_OFFSET	A01, A10	T1, R2
mm, degrees	Indexing axis with equidistant positions first index position	DOUBLE	Reset
-			
-	-	0.0	-
-	-	-	7/2
-	-	-	M

Description: Defines the position of the first indexing position from zero for an indexing axis with equidistant positions.
MD irrelevant for non-equidistant indexes in accordance with tables.
Related to:
MD30501 \$MA_INDEX_AX_NUMERATOR
MD30502 \$MA_INDEX_AX_DENOMINATOR
MD30500 \$MA_INDEX_AX_ASSIGN_POS_TAB

30505	HIRTH_IS_ACTIVE	A01, A10	T1
-	Axis is an indexing axis with Hirth tooth system	BOOLEAN	Reset
CTEQ			
-	-	FALSE	FALSE
-	-	TRUE	7/2
-	-	-	M

Description: Hirth tooth system is active when value 1 is set.
MD irrelevant if axis is not an indexing axis.
Related to:
MD30500 \$MA_INDEX_AX_ASSIGN_POS_TAB, MD30501 \$MA_INDEX_AX_NUMERATOR, MD30502 \$MA_INDEX_AX_DENOMINATOR, MD30503 \$MA_INDEX_AX_OFFSET

30550	AXCONF_ASSIGN_MASTER_CHAN	A01, A06, A10	K5, TE3, B3, S3, K1, R1
-	Initial setting of channel for change of axis	BYTE	PowerOn
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0
-	-	10	7/2
-	-	-	M

Description: Definition of the channel to which the axis is assigned after Power ON.
Related to:
MD20070 \$MC_AXCONF_MACHAX_USED

30552	AUTO_GET_TYPE	EXP, A06, A10	K5, M3, TE6, P2, P5, 2.4
-	Automatic GET for get axis	BYTE	PowerOn
-			
-	-	1, 1, 1, 1, 1, 1, 1, 1...	0
-	-	2	7/2
-	-	-	M

Description: 0 = No automatically created GET -> Alarm in response to incorrect programming.
1 = GET is output when GET is generated automatically.
2 = GETD is output when GET is generated automatically.

30554	AXCONF_ASSIGN_MASTER_NCU	A01, A06, A10	B3
-	Initial setting which NCU creates setpoints for the axis	BYTE	PowerOn
-			
-	-	0	0
-	-	16	7/2
-	-	-	M

Description: This machine data is evaluated only if the NCU is linked with other NCUs via the NCU link communication.
Assignment of master NCU:

If a machine axis is activated via MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB in several NCUs in an NCU cluster, then a MASTER NCU must be assigned to it. This NCU takes over the setpoint creation for the axis after the runup. For axes which are only activated in one NCU, the number of this NCU or 0 must be entered. Other entries initiate a runup interrupt.

30560	IS_LOCAL_LINK_AXIS			EXP, A01	B3	
-	Axis is a local link axis			BOOLEAN	PowerOn	
-						
-	-	FALSE	0	-	7/2	M

Description: An axis for which this MD is set to 1 is not addressed by the local NCU at runup. The associated drive is put into operation.
The axis is traversed by another NCU. The evaluation is made only if link communication exists.
Not relevant for:
Systems without link modules
Related to:
MD18780 \$MN_MM_NCU_LINK_MASK

30600	FIX_POINT_POS			A03, A10	K1, W3	
mm, degrees	Fixed-value positions of axis with G75			DOUBLE	PowerOn	
-						
-	4	0.0, 0.0, 0.0, 0.0	-	-	7/2	I

Description: The fixed-point positions (4 max.) for each axis which can be approached when G75 is programmed or via JOG are entered in these machine data.
References:
/PA/, "Programming Guide: Fundamentals"

30610	NUM_FIX_POINT_POS			A03, A10	K1	
-	Number of fixed-value positions of an axis			DWORD	PowerOn	
-						
-	-	0	0	4	7/2	M

Description: Number of fixed point positions set, i.e. the number of valid entries in MD30600 \$MA_FIX_POINT_POS.
For G75, two (2) fixed point positions are assumed in MD30600 \$MA_FIX_POINT_POS for reasons of compatibility, even if '0' has been entered in this machine data.

30800	WORKAREA_CHECK_TYPE			-	A3	
-	Type of check of working area limitations.			BOOLEAN	NEW CONF	
CTEQ						
-	-	FALSE	0	-	7/2	M

Description: With this machine data you can specify whether only the working area limitations of traversing axes are to be checked (0)
or
whether the stationary axes in a traversing block are also to be checked (1).
The value 0 corresponds to the behavior up to SW5.

31000	ENC_IS_LINEAR			A02, A11	G2	
-	Linear scale			BOOLEAN	PowerOn	
-						
-	2	FALSE, FALSE	0	-	7/2	M

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Description: MD = 1: Encoder for actual position value acquisition is linear (linear scale).
 MD = 0: Encoder for actual position value acquisition is rotary.
 The index [n] of the machine data has the following coding:
 [encoder no.]: 0 or 1

31010	ENC_GRID_POINT_DIST			A02, A11	G2	
mm	Division period for linear scales			DOUBLE	PowerOn	
-						
-	2	0.01, 0.01	0.0	-	7/2	M

Description: For linear measuring system only:
 The distance between the reference marks on the linear scale must be entered in this MD.
 Index [n] of the machine data has the following coding:
 [encoder no.]: 0 or 1

31020	ENC_RESOL			A02, A11	G2, R1	
-	Encoder lines per revolution			DWORD	PowerOn	
-						
-	2	2048, 2048, 2048, 2048, 2048, 2048, 2048, 2048, 2048, 2048, 2048...	1	-	7/2	M

Description: For rotary measuring system only:
 The number of encoder lines per encoder revolution must be entered in this MD.
 Index [n] of the machine data has the following coding:
 [encoder no.]: 0 or 1

31025	ENC_PULSE_MULT			EXP, A01, A02	-	
-	Encoder multiplication (high-resolution)			DWORD	PowerOn	
-						
-	2	2048, 2048, 2048, 2048, 2048, 2048, 2048, 2048, 2048, 2048, 2048...	0	-	7/2	M

Description: For PROFIdrive only:
 This MD describes the measuring system multiplication on PROFIBUS/PROFINET.
 Default value 2048 means: changing by just one encoder line can be seen in bit11 of the actual PROFIdrive value XIST1, that is, the actual encoder value is multiplied by 2 to the power of 11= 2048.

31030	LEADSCREW_PITCH			A02, A11	G2, A3	
mm	Pitch of leadscrew			DOUBLE	PowerOn	
-						
-	-	10.0	0.0	-	7/2	M

Description: The ball screw lead must be entered in the MD (see data sheet: mm/rev or inch/rev).
 Special meaning for hydraulic linear drives:
 If a hydraulic linear drive (HLA) is configured as rotary axis, it must be specified in this MD, which drive feedrate in mm corresponds to a programmed revolution (360 degrees).

31040	ENC_IS_DIRECT			A02, A11	G2, S1	
-	Direct measuring system (no compilation to load position)			BOOLEAN	PowerOn	
-						
-	2	FALSE, FALSE	0	-	7/2	M

Description:

MD = 1:

Encoder for actual position value acquisition is attached directly to the machine (without an intermediate gear unit).

MD = 0:

Encoder for actual position value acquisition is attached to the motor (MD31060 \$MA_DRIVE_AX_RATIO_NUMERA and MD31050 \$MA_DRIVE_AX_RATIO_DENOM are included in the encoder valuation).

The index[n] of the machine data has the following coding:

[encoder no.]: 0 or 1

Special cases:

An incorrect entry may result in an incorrect encoder resolution, as, for example, the gear ratios would be calculated incorrectly.

31044	ENC_IS_DIRECT2			A02	G2, S1	
-	Encoder mounted on the additional gearbox			BOOLEAN	NEW CONF	
-						
-	2	FALSE, FALSE	0	-	7/2	M

Description:

When using a load intermediate gearbox (for example for rotating tools, compare MD31066 \$MA_DRIVE_AX_RATIO2_NUMERA and MD31064 \$MA_DRIVE_AX_RATIO2_DENOM), the encoder installation location can be defined as "on the output" of this load intermediate gearbox:

Encoder installation "on the output of the load intermediate gearbox" is configured by MD31040 \$MA_ENC_IS_DIRECT=1 and MD31044 \$MA_ENC_IS_DIRECT2=1 at the same time.

Encoder installation "on the input of the load intermediate gearbox" is configured by MD31040 \$MA_ENC_IS_DIRECT=1 together with MD31044 \$MA_ENC_IS_DIRECT2=0.

A parameterization alarm will be output if MD31044 \$MA_ENC_IS_DIRECT2=1 is set without MD31040 \$MA_ENC_IS_DIRECT=1 (this combination has not been defined).

31046	ENC_PASSIVE_PARKING			A02	-	
-	Park passive measuring system			BOOLEAN	NEW CONF	
-						
-	2	FALSE, FALSE	-	-	7/2	M

Description:

The machine data can be used to configure the behavior for the passive measuring system:

MD = 0:

The passive measuring system is continuously monitored and updated.

MD = 1:

The passive measuring system is automatically parked. It is no longer monitored or updated. The encoder cable can be disconnected without an alarm being issued.

Notes:

- A measuring system switchover to a parked measuring system takes longer than a switch to a passive measuring system.
- On account of the duration, an axis standstill is recommended for the switchover.
- It is only with incremental encoders that the position and the state "Measuring system is referenced" are applied from the previously active measuring system as a function of MD34210 \$MA_ENC_REFP_STATE. In this case, renewed referencing is not absolutely necessary.

2.3 NC machine data

The machine data is inactive if:

- MD30200 \$MA_NUM_ENCS is less than 2
- MD30240 \$MA_ENC_TYPE=0
- The measuring system is used on the drive side, for example as a motor measuring system for speed control. Recommendation: Do not change the default value of the machine data for a motor measuring system.
- MD32950 \$MA_POSCTRL_DAMPING>0
- MD32960 \$MA_POSCTRL_DUAL_FEEDBACK_TIME>0

31050	DRIVE_AX_RATIO_DENOM			A02, A11	A2, A3, G2, S1, V1	
-	Denominator load gearbox			DWORD	PowerOn	
-						
-	6	1, 1, 1, 1, 1, 1	1	2147000000	7/2	M

Description: The load gearbox denominator is entered in this MD.
The index [n] of the machine data has the following coding:
[control parameter set no.]: 0-5

31060	DRIVE_AX_RATIO_NUMERA			A02, A11	A2, A3, G2, S1, V1	
-	Numerator load gearbox			DWORD	PowerOn	
-						
-	6	1, 1, 1, 1, 1, 1	-2147000000	2147000000	7/2	M

Description: The load gearbox numerator is entered in this MD.
The index [n] of the machine data has the following coding:
[control parameter set no.]: 0-5

31064	DRIVE_AX_RATIO2_DENOM			A02	G2, S1	
-	Denominator additional gearbox			DWORD	NEW CONF	
-						
-	-	1	1	2147000000	7/2	M

Description: Intermediate gearbox denominator
This MD together with MD31066 \$MA_DRIVE_AX_RATIO2_NUMERA defines an intermediate gearbox that acts as a multiplier to the motor/load gearbox (described by MD31060 \$MA_DRIVE_AX_RATIO_NUMERA and MD31050 \$MA_DRIVE_AX_RATIO_DENOM).
The load intermediate gearbox is inactive with the default values 1:1.
Please consider MD31044 \$MA_ENC_IS_DIRECT2 for encoder installation.
When the Safety Integrated functionality (see MD36901 \$MA_SAFE_FUNCTION_ENABLE) is active, the intermediate gearbox can be used, if

- the effectively active gear ratio from the motor to the tool is considered in the safety-relevant machine data and if
- the safety-relevant supplementary conditions for gear ratios are considered.

For more detailed information see the Safety Integrated Description of Functions.

31066	DRIVE_AX_RATIO2_NUMERA			A02	G2, S1	
-	Numerator additional gearbox			DWORD	NEW CONF	
-						
-	-	1	-2147000000	2147000000	7/2	M

Description: Intermediate gearbox numerator
Related to:
MD31064 \$MA_DRIVE_AX_RATIO2_DENOM

31070	DRIVE_ENC_RATIO_DENOM			A02, A11	A3, G2, S1	
-	Denominator measuring gearbox			DWORD	PowerOn	
-						
-	2	1, 1	1	2147000000	7/2	M

Description: The measuring gearbox denominator is entered in this MD.
The index [n] of the machine data has the following coding:
[encoder no.]: 0 or 1

31080	DRIVE_ENC_RATIO_NUMERA			A02, A11	A3, G2, S1	
-	Numerator measuring gearbox			DWORD	PowerOn	
-						
-	2	1, 1	1	2147000000	7/2	M

Description: The measuring gearbox numerator is entered in this MD.
The index [n] of the machine data has the following coding:
[encoder no.]: 0 or 1

31090	JOG_INCR_WEIGHT			A01, A12	H1, G2	
mm, degrees	Evaluation of an increment with INC/handwheel			DOUBLE	Reset	
CTEQ						
-	2	0.001, 0.00254	-	-	7/2	M

Description: The value entered in this MD defines the path of an increment which applies when an axis is traversed with the JOG keys in incremental mode or with the handwheel.
The path traveled by the axis on each increment each time the traversing key is pressed or for each handwheel detent position is defined by the following parameters:

- MD31090 \$MA_JOG_INCR_WEIGHT
(Weighting of an increment of a machine axis for INC/handwheel)
- Selected increment size (INC1, ..., INCvar)

The possible increment stages are defined globally for all axes in MD11330 \$MN_JOG_INCR_SIZE_TAB [n] and in SD41010 \$SN_JOG_VAR_INCR_SIZE.
Entering a negative value reverses the direction of evaluation of the traverse keys and the handwheel rotation.
Related to:
MD11330 \$MN_JOG_INCR_SIZE_TAB
SD41010 \$SN_JOG_VAR_INCR_SIZE

31092	JOG_INCR_WEIGHT_TRAFO			A01, A12	H1, G2	
mm, degrees	Evaluation of an increment for INC/handwheel for active transformation			DOUBLE	Reset	
CTEQ						
-	2	0.0, 0.0	-	-	7/2	M

Description: The input value is used to define the distance of an increment which, when traversing an axis during active transformation using the JOG keys, is valid for the incremental dimension or via handwheel.
The distance, through which the axis traverses when executing the incremental dimension with transformation active, depending on the traversing key actuated or handwheel grid position, is defined by the following parameters:

- MD31092 \$MA_JOG_INCR_WEIGHT_TRAFO
(Evaluating an increment of a machine axis for INC/handwheel)
- selected increment size (INC1, ..., INCvar)

The possible increment steps are globally defined for all axes in MD11330 \$MN_JOG_INCR_SIZE_TAB [n] or in SD41010 \$SN_JOG_VAR_INCR_SIZE.

2.3 NC machine data

Entering a negative value reverses the direction evaluation of the traversing keys and/or the handwheel direction of rotation.

The set value is only effective, if this is > 0 ist. For values of zero, then MD31090 \$MA_JOG_INCR_WEIGHT is effective

Corresponds with:

MD11330 \$MN_JOG_INCR_SIZE_TAB

MD31090 \$MA_JOG_INCR_WEIGHT

SD41010 \$SN_JOG_VAR_INCR_SIZE

31122	BERO_DELAY_TIME_PLUS			A02, A06	S1, R1	
s	BERO delay time Plus			DOUBLE	NEW CONF	
-						
-	2	0.000110, 0.000110	0.0	-	7/2	M

Description:

This machine data in combination with the setting in MD34200 \$MA_ENC_REFP_MODE (referencing mode) = 7 causes a signal runtime compensation in the positive direction of movement at a position determined by a BERO (zero mark).

The typical total delay time of the BERO message path for overtravel in the positive direction of movement is entered.

This time includes:

- the BERO edge delay time
- the time for digitizing the signal
- the time for processing the measured value, etc.

The periods of time depend on the hardware used. The default value is typical for SIEMENS products. Adjustment by the customer is only required in exceptional cases.

Input of the minimum value "0.0" deactivates the compensation (only active in combination with MD34200 \$MA_ENC_REFP_MODE = 7).

The machine data is available for all encoders.

Related to:

MD34200 \$MA_ENC_REFP_MODE (referencing mode)

MD34040 \$MA_REFP_VELO_SEARCH_MARKER[n]

(reference point shutdown velocity [Enc. no.])

31123	BERO_DELAY_TIME_MINUS			A02, A06	S1, R1	
s	BERO delay time minus			DOUBLE	NEW CONF	
-						
-	2	0.000078, 0.000078	0.0	-	7/2	M

Description:

This machine data in combination with the setting in MD34200 \$MA_ENC_REFP_MODE (referencing mode) = 7 causes a signal runtime compensation in the negative direction of movement at a position determined by a BERO (zero mark).

The typical total delay time of the BERO message path for overtravel in the negative direction of movement is entered.

The time includes:

- the BERO edge delay time
- the time for digitizing the signal
- the time for processing the measured value, etc.

The periods of time depend on the hardware used. The default value is typical for SIEMENS products. Adjustment by the customer is only required in exceptional cases.

Input of the minimum value "0.0" deactivates the compensation (only active in combination with MD34200 \$MA_ENC_REFP_MODE = 7).

The machine data is available for all encoders.

Related to:

MD34200 \$MA_ENC_REFP_MODE (referencing mode)

MD34040 \$MA_REFP_VELO_SEARCH_MARKER[n]
(shutdown velocity [Enc. no.])

31200	SCALING_FACTOR_G70_G71			EXP, A01	G2	
-	Factor for converting values while G70/G71 is active			DOUBLE	PowerOn	
CTEQ						
-	-	25.4	1.e-9	-	7/2	M

Description: The inch/metric conversion factor by which the programmed geometry of an axis (position, polynomial coefficients, radius for circle programming,...) is multiplied when the programmed value for G code group G70/G71 differs from the initial setting value (set in MD20150 \$MC_GCODE_RESET_VALUES[n]) is entered in this MD.

The factor can be set for each axis individually, so that pure positioning axes are not dependent on G70/G71. The factors within the three geometry axes should not be different.

The data influenced by G70/G71 are described in the Programming Guide.

Related to:
MD20150 \$MC_GCODE_RESET_VALUES[n] (G group initial setting).

31600	TRACE_VDI_AX			EXP, N06	-	
-	Trace-specification for axial VDI signals			BOOLEAN	PowerOn	
NBUP						
-	-	FALSE	0	-	2/2	M

Description: This machine data determines whether the axial VDI signals for this axis are recorded in the NCSC trace (according to MD18794 \$MN_MM_TRACE_VDI_SIGNAL).

32000	MAX_AX_VELO			A11, A04	M3, TE1, TE3, W6, Z3, H1, K3, M1, P2, A3, B2, G2, H2, S1, V1, W1	
mm/min, rev/min	Maximum axis velocity			DOUBLE	NEW CONF	
CTEQ						
-	-	(10000./3000), (10000./3000), (10000./3000), (10000./3000), (100...	(1e-9/ 1e-9)	(1.e300/ 1.e300)	7/2	M

Description: Maximum velocity at which the axis can permanently travel. The value limits both the positive and the negative axis velocity. The axis traverses at this velocity, if rapid traverse has been programmed.

Depending on the MD30300 \$MA_IS_ROT_AX, the maximum rotary or linear axis velocity has to be entered.

In the machine data, the dynamic behavior of the machine and drive and the limit frequency of the actual value acquisition must be taken into account.

32010	JOG_VELO_RAPID			A11, A04	H1	
mm/min, rev/min	Rapid traverse in jog mode			DOUBLE	Reset	
CTEQ						
-	-	(10000./100), (10000./100), (10000./100), (10000./100), (10000./...	(0./ 0.)	(1.e300/ 1.e300)	7/2	M

Description: The axis velocity entered applies when the rapid traverse override key is pressed in JOG mode and when the axial feedrate override is set to 100%.

2.3 NC machine data

The value entered must not exceed the maximum permissible axis velocity (MD32000 \$MA_MAX_AX_VELO).

This machine data is not used for the programmed rapid traverse G0.

MD irrelevant to:

Operating modes AUTOMATIC and MDI

Related to:

MD32000 \$MA_MAX_AX_VELO (maximum axis velocity)

MD32040 \$MA_JOG_REV_VELO_RAPID

(revolutional feedrate for JOG with rapid traverse override)

NC/PLC interface signal DB21-30 DBX12.5, DBX16.5, DBX20.5 (Rapid traverse override)

NC/PLC interface signal DB21-30 DBB4 (Feedrate override A-H)

32020	JOG_VELO			A11, A04	H1	
mm/min, rev/min	Jog axis velocity			DOUBLE	Reset	
CTEQ						
-	-	(2000./30), (2000./30), (2000./30), (2000./30), (2000./30), (200...	(0./ 0.)	(1.e300/ 1.e300)	7/2	M

Description:

The velocity entered applies to traversing in JOG mode when the axial feedrate override switch position is 100%.

This velocity is only used when general SD41110 \$SN_JOG_SET_VELO = 0 for linear axes, and linear feedrate is selected (SD41100 \$SN_JOG_REV_IS_ACTIVE = 0) or SD41130 \$SN_JOG_ROT_AX_SET_VELO = 0 for rotary axes.

If this is the case, the axis velocity is active for

- continuous jogging
- incremental jogging (INC1, ... INCvar)
- handwheel jogging

The value entered must not exceed the maximum permissible axis velocity (MD32000 \$MA_MAX_AX_VELO).

If DRF is active, the axis velocity for JOG must be reduced with MD32090 \$MA_HANDWH_VELO_OVERLAY_FACTOR.

Spindles in JOG mode:

This machine data can also be used to define the JOG mode speed for specific spindles (if SD41200 \$SN_JOG_SPIND_SET_VELO = 0). However, the speed can be modified with the spindle override switch.

Related to:

MD32000 \$MA_MAX_AX_VELO

(maximum axis velocity)

MD32050 \$MA_JOG_REV_VELO

(revolutional feedrate for JOG)

MD32090 \$MA_HANDWH_VELO_OVERLAY_FACTOR

(ratio of JOG velocity to handwheel velocity (DRF))

SD41110 \$SN_JOG_SET_VELO

(JOG velocity for G94)

SD41130 \$SN_JOG_ROT_AX_SET_VELO

(JOG velocity for rotary axes)

NC/PLC interface signal DB21-30 DBB4 (Feedrate override A-H)

32040	JOG_REV_VELO_RAPID			A11, A04	H1, P2, R2, T1, V1, Z1	
mm/rev	Revolutional feedrate in JOG with rapid traverse override			DOUBLE	Reset	
CTEQ						
-	-	2.5, 2.5, 2.5, 2.5, 2.5, 2.5, 2.5, 2.5...	0.0	-	7/2	M

Description: The value entered defines the revolutional feedrate of the axis in JOG mode with rapid traverse override in relation to the revolutions of the master spindle. This feedrate is active when SD41100 \$SN_JOG_REV_IS_ACTIVE = 1. (Revolutional feedrate active with JOG)

MD irrelevant for:

SD41100 \$SN_JOG_REV_IS_ACTIVE = "0"

Related to:

SD41100 \$SN_JOG_REV_IS_ACTIVE (revolutional feedrate with JOG active)

MD32050 \$MA_JOG_REV_VELO (revolutional feedrate with JOG)

32050	JOG_REV_VELO			A11, A04	H1, P2, R2, T1, V1, Z1	
mm/rev	Revolutional feedrate in JOG			DOUBLE	Reset	
CTEQ						
-	-	0.5, 0.5, 0.5, 0.5, 0.5, 0.5, 0.5, 0.5...	0.0	-	7/2	M

Description: The value entered defines the revolutional feedrate of the axis in JOG mode in relation to the revolutions of the master spindle.

This feedrate is active when SD41100 \$SN_JOG_REV_IS_ACTIVE= 1 (revolutional feedrate active with JOG).

MD irrelevant for:

Linear feedrate; i.e. SD41100 \$SN_JOG_REV_IS_ACTIVE = 0

Related to:

SD41100 \$SN_JOG_REV_IS_ACTIVE
(revolutional feedrate for JOG active)

MD32040 \$MA_JOG_REV_VELO_RAPID
(JOG revolutional feedrate with rapid traverse override)

32060	POS_AX_VELO			A12, A04	H1, P2, K1, V1, 2.4, 6.2	
mm/min, rev/min	Initial setting for positioning axis velocity			DOUBLE	Reset	
CTEQ						
-	-	(10000./30), (10000./30), (10000./30), (10000./30), (10000./30),....	(0./ 0.)	(1.e300/ 1.e300)	7/2	M

Description: If a positioning axis is programmed in the part program without specifying the axis-specific feedrate, the feedrate entered in MD32060 \$MA_POS_AX_VELO is automatically used for this axis. The feedrate in MD32060 \$MA_POS_AX_VELO applies until an axis-specific feedrate is programmed in the part program for this positioning axis.

MD irrelevant for:

MD32060 \$MA_POS_AX_VELO is irrelevant for all axis types other than positioning axis.

Special cases:

If a ZERO velocity is entered in MD32060 \$MA_POS_AX_VELO, the positioning axis does not traverse if it is programmed without feed. If a velocity is entered in MD32060 \$MA_POS_AX_VELO that is higher than the maximum velocity of the axis (MD32000 \$MA_MAX_AX_VELO), the velocity is automatically restricted to the maximum rate.

2.3 NC machine data

32070	CORR_VELO			A04	2.4, 6.2	
%	Axis velocity for override			DOUBLE	Reset	
CTEQ						
-	-	50.0	0.0	-	7/2	M

Description: Limitation of axis velocity for handwheel override, external work offset, continuous dressing, distance control \$AA_OFF via synchronized actions related to the JOG velocity

MD32020 \$MA_JOG_VELO,

MD32010 \$MA_JOG_VELO_RAPID,

MD32050 \$MA_JOG_REV_VELO,

MD32040 \$MA_JOG_REV_VELO_RAPID.

The maximum permissible velocity is the maximum velocity in MD32000 \$MA_MAX_AX_VELO. Velocity is limited to this value.

The conversion into linear or rotary axis velocity is made according to MD30300 \$MA_IS_ROT_AX.

32074	FRAME_OR_CORRPOS_NOTALLOWED			A01	K5, K2, 2.4, 6.2	
-	Frame or tool length compensation are not permissible			UDWORD	PowerOn	
CTEQ						
-	-	0	0	0xFFF	7/2	M

Description: This machine data is used to define the effectiveness of the frames and tool length compensations for indexing axes, PLC axes and command axes started from synchronized actions.

Bit assignment:

Bit 0 = 0:

Programmable work offset (TRANS) allowed for indexing axis

Bit 0 = 1:

Programmable work offset (TRANS) forbidden for indexing axis

Bit 1 = 0:

Scale modification (SCALE) allowed for indexing axis

Bit 1 = 1:

Scale modification (SCALE) forbidden for indexing axis

Bit 2 = 0:

Direction change (MIRROR) allowed for indexing axis

Bit 2 = 1:

Direction change (MIRROR) forbidden for indexing axis

Bit 3 = 0:

DRF offset allowed for axis

Bit 3 = 1:

DRF offset forbidden for axis

Bit 4 = 0:

External work offset allowed for axis

Bit 4 = 1:

External work offset forbidden for axis

Bit 5 = 0:

Online tool compensation allowed for axis

Bit 5 = 1:

Online tool compensation forbidden for axis

Bit 6 = 0:

Synchronized action offset allowed for axis

Bit 6 = 1:
Synchronized action offset forbidden for axis

Bit 7 = 0:
Compile cycles offset allowed for axis

Bit 7 = 1:
Compile cycles offset forbidden for axis

Bit 8 = 0:
Axial frames and tool length compensation are NOT considered for PLC axes (bit evaluation for compatibility reasons)

Bit 8 = 1:
Axial frames are considered for PLC axes and tool length compensation is considered for PLC axes which are geometry axes.

Bit 9 = 0:
Axial frames are considered for command axes, and tool length compensation is considered for command axes which are geometry axes.

Bit 9 = 1:
Axial frames and tool length compensation are NOT considered for command axes
If the tool is treated in an active transformation, the tool length compensation is taken into account for geometry axes (as for bit9=0, see also MD24130 \$MC_TRAFO_INCLUDES_TOOL_1).

Bit 10 = 0:
In JOG mode, too, traversing of a geometry axis as a PLC or command axis is NOT allowed with active rotation.

Bit 10 = 1:
In JOG mode, traversing of a geometry axis as a PLC axis or command axis (static synchronized action) is allowed with active rotation (ROT frame). Traversing must be terminated prior to returning to AUTOMATIC mode (neutral axis state), as otherwise alarm 16908 would be output when the mode is changed.

Bit 11 = 0:
In 'Program interrupted' status, repositioning to the interrupt position (AUTO - JOG) takes place when changing from JOG to AUTO.

Bit 11 = 1:
Prerequisite: Bit 10 == 1 (PLC or command axis motion with active rotation in JOG mode).
In 'Program interrupted' status, the end point of the PLC or command axis motion is taken over when changing from JOG to AUTOMATIC and the geometry axes are positioned according to the rotation

32075	MAPPED_FRAME			A01	-	
-	Mapping an axial frame			STRING	PowerOn	
-						
-	-	NO_AXIS, NO_AXIS, NO_AXIS, NO_AXIS, NO_AXIS, NO_AXIS, N...	-	-	7/2	M

Description: This machine data can be used to map an axial frame onto an axial frame of another axis. This means that the description of a frame in the data management can simultaneously describe the frame of another axis with the same values. Selected data management frames can be enabled for the mapping in MD10616 \$MN_MAPPED_FRAME_MASK.

2.3 NC machine data

32080	HANDWH_MAX_INCR_SIZE	A05, A10	H1
mm, degrees	Limitation of selected increment	DOUBLE	Reset
CTEQ			
-	-	0.0	0.0
-	-	-	7/2
-	-	-	M

Description: > 0: Limitation of size of selected increment MD11330 \$MN_JOG_INCR_SIZE <Increment/VDI signal>Ü or SD41010 \$SN_JOG_VAR_INCR_SIZE for the associated machine axis
0: No limitation

32082	HANDWH_MAX_INCR_VELO_SIZE	A05, A10, A04	-
mm/min, rev/min	Limitation for velocity override	DOUBLE	Reset
CTEQ			
-	-	(500.0/1.0), (500.0/1.0), (500.0/1.0), (500.0/1.0), (500.0/1.0),...	(0./0.)
-	-	(1.e300/ 1.e300)	7/2
-	-	-	M

Description: For the velocity override of positioning axes:
>0: Limitation of size of selected increment \$MN_JOG_INCR_SIZE<Increment/VDI signal> 0 or SD41010 \$SN_JOG_VAR_INCR_SIZE for the associated machine axis
0: No limitation

32084	HANDWH_STOP_COND	EXP, A10	H1
-	Handwheel travel behavior	UDWORD	Reset
CTEQ			
-	-	0x10FF	0
-	-	0x1FFF	7/2
-	-	-	M

Description: Definition of the response of the handwheel travel to axis-specific VDI interface signals or the CP-SW limit stop or a stop from an OEM application:
Bit = 0:
Interruption or collection of the distances preset via the handwheel.
Bit = 1:
Cancellation of the traversing motion or no collection.
Bit assignment:
Bit 0: feedrate override
Bit 1: spindle speed override
Bit 2: feedrate stop/spindle stop or CP-SW limit stop or stop from an OEM application
Bit 3: clamping procedure running (= 0 no effect)
Bit 4: servo enable
Bit 5: pulse enable
For machine axis:
Bit 6 = 0
For handwheel travel, the maximum velocity at which the relevant machine axis can be traversed is the feedrate set in MD32020 \$MA_JOG_VELO.
Bit 6 = 1
For handwheel travel, the maximum velocity at which the relevant machine axis can be traversed is the feedrate set in MD32000 \$MA_MAX_AX_VELO.
Bit 7 = 0
The override is active in handwheel travel.
Bit 7 = 1

The override is always assumed to be 100% for handwheel travel, regardless of how the override switch is set.

Exception: override 0% is always active.

Bit 8 = 0

The override is active with DRF

Bit 8 = 1

The override is always assumed to be 100% for DRF, regardless of how the override switch is set.

Exception: override 0% is always active.

Bit 9 = 0

For handwheel travel, the maximum possible velocity with revolutionary feedrate is

- with the feedrate in SD41120 \$SN_JOG_REV_SET_VELO or

- the feedrate in MD32050 \$MA_JOG_REV_VELO or

- in the case of rapid traverse with MD32040 \$MA_JOG_REV_VELO_RAPID

of the relevant machine axis calculated with the spindle or rotary axis feedrate.

Bit 9 = 1

For handwheel travel, the maximum possible velocity is with the revolutionary feedrate in MD32000 \$MA_MAX_AX_VELO of the relevant machine axis. (see also bit 6)

Bit 10 = 0

For overlaid motions, \$AA_OVR is not active.

Bit 10 = 1

For overlaid motions (DRF, \$AA_OFF, external work offset, online tool offset), the override \$AA_OVR settable via synchronized actions is active.

Bit 11 = 0

With the VDI interface signal DB31, ... DBX93.5 (Drive Ready) missing, paths defined by the handwheel are not collected, but a traversing request is displayed. Start of a continuous JOG motion in continuous mode (MD41050 \$SN_JOG_CONT_MODE_LEVELTRIGGRD 41050 = 0) or an incremental JOG motion in continuous mode (MS11300

\$MN_JOG_INC_MODE_LEVELTRIGGRD 11300 = 0) is displayed as a traversing request. With "driveReady" = 1, however, the tool is not traversed, but the procedure is canceled and must be started again.

Bit 11 = 1

With the VDI interface DB31, ... DBX93.5 (Drive Ready) missing, the paths defined by the handwheel are collected. Start of a continuous JOG motion in continuous mode (MD41050 \$SN_JOG_CONT_MODE_LEVELTRIGGRD 41050 = 0) or an incremental JOG motion in continuous mode (MS11300 \$MN_JOG_INC_MODE_LEVELTRIGGRD 11300 = 0) is displayed and saved as a traversing request. With "driveReady" = 1 the traversing motion is started.

Bit 12 = 0

Interruption or collection of the distances preset via the handwheel with safe operational stop.

Bit 12 = 1

Cancellation of the traversing motion or no collection with safe operational stop.

32090	HANDWH_VELO_OVERLAY_FACTOR			A10, A04	H1	
-	Ratio of JOG velocity to handwheel velocity (DRF)			DOUBLE	Reset	
CTEQ						
-	-	0.5	0.0	-	7/2	M

Description:

The velocity active with the handwheel in DRF can be reduced from the JOG velocity with this machine data.

The following applies to linear axes for the velocity active with DRF:

$v_{DRF} = SD41110 \$SN\_JOG\_SET\_VELO * MD32090 \$MA\_HANDWH\_VELO\_OVERLAY\_FACTOR$

or when $SD41110 \$SN\_JOG\_SET\_VELO = 0$:

2.3 NC machine data

vDRF = MD32020 \$MA_JOG_VELO * MD32090 \$MA_HANDWH_VELO_OVERLAY_FACTOR

The velocity setting in SD41130 \$SN_JOG_ROT_AX_SET_VELO applies for DRF on rotary axes instead of the value in SD41110 \$SN_JOG_SET_VELO.

MD irrelevant for:

JOG handwheel

Related to:

MD32020 \$MA_JOG_VELO (JOG axis velocity)

SD41110 \$SN_JOG_SET_VELO (JOG velocity for G94)

SD41130 \$SN_JOG_ROT_AX_SET_VELO (JOG velocity for rotary axes)

32100	AX_MOTION_DIR			A07, A03, A11	G1, TE3, G2	
-	Traversing direction (not control direction)			DWORD	PowerOn	
-						
-	-	1	-1	1	7/2	M

Description:

The direction of movement of the machine can be reversed with this MD.

The control direction is, however, not destroyed; i.e. closed-loop control remains stable.

-1: Direction reversal

0, 1: No direction reversal

32110	ENC_FEEDBACK_POL			A07, A02, A11	G2	
-	Sign actual value (control direction)			DWORD	PowerOn	
-						
-	2	1, 1	-1	1	7/2	M

Description:

The evaluation direction of the shaft encoder signals is entered in the MD.

-1: Actual value reversal

0, 1: No actual value reversal

The index[n] of the machine data is encoded as follows:

[Encoder no.]: 0 or 1

Special cases:

The axis can run off if an incorrect control direction is entered.

Depending on the setting of the corresponding limit values, one of the following alarms is displayed:

Alarm 25040 "Standstill monitoring"

Alarm 25050 "Contour monitoring"

Alarm 25060 "Speed setpoint limitation"

If an uncontrolled setpoint step change occurs on connection of a drive, the control direction might be incorrect.

Note:

In the case of SINAMICS drives, we recommend that the direction of motion is reversed in the drive (see P410).

This is obligatory if you are using DSC (see also MD32640 \$MA_STIFFNESS_CONTROL_ENABLE).

32200	POSCTRL_GAIN			A07, A11	G1, TE1, TE9, K3, S3, A2, A3, D1, G2, S1, V1	
1000/min	Servo gain factor			DOUBLE	NEW CONF	
CTEQ						
-	6	16.66666667, 16.66666667, 16.66666667, 16.66666667, 16.66666667,	0	2000.	7/2	M

Description:

Position controller gain, or servo gain factor.

The input/output unit for the user is [(m/min)/mm].

I.e. MD32200 \$MA_POSCTRL_GAIN[n] = 1 corresponds to a 1 mm following error at V = 1m/min.

The following machine data have default settings for adapting the standard selected input/output unit to the internal unit [rev/s].

- MD10230 \$MN_SCALING_FACTORS_USER_DEF[9] = 16.666667S
- MD10220 \$MN_SCALING_USER_DEF_MASK = 0x200; (bit no 9 as hex value).

If the value "0" is entered the position controller is opened.

When entering the servo gain factor it is important to take into account that the gain factor of the whole position control loop is still dependent on other parameters of the controlled system. A distinction should be made between a "desired servo gain factor" (MD32200 \$MA_POSCTRL_GAIN) and an "actual servo gain factor" (produced by the machine). Only when all the parameters of the control loop are matched will these servo gain factors be the same.

Other factors are:

- Speed setpoint adjustment (MD32260 \$MA_RATED_VELO, MD32250 \$MA_RATED_OUTVAL) or automatic speed setpoint interface adjustment (with MD32250 \$MA_RATED_OUTVAL = 0 etc.)
- Correct actual value recording of the position encoder (no. of encoder pulses, high resolution, encoder mounting location, gear etc.)
- Correct actual speed recording on the drive (standardization, possibly tachocompensation, tachogenerator)

Note:

Axes which interpolate together and are to perform a machining operation, must either have the same gain setting (i.e. have the identical following error = 45° slope at the same velocity) or they must be matched via MD32910 \$MA_DYN_MATCH_TIME.

The actual servo gain factor can be checked by means of the following error (in the service display).

In the case of analog axes, a drift compensation must be performed prior to the control.

The index [n] of the machine data has the following coding:

[control parameter set no.]: 0-5

32210	POSCTRL_INTEGR_TIME			A07	G2	
s	Position controller integral time			DOUBLE	NEW CONF	
-						
-	-	1.0	0	10000.0	7/2	M

Description:

Position controller integral action time for the integral component in s

The MD is only active if MD32220 \$MA_POSCTRL_INTEGR_ENABLE = TRUE.

A value of the MD less than 0.001 disables the integral component of the PI controller. The controller is then a P controller, which works with disabled manipulated variable clamping (see also MD32230 \$MA_POSCTRL_CONFIG, bit0 = 1).

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32220	POSCTRL_INTEGR_ENABLE	A07	G2
-	Enable integral component position controller	BOOLEAN	PowerOn
-			
-	-	FALSE	0

Description: Enable of the integral component position controller; the position controller is then a PI controller in which the manipulated variable clamping is disabled (s.a. MD32230 \$MA_POSCTRL_CONFIG, bit0 = 1).

Position overshoots may occur if the integral component is used. For this reason, this functionality may only be used in special cases.

32230	POSCTRL_CONFIG	A07	TE1
-	Configuration of the position controller structure	UBYTE	PowerOn
-			
-	-	0	0

Description: Configuration of the position controller structure:
 Bit0 = 1: Manipulated variable clamping inactive
 Bit4 = 1: Accelerated exact stop signal active

32250	RATED_OUTVAL	A01, A11	A3, D1, G2
%	Rated output voltage	DOUBLE	NEW CONF
CTEQ			
-	1	0.0	0.0

Description: a.)

Scaling of the manipulated variable with analog drives:

The value of the speed setpoint in percent is to be entered in this MD, in relation to the maximum speed setpoint at which the motor speed specified in MD32260 \$MA_RATED_VELO[n] is reached.

Related to:

MD32250 \$MA_RATED_OUTVAL[n] only makes sense in combination with MD32260 \$MA_RATED_VELO[n].

Example:

- At a voltage of 5V, the drive reaches a speed of 1875 rpm ==> RATED_OUTVAL = 50%, RATED_VELO = 11250 [degrees/s]
- At a voltage of 8V, the drive reaches a speed of 3000 rpm ==> RATED_OUTVAL = 80%, RATED_VELO = 18000 [degrees/s]
- At a voltage of 1.5V, the drive reaches a speed of 562.5 rpm ==> RATED_OUTVAL = 15%, RATED_VELO = 3375 [degrees/s]

All three examples are possible for one and the same drive/converter. The ratio of the two values is decisive; it is the same in all three examples.

MD32250 \$MA_RATED_OUTVAL and MD32260 \$MA_RATED_VELO describe physical properties of converter and drive; they can therefore only be determined by means of a measurement or commissioning instructions (converter, drive).

b.)

Scaling of the manipulated variable with digital PROFIdrive drives:

Default value "0" declares MD32250 \$MA_RATED_OUTVAL and MD32260 \$MA_RATED_VELO as invalid. Scaling of the manipulated variable is automatically determined and adjusted from the drive parameters instead.

Otherwise (MD32250 \$MA_RATED_OUTVAL unequal to zero), the scaling of the manipulated variable is not determined from the drive (for example non-Siemens PROFIdrive drives), but set with RATED_VELO and RATED_OUTVAL, even in the case of these, irrespective of the scaling active on the drive side. In this case, the following applies:

Scaling of the manipulated variable on the drive = $\text{RATED\_VELO} / \text{RATED\_OUTVAL}$

Further scalings from drive parameters, such as torque scaling, are not active if MD32250 \$MA_RATED_OUTVAL is not equal to zero, the values based on it remain zero.

In the case of simultaneous operation of analog and PROFIdrive drives, the settings for the analog axes must be adjusted as described in a.).

32260	RATED_VELO			A01, A11	A3, D1, G2	
rev/min	Rated motor speed			DOUBLE	NEW CONF	
CTEQ						
-	1	3000.0, 3000.0, 3000.0, 3000.0, 3000.0, 3000.0, 3000.0, 3000.0...	0.0	-	7/2	M

Description:

Only applies when:

MD32250 \$MA_RATED_OUTVAL is set greater than 0.

The drive speed (scaled on the drive) that is reached with the percentual speed setpoint specified in MD32250 \$MA_RATED_OUTVAL[n] must be entered in the MD.

Related to:

MD32260 \$MA_RATED_VELO[n] only makes sense in combination with MD32250 \$MA_RATED_OUTVAL[n].

32300	MAX_AX_ACCEL			A11, A04	M3, TE6, Z3, H1, K3, M1, A3, B1, B2, K1, V1, 2.4	
m/s², rev/s²	Maximum axis acceleration			DOUBLE	NEW CONF	
CTEQ						
-	5	1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0....	1.0e-6	-	7/2	M

Description:

Maximum acceleration, i.e. change in setpoint velocity, which is to act upon the axis. The value limits both positive and negative axis acceleration.

The maximum angular or linear axis acceleration must be entered dependent upon machine data MD30300 \$MA_IS_ROT_AX.

In the case of linear interpolation of the axes in a grouping, the grouping is limited in such a way that no axis is overloaded. With regard to contour accuracy, the control dynamic behavior has to be taken into account.

Not relevant for error states that lead to quick stop.

Each field element corresponds to a G code in the 59th G code group.

Related to:

MD32310 \$MA_MAX_ACCEL_OVL_FACTOR

MD32434 \$MA_G00_ACCEL_FACTOR

MD32433 \$MA_SOFT_ACCEL_FACTOR

MD20610 \$MC_ADD_MOVE_ACCEL_RESERVE

MD20602 \$MC_CURV_EFFECT_ON_PATH_ACCEL

32310	MAX_ACCEL_OVL_FACTOR				A04	B1	
-	Overload factor for axial velocity steps				DOUBLE	NEW CONF	
CTEQ							
-	5	1.2, 1.2, 1.2, 1.2, 1.2		0.0	-	7/7	U

Description:

The overload factor limits the velocity jump of the machine axis on block transition. The value entered is related to the value of MD32300 \$MA_MAX_AX_ACCEL (axis acceleration) and states by how much the maximum acceleration can be exceeded for one IPO cycle.

Related to:

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MD32300 \$MA_MAX_AX_ACCEL (axis acceleration)

MD10070 \$MN_IPO_SYSCLOCK_TIME_RATIO (interpolator clock)

Each field element corresponds to a G code in the 59th G group.

32320	DYN_LIMIT_RESET_MASK			A05, A06, A10, A04	-	
-	Reset behavior of dynamic response limitation.			UDWORD	Reset	
CTEQ						
-	-	0	0	0x03	7/2	M

Description:

MD32320 \$MA_DYN_LIMIT_RESET_MASK is used to set the reset response of functions limiting dynamic response for specific axes and groups.

The MD is bit-coded, bit 0 (LSB) and bit 1 are currently allocated.

Bit 0 = 0:

Programmed ACC, VELOLIM and JERKLIM are reset to 100% with channel reset/M30 if the channel-specific MD22410 \$MC_F_VALUES_ACTIVE_AFTER_RESET is also zero.

For spindle mode, programmed ACC and VELOLIM are reset to 100% with channel reset/M30 if MD35040 \$MA_SPIND_ACTIVE_AFTER_RESET is zero and the channel-specific MD22400 \$MC_S_VALUES_ACTIVE_AFTER_RESET is also zero.

Bit 0 = 1:

Programmed ACC, VELOLIM and JERKLIM are retained beyond channel reset/M30.

Bit 1 = 0:

Programmed ACCLIMA, VELOLIMA and JERKLIMA are reset to 100% with channel reset/M30, if MD22410 \$MC_F_VALUES_ACTIVE_AFTER_RESET is also zero.

Bit 1 = 1:

Programmed ACCLIMA, VELOLIMA and JERKLIMA are retained beyond channel reset//M30.

Notes:

In MD22410 \$MC_F_VALUES_ACTIVE_AFTER_RESET, the reset responses of the dynamic instructions ACC, VELOLIM, JERKLIM, ACCLIMA, VELOLIMA and JERKLIMA are set channel specifically. If the MD is set, then the values are also retained.

For spindle mode, the values for ACC and VELOLIM are also retained if MD35040 \$MA_SPIND_ACTIVE_AFTER_RESET is not equal to zero or the channel-specific MD22400 \$MC_S_VALUES_ACTIVE_AFTER_RESET is not equal to zero.

32400	AX_JERK_ENABLE			A07, A04	B2	
-	Axial jerk limitation			BOOLEAN	NEW CONF	
CTEQ						
-	-	FALSE	0	-	7/2	M

Description:

Enables the function of an axial jerk limitation.

The limitation is set via a time constant; it is always active.

The limitation works independently of the limitations "path-related maximum jerk", "knee-shaped acceleration characteristic" and the axial jerk limitation of the axes that are operated in JOG mode or positioning axis mode.

Related to:

MD32410 \$MA_AX_JERK_TIME (time constant for axial jerk limitation)

32402	AX_JERK_MODE			A07, A04	B2, G2, B3	
-	Filter type for axial jerk limitation			BYTE	PowerOn	
CTEQ						
-	-	1	1	3	7/2	M

Description:

Filter type for axial jerk limitation:

1: 2nd order filter (as in SW 1 through 4)

2: Moving averaging (SW 5 and higher)

3: Bandstop filter (SW 6 and higher)

Type 2 requires more computing time, but causes smaller contour errors for the same smoothing effect, or smoother movements at the same accuracy.

Type 2 is recommended; type 1 is set as a default value for reasons of compatibility.

The maximum jerk is set in the time constant MD32410 \$MA_AX_JERK_TIME.

Recommended values for type 1:

Min. 0.03 s; max. 0.06s.

Recommended values for type 2:

Min. 1 position-control cycle; max. 16 position-control cycles

At a position-control cycle of 2ms, this corresponds to 0.002 to 0.032 seconds.

Type 3 requires the setting of

MD32410 \$MA_AX_JERK_TIME

MD32412 \$MA_AX_JERK_FREQ

MD32414 \$MA_AX_JERK_DAMP.

To parameterize a simple bandstop filter, we recommend setting MD32410 \$MA_AX_JERK_TIME=0,

which automatically sets "denominator frequency = numerator frequency = blocking frequency = MD32412 \$MA_AX_JERK_FREQ".

However, MD32410 \$MA_AX_JERK_TIME > 0 is used to set a specific denominator frequency, which makes it possible to implement a bandstop filter with amplitude increase for frequencies beyond the blocking frequency.

MD32402 \$MA_AX_JERK_MODE is only active if MD32400 \$MA_AX_JERK_ENABLE has been set to 1.

Special cases, errors:

The machine data must be same for all axes of an axis container.

Related to:

MD32400 \$MA_AX_JERK_ENABLE

MD32410 \$MA_AX_JERK_TIME

and for type 3:

MD32412 \$MA_AX_JERK_FREQ and

MD32414 \$MA_AX_JERK_DAMP

32410	AX_JERK_TIME	A07, A04	G1, TE1, S3, B2, G2
s	Time constant for axial jerk filter	DOUBLE	NEW CONF
-			
-	-	0.001	0.0
-	-	-	7/2
-	-	-	M

Description:

Time constant of the axial jerk filter which causes a smoother axis setpoint characteristic. The jerk filter will only be active, if the time constant is higher than a position control cycle.

Not active in case of errors that cause a change in follow-up mode (for example EMERGENCY STOP)

Special cases:

Machine axes that are supposed to be interpolating with one another, must have the same effective jerk filtering (for example the same time constant for tapping without compensating chuck).

Related to:

MD32400 \$MA_AX_JERK_ENABLE (axial jerk limitation)

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32412	AX_JERK_FREQ	A07, A04	-
-	Blocking frequency of axial jerk filter	DOUBLE	NEW CONF
-			
-	-	10.0	0.0
-	-	-	7/2
-	-	-	M

Description: Blocking frequency of axial jerk filter bandstop MD is only active if MD32402 \$MA_AX_JERK_MODE = 3

32414	AX_JERK_DAMP	A07, A04	-
-	Damping of axial jerk filter	DOUBLE	NEW CONF
-			
-	-	0.0	0.0
-	-	-	7/2
-	-	-	M

Description: Damping of axial jerk filter bandstop:
Input value 0 means complete blocking with MD32412 \$MA_AX_JERK_FREQ, input values >0 can attenuate the blocking effect.
MD is only active if MD32402 \$MA_AX_JERK_MODE = 3

32415	EQUIV_CPREC_TIME	A07, A04	MD32410 \$MA_AX_JERK_TIME, \$MC_CPREC_WITH_FFW
s	Time constant for the programmable contour accuracy	DOUBLE	NEW CONF
-			
-	-	0	-
-	-	-	7/2
-	-	-	M

Description: The data states the jerk filter time constant at which the contour error with active feedforward control is negligibly small.

32420	JOG_AND_POS_JERK_ENABLE	A04	G1, H1, P2, S3, B2
-	Default setting of axis jerk limitation	BOOLEAN	Reset
CTEQ			
-	-	FALSE	0
-	-	-	7/2
-	-	-	M

Description: Enables the function of the axis-specific jerk limitation for the operating modes JOG, REF and positioning axis mode.
1: Axial jerk limitation for JOG mode and positioning axis mode
0: No jerk limitation for JOG mode and positioning axis mode
The maximum jerk occurring is defined in MD32430 \$MA_JOG_AND_POS_MAX_JERK.
Related to:
MD32430 \$MA_JOG_AND_POS_MAX_JERK (axial jerk)

32430	JOG_AND_POS_MAX_JERK	A04	G1, P2, S3, B2
m/s³, rev/s³	Axial jerk	DOUBLE	NEW CONF
CTEQ			
-	-	1000.0, 1000.0, 1000.0, 1000.0, 1000.0, 1000.0, 1000.0, 1000.0...	1.e-9
-	-	-	7/2
-	-	-	M

Description: The jerk limit value limits the rate of change of axis acceleration in JOG and REF modes as well as in positioning axis mode with MD18960 \$MN_POS_DYN_MODE=0.
The setting and time calculation are made as for MD20600 \$MC_MAX_PATH_JERK (path-related maximum jerk).
Not relevant for:

- Path interpolation
- Error states that lead to quick stop.

Related to:

MD32420 \$MA_JOG_AND_POS_JERK_ENABLE (initial setting of axial jerk limitation)

MD18960 \$MN_POS_DYN_MODE

32431	MAX_AX_JERK			A04	B1, B2	
m/s³, rev/s³	Maximum axial jerk for path movement			DOUBLE	NEW CONF	
-						
-	5	1.e6, 1.e6, 1.e6, 1.e6, 1.e6, 1.e6, 1.e6, 1.e6, 1.e6, 1.e6, 1.e6...	1.e-9	-	3/3	I

Description: Maximum axial jerk for path motion
Each field element corresponds to a G code in the 59th G code group.

32432	PATH_TRANS_JERK_LIM			A04	B1, B2	
m/s³, rev/s³	Maximum axial jerk at block transition in continuous-path mode			DOUBLE	NEW CONF	
CTEQ						
-	5	1.e6, 1.e6, 1.e6, 1.e6, 1.e6, 1.e6, 1.e6, 1.e6, 1.e6, 1.e6, 1.e6...	0.0	-	3/3	I

Description: The control limits the jerk (acceleration jump) at a block transition between contour sections of different curvature to the value set with active jerk limitation.
Not relevant for:
Exact stop
There is an entry for each G code from the 59th G code group (dynamic G code group).
Related to:
Path control, SOFT type of acceleration

32433	SOFT_ACCEL_FACTOR			A04	TE9, B1, B2	
-	Scaling of acceleration limitation with SOFT			DOUBLE	NEW CONF	
-						
-	5	1., 1., 1., 1., 1.	1e-9	-	3/3	I

Description: Scaling of acceleration limitation with SOFT.
Relevant axial acceleration limitation for SOFT =:
(MD32433 \$MA_SOFT_ACCEL_FACTOR[...] * MD32300 \$MA_MAX_AX_ACCEL[...])
Each field element corresponds to a G code in the 59th G code group.

32434	G00_ACCEL_FACTOR			A04	TE9, B1, B2	
-	Scaling of acceleration limitation with G00.			DOUBLE	NEW CONF	
-						
-	-	1.	1e-9	-	3/3	I

Description: Scaling of the acceleration limitation with G00.
Relevant axial acceleration limitation for G00 =:
(MD32433 \$MA_G00_ACCEL_FACTOR[...] * MD32300 \$MA_MAX_AX_ACCEL[...])

32435	G00_JERK_FACTOR			A04	B1, B2	
-	Scaling of jerk limitation with G00.			DOUBLE	NEW CONF	
-						
-	-	1.	1e-9	-	3/3	I

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Description: Scaling of the jerk limitation with G00.
 Relevant axial jerk limitation for G00 =:
 (MD32435 \$MA_G00_JERK_FACTOR[...] * MD32431 \$MA_MAX_AX_JERK[...])

32437	AX_JERK_VELO			A04	B1	
mm/min, rev/min	Velocity threshold for linear jerk adjustment			DOUBLE	NEW CONF	
-						
-	5	3000, 3000, 3000, 3000, 3000, 3000, 3000, 3000, 3000, 3000, 3000...	0.0	-	3/3	I

Description: Velocity at and above which the permissible jerk of an axis increases in a linear fashion.
 Jerk adjustment only becomes active if MD32439 \$MA_MAX_AX_JERK_FACTOR is > 1.0.
 There is an entry for each dynamic G code group.
 See also MD32438 \$MA_AX_JERK_VEL1 and \$MA_MAX_AX_JERK_FACTOR.

32438	AX_JERK_VEL1			A04	B1	
mm/min, rev/min	Velocity threshold for linear jerk adjustment			DOUBLE	NEW CONF	
-						
-	5	6000, 6000, 6000, 6000, 6000, 6000, 6000, 6000, 6000, 6000, 6000...	0.0	-	3/3	I

Description: Velocity at and above which the permissible jerk of an axis switches from increasing in a linear fashion
 to the saturation defined in MD32439 \$MA_MAX_AX_JERK_FACTOR.
 The value of this velocity must be greater than the value set with MD32437 \$MA_AX_JERK_VELO.
 Jerk adjustment becomes active only if MD32439 \$MA_MAX_AX_JERK_FACTOR is > 1.0.
 There is an entry for each dynamic G code group.
 See also MD32437 \$MA_AX_JERK_VELO and MD32439 \$MA_MAX_AX_JERK_FACTOR

32439	MAX_AX_JERK_FACTOR			A04	B1	
-	Factor for jerk adjustment at high velocities			DOUBLE	NEW CONF	
-						
-	5	1.0, 1.0, 1.0, 1.0, 1.0	1.0	-	3/3	I

Description: Factor for setting adaptive jerk adjustment for an axis.
 Jerk adjustment becomes active only if the value of this MD is greater than 1.
 The speed-dependent axial jerk is only used for defining the maximum path velocity and does not affect the maximum path acceleration and maximum path jerk. Therefore, speed-dependent jerk adaptation only affects traversing that includes geometric torsion (change of the curvature). Both the curvature and torsion of linear movements are zero, and jerk adaptation has no effect.
 There is an entry for each dynamic G code group.
 See also MD32437 \$MA_AX_JERK_VELO and MD32438 \$MA_AX_JERK_VEL1.

32440	LOOKAH_FREQUENCY			EXP, A04	B1	
-	Smoothing frequency for LookAhead			DOUBLE	NEW CONF	
-						
-	-	10.	0.0	-	7/2	M

Description: Acceleration procedures in continuous-path mode with LookAhead which execute with a higher frequency than that parameterized in this MD are smoothed as a function of the parameterization in MD20460 \$MC_LOOKAH_SMOOTH_FACTOR.

It is always the minimum of all the axes participating in the path which is determined.

If vibrations are aroused in the mechanics of this axis and if their frequency is known, then this MD should be set to a lower value than this frequency.

32450	BACKLASH			A09	K3, G2	
mm, degrees	Backlash			DOUBLE	NEW CONF	
-						
-	2	0.0, 0.0	-	-	7/2	I

Description: Backlash on reversal between positive and negative travel directions.

Input of the compensation value is

- positive, if the encoder is leading the machine part (normal situation)
- negative, if the encoder is behind the machine part.

Backlash compensation is not active when 0 is entered.

Backlash compensation is always active after reference point approach in all operating modes.

Special cases:

A specific backlash on reversal must be entered for each measuring system.

Related to:

MD30200 \$MA_NUM_ENCS (number of measuring systems)

MD36500 \$MA_ENC_CHANGE_TOL

(Maximum tolerance at actual position value change)

32452	BACKLASH_FACTOR			A09	K3, G2, S1, V1	
-	Evaluation factor for backlash			DOUBLE	NEW CONF	
-						
-	6	1.0, 1.0, 1.0, 1.0, 1.0, 1.0	0.01	100.0	7/2	I

Description: Evaluation factor for backlash.

The machine data enables the backlash defined in MD32450 \$MA_BACKLASH to be changed as a function of the parameter set, in order to take a gear stage dependent backlash into account, for example.

Related to:

MD32450 \$MA_BACKLASH[n]

32454	BACKLASH_MODE			A09	-	
-	Backlash compensation mode			UBYTE	NEW CONF	
-						
-	2	0, 0	0	0x3	7/2	I

Description: Bit 0 = 0:
The backlash compensation value is not restored at Power On.

Bit 0 = 1:
The backlash compensation value is restored at Power On.

Bit 1 = 0:
The backlash compensation responds to other compensation movements (temperature compensation, sag and angularity error compensation).

Bit 1 = 1:
The backlash compensation does not respond to other compensation movements (temperature compensation, sag and angularity error compensation).

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32456	BACKLASH_DYN	A09	-
mm, degrees	Compensation value of dynamic backlash compensation	DOUBLE	NEW CONF
-			
-	2	0.0, 0.0	-

Description: Compensation value for dynamic backlash compensation value
The entry of the compensation value is

- positive if the encoder leading the machine part (normal case)
- negative if the encoder is following the machine part.

Backlash compensation becomes ineffective if 0 is entered.
The dynamic backlash compensation can only be activated after the reference point approach. Activation takes place via PLC user interface signals.
Special cases:
A separate compensation value must be entered for each measuring system.
Corresponds to:
MD32457 \$MA_BACKLASH_DYN_MAX_VELO
(limitation of the compensation value change)
MD32000 \$MA_MAX_AX_VELO
(maximum axis velocity)
MD30200 \$MA_NUM_ENCS
(number of measuring systems)
MD30200 \$MA_NUM_ENCS (number of measuring systems)

32457	BACKLASH_DYN_MAX_VELO	A09	-
%	Limitation of dynamic backlash compensation value change	DOUBLE	NEW CONF
-			
-	-	1.0	-

Description: Relative velocity at which a dynamic backlash compensation value is retracted.
Limitation of compensation value change. This is entered as percentage of MD32000 \$MA_MAX_AX_VELO.
Corresponds to:
MD32456 \$MA_BACKLASH_DYN
(compensation value of dynamic backlash compensation)
MD32000 \$MA_MAX_AX_VELO
(maximum axis velocity)

32490	FRICT_COMP_MODE	A09	K3
-	Type of friction compensation	BYTE	PowerOn
-			
-	1	1	0

Description: 0: No friction compensation
1: Friction compensation with constant injected value or adaptive characteristic
2: Friction compensation with learned characteristic via neural network
3: Friction compensation with adaptive characteristics, injection time depends on velocity setpoint
4: Friction compensation with adaptive characteristics, injection time depends on position controller output
Not relevant for:
MD32500 \$MA_FRICT_COMP_ENABLE = 0
Modes 1 and 2 related to:

MD32490 \$MA_FRICT_COMP_MODE
MD32510 \$MA_FRICT_COMP_ADAPT_ENABLE
MD32520 \$MA_FRICT_COMP_CONST_MAX
MD32540 \$MA_FRICT_COMP_TIME
MD38010 \$MA_MM_QEC_MAX_POINTS
Modes 3 and 4 related to:
MD32571 \$MA_FRICT_VELO_STEP
MD32572 \$MA_FRICT_V_PULSE_DELAY_TIME
MD32573 \$MA_FRICT_V_PULSE_CONST_TIME
MD32574 \$MA_FRICT_V_PULSE_DECAY_TIME
MD32575 \$MA_FRICT_V_PULSE_SMOOTH_TIME
MD32576 \$MA_FRICT_TORQUE_STEP
MD32577 \$MA_FRICT_T_PULSE_DELAY_TIME
MD32578 \$MA_FRICT_T_PULSE_SMOOTH_TIME
MD32581 \$MA_FRICT_ADAPT_TABLE_ACCEL
MD32582 \$MA_FRICT_ADAPT_V_STEP_PLUS
MD32583 \$MA_FRICT_ADAPT_V_STEP_MINUS
MD32584 \$MA_FRICT_ADAPT_V_CONST_PLUS
MD32585 \$MA_FRICT_ADAPT_V_CONST_MINUS
MD32586 \$MA_FRICT_ADAPT_V_DECAY_PLUS
MD32587 \$MA_FRICT_ADAPT_V_DECAY_MINUS
MD32588 \$MA_FRICT_ADAPT_T_STEP

32500	FRICT_COMP_ENABLE			A09	K3, G2	
-	Friction compensation active			BOOLEAN	NEW CONF	
-						
-	-	FALSE	0	-	7/2	I

Description:

1: Friction compensation is enabled for this axis.

The corresponding friction compensation is active as function of the setting of MD32490 \$MA_FRICT_COMP_MODE.

In the case of neural QEC, the machine data should not be set to "1" until a valid characteristic has been "learnt".

During the learning stage, the compensation values are added on independently of the contents of this machine data.

0: Friction compensation is not enabled for this axis.

Thus, no friction compensation values are entered.

Related to:

MD32490 \$MA_FRICT_COMP_MODE

32510	FRICT_COMP_ADAPT_ENABLE			EXP, A09	K3	
-	Adaptation friction compensation active			BOOLEAN	NEW CONF	
-						
-	1	FALSE	0	-	7/2	I

Description:

1: Friction compensation with amplitude adaptation is enabled for the axis. Quadrant errors on circular contours can be compensated with friction compensation.

The amplitude of the friction compensation value required to be added on is frequently not constant over the entire acceleration range. That is, a lower compensation value needs to be entered for optimum friction compensation for higher accelerations than for lower accelerations.

The parameters of the adaptation curve have to be determined, and entered in the machine data.

2.3 NC machine data

0: Friction compensation with amplitude adaptation is not enabled for the axis.

MD irrelevant for:

MD32500 \$MA_FRICT_COMP_ENABLE = 0

MD32490 \$MA_FRICT_COMP_MODE = 2

Related to:

MD32500 \$MA_FRICT_COMP_ENABLE

Friction compensation active

MD32520 \$MA_FRICT_COMP_CONST_MAX

Maximum friction compensation value

MD32530 \$MA_FRICT_COMP_CONST_MIN

Minimum friction compensation value

MD32550 \$MA_FRICT_COMP_ACCEL1

Adaptation acceleration value 1

MD32560 \$MA_FRICT_COMP_ACCEL2

Adaptation acceleration value 2

MD32570 \$MA_FRICT_COMP_ACCEL3

Adaptation acceleration value 3

MD32540 \$MA_FRICT_COMP_TIME

Friction compensation time constant

32520	FRICT_COMP_CONST_MAX			EXP, A09	K3	
mm/min, rev/min	Maximum friction compensation value			DOUBLE	NEW CONF	
-						
-	1	0.0	-	-	7/2	I

Description:

If adaptation is inactive (MD32510 \$MA_FRICT_COMP_ADAPT_ENABLE=0), the maximum friction compensation is applied throughout the entire acceleration range.

If adaptation is active (MD32510 \$MA_FRICT_COMP_ADAPT_ENABLE=1), the maximum friction compensation is applied in accordance with the adaptation curve.

In the 1st acceleration range ($a < MD32550$), the switching amplitude = $MD32520 * (a / MD32550)$.

In the 2nd acceleration range ($MD32550 \leq a \leq MD32560$), the switching amplitude = $MD32520$.

In the 3rd acceleration range ($MD32560 < a < MD32570$), the switching amplitude = $MD32520 + (MD32530 - MD32520) / (MD32570 - MD32560) * (a - MD32560)$.

In the 4th acceleration range ($MD32570 \leq a$), the switching amplitude = $MD32530$.

Not relevant for:

MD32500 \$MA_FRICT_COMP_ENABLE = 0

MD32490 \$MA_FRICT_COMP_MODE = 2 (neural QEC)

Related to:

MD32500 \$MA_FRICT_COMP_ENABLE

Friction compensation active

MD32510 \$MA_FRICT_COMP_ADAPT_ENABLE

Friction compensation adaptation active

MD32530 \$MA_FRICT_COMP_CONST_MIN

Minimum friction compensation value

MD32550 \$MA_FRICT_COMP_ACCEL1

Adaptation acceleration value 1

MD32560 \$MA_FRICT_COMP_ACCEL2

Adaptation acceleration value 2

MD32570 \$MA_FRICT_COMP_ACCEL3
Adaptation acceleration value 3
MD32540 \$MA_FRICT_COMP_TIME
Friction compensation time constant

32530	FRICT_COMP_CONST_MIN			EXP, A09	K3	
mm/min, rev/min	Minimum friction compensation value			DOUBLE	NEW CONF	
-						
-	1	0.0	-	-	7/2	I

Description: The minimum friction compensation value is active only if "Friction compensation with adaptation" (MD32510 \$MA_FRICT_COMP_ADAPT_ENABLE=1) is active.
The amplitude of the friction compensation value is entered in the 4th acceleration range (MD32570 \$MA_FRICT_COMP_ACCEL3 <= a).
MD irrelevant for:
MD32510 \$MA_FRICT_COMP_ADAPT_ENABLE = 0
MD32490 \$MA_FRICT_COMP_MODE = 2 (neural QEC)
Special cases:
In special cases, the value for FRICT_COMP_CONST_MIN may be even higher than for MD32520 \$MA_FRICT_COMP_CONST_MAX.
Related to:
MD32500 \$MA_FRICT_COMP_ENABLE
Friction compensation active
MD32510 \$MA_FRICT_COMP_ADAPT_ENABLE
Friction compensation adaptation active
MD32520 \$MA_FRICT_COMP_CONST_MAX
Maximum friction compensation value
MD32550 \$MA_FRICT_COMP_ACCEL1
Adaptation acceleration value 1
MD32560 \$MA_FRICT_COMP_ACCEL2
Adaptation acceleration value 2
MD32570 \$MA_FRICT_COMP_ACCEL3
Adaptation acceleration value 3
MD32540 \$MA_FRICT_COMP_TIME
Friction compensation time constant

32540	FRICT_COMP_TIME			EXP, A09	K3	
s	Friction compensation time constant			DOUBLE	NEW CONF	
-						
-	1	0.015	0.0	-	7/2	1

Description: The friction compensation value is entered via a DT1 filter.
The add-on amplitude decays in accordance with the time constant.
MD irrelevant for:
MD32500 \$MA_FRICT_COMP_ENABLE = 0
Related to:
MD32500 \$MA_FRICT_COMP_ENABLE
Friction compensation active
MD32520 \$MA_FRICT_COMP_CONST_MAX
Maximum friction compensation value

2.3 NC machine data

32550	FRICT_COMP_ACCEL1			EXP, A09	K3	
m/s², rev/s²	Adaptation acceleration value 1			DOUBLE	NEW CONF	
-						
-	1	0.0	0.0	-	7/2	I

Description:

The adaptation acceleration value is only required if "Friction compensation with adaptation" (MD32510=1) is active.

The adaptation acceleration values 1 to 3 are interpolation points for defining the adaptation curve. The adaptation curve is subdivided into 4 ranges, in each of which a different friction compensation value applies.

For the 1st range ($a < \text{MD32550}$), the add-on amplitude = $a * \text{MD32520} / \text{MD32550}$

MD irrelevant for:

MD32510 \$MA_FRICT_COMP_ADAPT_ENABLE = 0

MD32490 \$MA_FRICT_COMP_MODE = 2

Related to:

MD32500 \$MA_FRICT_COMP_ENABLE

Friction compensation active

MD32510 \$MA_FRICT_COMP_ADAPT_ENABLE

Friction compensation adaptation active

MD32520 \$MA_FRICT_COMP_CONST_MAX

Maximum friction compensation value

MD32530 \$MA_FRICT_COMP_CONST_MIN

Minimum friction compensation value

MD32560 \$MA_FRICT_COMP_ACCEL2

Adaptation acceleration value 2

MD32570 \$MA_FRICT_COMP_ACCEL3

Adaptation acceleration value 3

MD32540 \$MA_FRICT_COMP_TIME

Friction compensation time constant

32560	FRICT_COMP_ACCEL2			EXP, A09	K3	
m/s², rev/s²	Adaptation acceleration value 2			DOUBLE	NEW CONF	
-						
-	1	0.0	0.0	-	7/2	I

Description:

The adaptation acceleration value is only required if "Friction compensation with adaptation" (MD32510 \$MA_FRICT_COMP_ADAPT_ENABLE=1) is active.

Adaptation acceleration values 1 to 3 are interpolation points for defining the adaptation curve. The adaptation curve is subdivided into 4 ranges, in each of which a different friction compensation value applies.

In the 1st acceleration range ($a < \text{MD32550}$), the switching amplitude = $\text{MD32520} * (a / \text{MD32550})$.

In the 2nd acceleration range ($\text{MD32550} \leq a \leq \text{MD32560}$), the switching amplitude = MD32520 .

In the 3rd acceleration range ($\text{MD32560} < a < \text{MD32570}$), the switching amplitude = $\text{MD32520} + (\text{MD32530} - \text{MD32520}) / (\text{MD32570} - \text{MD32560}) * (a - \text{MD32560})$.

In the 4th acceleration range ($\text{MD32570} \leq a$), the switching amplitude = MD32530 .

Not relevant for:

MD32510 \$MA_FRICT_COMP_ADAPT_ENABLE = 0

MD32490 \$MA_FRICT_COMP_MODE = 2

Related to:

MD32500 \$MA_FRICT_COMP_ENABLE
Friction compensation active
MD32510 \$MA_FRICT_COMP_ADAPT_ENABLE
Friction compensation adaptation active
MD32520 \$MA_FRICT_COMP_CONST_MAX
Maximum friction compensation value
MD32530 \$MA_FRICT_COMP_CONST_MIN
Minimum friction compensation value
MD32550 \$MA_FRICT_COMP_ACCEL1
Adaptation acceleration value 1
MD32570 \$MA_FRICT_COMP_ACCEL3
Adaptation acceleration value 3
MD32540 \$MA_FRICT_COMP_TIME
Friction compensation time constant

32570	FRICT_COMP_ACCEL3			EXP, A09	K3	
m/s², rev/s²	Adaptation acceleration value 3			DOUBLE	NEW CONF	
-						
-	1	0.0	0.0	-	7/2	I

Description:

The adaptation acceleration value is only required if "Friction compensation with adaptation" (MD32510=1) is active.

Adaptation acceleration values 1 to 3 are interpolation points for defining the adaptation curve. The adaptation curve is subdivided into 4 ranges, in each of which a different friction compensation value applies.

In the 1st acceleration range ($a < MD32550$), the switching amplitude = $MD32520 * (a / MD32550)$.

In the 2nd acceleration range ($MD32550 \leq a \leq MD32560$), the switching amplitude = $MD32520$.

In the 3rd acceleration range ($MD32560 < a < MD32570$), the switching amplitude = $MD32520 + (MD32530 - MD32520) / (MD32570 - MD32560) * (a - MD32560)$.

In the 4th acceleration range ($MD32570 \leq a$), the switching amplitude = $MD32530$.

Not relevant for:

MD32510 \$MA_FRICT_COMP_ADAPT_ENABLE = 0

MD32490 \$MA_FRICT_COMP_MODE = 2

Related to:

MD32500 \$MA_FRICT_COMP_ENABLE
Friction compensation active
MD32510 \$MA_FRICT_COMP_ADAPT_ENABLE
Friction compensation adaptation active
MD32520 \$MA_FRICT_COMP_CONST_MAX
Maximum friction compensation value
MD32530 \$MA_FRICT_COMP_CONST_MIN
Minimum friction compensation value
MD32550 \$MA_FRICT_COMP_ACCEL1
Adaptation acceleration value 1
MD32560 \$MA_FRICT_COMP_ACCEL2
Adaptation acceleration value 2
MD32540 \$MA_FRICT_COMP_TIME
Friction compensation time constant

2.3 NC machine data

32571	FRICT_VELO_STEP	EXP, A09	K3
mm/min, rev/min	Amplitude of the velocity injection pulse of the friction compensation	DOUBLE	NEW CONF
-			
-	-	0.0	0.0
-	-	-	7/2
-	-	-	I

Description: The amplitude of the velocity injection pulse of the friction compensation is adapted as a function of the acceleration via weighting factors from the characteristics.

Not relevant for:

MD32500 \$MA_FRICT_COMP_ENABLE = 0

MD32490 \$MA_FRICT_COMP_MODE = 1/2

Related to:

MD32500 \$MA_FRICT_COMP_ENABLE = 1

MD32490 \$MA_FRICT_COMP_MODE = 3/4

MD32582 \$MA_FRICT_ADAPT_V_STEP_PLUS

MD32583 \$MA_FRICT_ADAPT_V_STEP_MINUS

32572	FRICT_V_PULSE_DELAY_TIME	EXP, A09	K3
s	Delay time of the velocity injection pulse of the friction compensation	DOUBLE	NEW CONF
-			
-	-	0.0	0
-	-	0.1	7/2
-	-	-	I

Description: The velocity injection pulse of the friction compensation is delayed by this time. The delay time is not adapted and is limited to 16 position controller cycles.

Not relevant for:

MD32500 \$MA_FRICT_COMP_ENABLE = 0

MD32490 \$MA_FRICT_COMP_MODE = 1/2

Related to:

MD32500 \$MA_FRICT_COMP_ENABLE = 1

MD32490 \$MA_FRICT_COMP_MODE = 3/4

MD10050 \$MN_SYSCLOCK_CYCLE_TIME

MD10060 \$MN_POSCTRL_SYSCLOCK_TIME_RATIO

32573	FRICT_V_PULSE_CONST_TIME	EXP, A09	K3
s	Active time of the velocity injection pulse of the friction compensation	DOUBLE	NEW CONF
-			
-	-	0.0	0
-	-	10.0	7/2
-	-	-	I

Description: The active time of the velocity injection pulse of the friction compensation is adapted as a function of the acceleration via weighting factors from the characteristics.

Not relevant for:

MD32500 \$MA_FRICT_COMP_ENABLE = 0

MD32490 \$MA_FRICT_COMP_MODE = 1/2

Related to:

MD32500 \$MA_FRICT_COMP_ENABLE = 1

MD32490 \$MA_FRICT_COMP_MODE = 3/4

MD32584 \$MA_FRICT_ADAPT_V_CONST_PLUS

MD32585 \$MA_FRICT_ADAPT_V_CONST_MINUS

32574	FRICT_V_PULSE_DECAY_TIME	EXP, A09	K3
s	Decay time of the velocity injection pulse of the friction compensation	DOUBLE	NEW CONF
-			
-	-	0.0	0
		10.0	7/2
			I

Description: The decay time of the velocity injection pulse of the friction compensation is smoothed and adapted as a function of the acceleration via weighting factors from the characteristics.

Not relevant for:

MD32500 \$MA_FRICT_COMP_ENABLE = 0

MD32490 \$MA_FRICT_COMP_MODE = 1/2

Related to:

MD32500 \$MA_FRICT_COMP_ENABLE = 1

MD32490 \$MA_FRICT_COMP_MODE = 3/4

MD32586 \$MA_FRICT_ADAPT_V_DECAY_PLUS

MD32587 \$MA_FRICT_ADAPT_V_DECAY_MINUS

32575	FRICT_V_PULSE_SMOOTH_TIME	EXP, A09	K3
s	Rise time of the velocity injection pulse of the friction compensation	DOUBLE	NEW CONF
-			
-	-	0.0	0
		10.0	7/2
			I

Description: The rise time of the velocity injection pulse of the friction compensation. The rise time is smoothed and is not adapted.

Not relevant for:

MD32500 \$MA_FRICT_COMP_ENABLE = 0

MD32490 \$MA_FRICT_COMP_MODE = 1/2

Related to:

MD32500 \$MA_FRICT_COMP_ENABLE = 1

MD32490 \$MA_FRICT_COMP_MODE = 3/4

MD32571 \$MA_FRICT_VELO_STEP

MD32573 \$MA_FRICT_V_PULSE_CONST_TIME

MD32574 \$MA_FRICT_V_PULSE_DECAY_TIME

32576	FRICT_TORQUE_STEP	EXP, A09	K3
-	Amplitude of the torque injection pulse of the friction compensation	DOUBLE	NEW CONF
-			
-	-	0.0	0.0
		-	7/2
			I

Description: The amplitude of the torque injection pulse of the friction compensation is adapted as a function of the acceleration via weighting factors from the characteristics.

Not relevant for:

MD32500 \$MA_FRICT_COMP_ENABLE = 0

MD32490 \$MA_FRICT_COMP_MODE = 1/2

Related to:

MD32500 \$MA_FRICT_COMP_ENABLE = 1

MD32490 \$MA_FRICT_COMP_MODE = 3/4

MD32588 \$MA_FRICT_ADAPT_T_STEP

2.3 NC machine data

32577	FRICT_T_PULSE_DELAY_TIME	EXP, A09	K3
s	Delay time of the torque injection pulse of the friction compensation	DOUBLE	NEW CONF
-			
-	-	0.0	0
-	-	0.1	7/2
-	-		I

Description: The torque injection pulse of the friction compensation is delayed by this time. The delay time is not adapted and is limited to 16 position controller cycles.

Not relevant for:

MD32500 \$MA_FRICT_COMP_ENABLE = 0

MD32490 \$MA_FRICT_COMP_MODE = 1/2

Related to:

MD32500 \$MA_FRICT_COMP_ENABLE = 1

MD32490 \$MA_FRICT_COMP_MODE = 3/4

MD10050 \$MN_SYSCLOCK_CYCLE_TIME

MD10060 \$MN_POSCTRL_SYSCLOCK_TIME_RATIO

32578	FRICT_T_PULSE_SMOOTH_TIME	EXP, A09	K3
s	Rise time of the torque injection pulse of the friction compensation	DOUBLE	NEW CONF
-			
-	-	0.0	0
-	-	10.0	7/2
-	-		I

Description: The rise time of the torque injection pulse of the friction compensation. The rise time is smoothed and is not adapted.

Not relevant for:

MD32500 \$MA_FRICT_COMP_ENABLE = 0

MD32490 \$MA_FRICT_COMP_MODE = 1/2

Related to:

MD32500 \$MA_FRICT_COMP_ENABLE = 1

MD32576 \$MA_FRICT_TORQUE_STEP = 1

32579	FRICT_PRETRIGGER_TIME	EXP, A09	K3
s	Rate time for the friction compensation pulses	DOUBLE	NEW CONF
-			
-	-	0.0	-0.250
-	-	0.250	7/2
-	-		I

Description: The rate and delay times can be set within the range from 0 to 64 position control cycles. The phase filter (compare MD32895 \$MA_DESVAL_DELAY_TIME can delay the setpoints by 0 to 128 ms in total with, for example, a 2 ms position control cycle.

The rate and delay times are not adapted for the friction compensation pulse.

a. Positive input values: The friction compensation pulses are injected prematurely by this time. The rate time is not adapted and is limited to MD32895 \$MA_DESVAL_DELAY_TIME.

b. Negative input values: The friction compensation pulses are injected with a delay of this time (in addition to MD32895 \$MA_DESVAL_DELAY_TIME).

Not relevant for:

MD32500 \$MA_FRICT_COMP_ENABLE = 0

MD32490 \$MA_FRICT_COMP_MODE = 1/2

Related to:

MD32500 \$MA_FRICT_COMP_ENABLE = 1

MD32490 \$MA_FRICT_COMP_MODE = 3/4

MD32890 \$MA_DESVAL_DELAY_ENABLE

MD32895 \$MA_DESVAL_DELAY_TIME

32581	FRICT_ADAPT_TABLE_ACCEL			EXP, A09	K3	
m/s², rev/s²	Acceleration interpolation points of friction compensation characteristics			DOUBLE	NEW CONF	
-						
-	10	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	0	1000000.0	7/2	I

Description: Up to ten different acceleration values can be input for which the friction compensation values are to be adapted. The acceleration values must be entered in strictly monotonously increasing order. The first acceleration value must always be zero. A final acceleration value equal to zero reduces the number of adaptation interpolation points.

The following friction compensation values are adapted as a function of the acceleration:

- Amplitude of the velocity injection pulse
- Active time of the velocity injection pulse
- Decay time of the velocity injection pulse
- Amplitude of the torque injection pulse

Not relevant for:

MD32500 \$MA_FRICT_COMP_ENABLE = 0

MD32490 \$MA_FRICT_COMP_MODE = 1/2

Related to:

MD32500 \$MA_FRICT_COMP_ENABLE = 1

MD32490 \$MA_FRICT_COMP_MODE = 3/4

MD32582 \$MA_FRICT_ADAPT_V_STEP_PLUS

MD32583 \$MA_FRICT_ADAPT_V_STEP_MINUS

MD32584 \$MA_FRICT_ADAPT_V_CONST_PLUS

MD32585 \$MA_FRICT_ADAPT_V_CONST_MINUS

MD32586 \$MA_FRICT_ADAPT_V_DECAY_PLUS

MD32587 \$MA_FRICT_ADAPT_V_DECAY_MINUS

MD32588 \$MA_FRICT_ADAPT_T_STEP

32582	FRICT_ADAPT_V_STEP_PLUS			EXP, A09	K3	
-	Weighting factor for the amplitude of the velocity injection pulse			DOUBLE	NEW CONF	
-						
-	10	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	-1.0	1.0	7/2	I

Description: A factor between -1.0 and 1.0 can be entered for each acceleration value from MD32581 \$MA_FRICT_ADAPT_TABLE_ACCEL with which the amplitude of the velocity injection pulse of the friction compensation is weighted. The weighting factors are active on sign change of the velocity in the positive direction.

Not relevant for:

MD32500 \$MA_FRICT_COMP_ENABLE = 0

MD32490 \$MA_FRICT_COMP_MODE = 1/2

Related to:

MD32500 \$MA_FRICT_COMP_ENABLE = 1

MD32490 \$MA_FRICT_COMP_MODE = 3/4

MD32581 \$MA_FRICT_ADAPT_TABLE_ACCEL

MD32571 \$MA_FRICT_VELO_STEP

2.3 NC machine data

32583	FRICT_ADAPT_V_STEP_MINUS			EXP, A09	K3	
-	Weighting factor for the amplitude of the velocity injection pulse			DOUBLE	NEW CONF	
-						
-	10	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	-1.0	1.0	7/2	I

Description: A factor between -1.0 and 1.0 can be entered for each acceleration value from MD32581 \$MA_FRICT_ADAPT_TABLE_ACCEL with which the amplitude of the velocity injection pulse of the friction compensation is weighted. The weighting factors are active on sign change of the velocity in the negative direction.

Not relevant for:

MD32500 \$MA_FRICT_COMP_ENABLE = 0

MD32490 \$MA_FRICT_COMP_MODE = 1/2

Related to:

MD32500 \$MA_FRICT_COMP_ENABLE = 1

MD32490 \$MA_FRICT_COMP_MODE = 3/4

MD32581 \$MA_FRICT_ADAPT_TABLE_ACCEL

MD32571 \$MA_FRICT_VELO_STEP

32584	FRICT_ADAPT_V_CONST_PLUS			EXP, A09	K3	
-	Weighting factor for the active time of the velocity injection pulse			DOUBLE	NEW CONF	
-						
-	10	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	0	1.0	7/2	I

Description: A factor between 0.0 and 1.0 can be entered for each acceleration value from MD32581 \$MA_FRICT_ADAPT_TABLE_ACCEL with which the active time of the velocity injection pulse of the friction compensation is weighted. The weighting factors are active on sign change of the velocity in the positive direction.

Not relevant for:

MD32500 \$MA_FRICT_COMP_ENABLE = 0

MD32490 \$MA_FRICT_COMP_MODE = 1/2

Related to:

MD32500 \$MA_FRICT_COMP_ENABLE = 1

MD32490 \$MA_FRICT_COMP_MODE = 3/4

MD32581 \$MA_FRICT_ADAPT_TABLE_ACCEL

MD32573 \$MA_FRICT_V_PULSE_CONST_TIME

32585	FRICT_ADAPT_V_CONST_MINUS			EXP, A09	K3	
-	Weighting factor for the active time of the velocity injection pulse			DOUBLE	NEW CONF	
-						
-	10	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	0	1.0	7/2	I

Description: A factor between 0.0 and 1.0 can be entered for each acceleration value from MD32581 \$MA_FRICT_ADAPT_TABLE_ACCEL with which the active time of the velocity injection pulse of the friction compensation is weighted. The weighting factors are active on sign change of the velocity in the negative direction.

Not relevant for:

MD32500 \$MA_FRICT_COMP_ENABLE = 0

MD32490 \$MA_FRICT_COMP_MODE = 1/2

Related to:

MD32500 \$MA_FRICT_COMP_ENABLE = 1

MD32490 \$MA_FRICT_COMP_MODE = 3/4
MD32581 \$MA_FRICT_ADAPT_TABLE_ACCEL
MD32573 \$MA_FRICT_V_PULSE_CONST_TIME

32586	FRICT_ADAPT_V_DECAY_PLUS			EXP, A09	K3	
-	Weighting factor for the decay time of the velocity injection pulse			DOUBLE	NEW CONF	
-						
-	10	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	0	1.0	7/2	I

Description: A factor between 0.0 and 1.0 can be entered for each acceleration value from MD32581 \$MA_FRICT_ADAPT_TABLE_ACCEL with which the decay time of the velocity injection pulse of the friction compensation is weighted. The weighting factors are active on sign change of the velocity in the positive direction.

Not relevant for:

MD32500 \$MA_FRICT_COMP_ENABLE = 0

MD32490 \$MA_FRICT_COMP_MODE = 1/2

Related to:

MD32500 \$MA_FRICT_COMP_ENABLE = 1

MD32490 \$MA_FRICT_COMP_MODE = 3/4

MD32581 \$MA_FRICT_ADAPT_TABLE_ACCEL

MD32574 \$MA_FRICT_V_PULSE_DECAY_TIME

32587	FRICT_ADAPT_V_DECAY_MINUS			EXP, A09	K3	
-	Weighting factor for the decay time of the velocity injection pulse			DOUBLE	NEW CONF	
-						
-	10	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	0	1.0	7/2	I

Description: A factor between 0.0 and 1.0 can be entered for each acceleration value from MD32581 \$MA_FRICT_ADAPT_TABLE_ACCEL with which the decay time of the velocity injection pulse of the friction compensation is weighted. The weighting factors are active on sign change of the velocity in the negative direction.

Not relevant for:

MD32500 \$MA_FRICT_COMP_ENABLE = 0

MD32490 \$MA_FRICT_COMP_MODE = 1/2

Related to:

MD32500 \$MA_FRICT_COMP_ENABLE = 1

MD32490 \$MA_FRICT_COMP_MODE = 3/4

MD32581 \$MA_FRICT_ADAPT_TABLE_ACCEL

MD32574 \$MA_FRICT_V_PULSE_DECAY_TIME

32588	FRICT_ADAPT_T_STEP			EXP, A09	K3	
-	Weighting factor for the amplitude of the torque injection pulse			DOUBLE	NEW CONF	
-						
-	10	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	-1.0	1.0	7/2	I

Description: A factor between -1.0 and 1.0 can be entered for each acceleration value from MD32581 \$MA_FRICT_ADAPT_TABLE_ACCEL with which the amplitude of the torque injection pulse of the friction compensation is weighted.

Not relevant for:

MD32500 \$MA_FRICT_COMP_ENABLE = 0

MD32490 \$MA_FRICT_COMP_MODE = 1/2

2.3 NC machine data

Related to:

MD32500 \$MA_FRICT_COMP_ENABLE = 1

MD32490 \$MA_FRICT_COMP_MODE = 3/4

MD32581 \$MA_FRICT_ADAPT_TABLE_ACCEL

MD32576 \$MA_FRICT_TORQUE_STEP

32610	VELO_FFW_WEIGHT			A07, A09	G1, TE1, K3, S3, A3, G2, S1, V1	
-	Feedforward control factor f. velocity/speed feedforward control			DOUBLE	NEW CONF	
-						
-	6	1.0, 1.0, 1.0, 1.0, 1.0, 1.0	0.0	-	7/2	M

Description:

Weighting factor for feedforward control. Is normally = 1.0 on digital drives, since these keep the setpoint speed exactly .

On analog drives, this factor can be used to compensate the gain error of the drive actuator, so that the actual speed becomes exactly equal to the setpoint speed (this reduces the following error with feedforward control).

On both drive types, the effect of the feedforward control can be continuously reduced with a factor of < 1.0, if the machine moves too abruptly and other measures (e.g. jerk limitation) are not to be used. This also reduces possibly existing overshoots; however, the error increases on curved contours, e.g. on a circle. With 0.0, you have a pure position controller without feedforward control.

Contour monitoring takes into account factors < 1.0.

In individual cases, it can, however, become necessary to increase MD CONTOUR_TOL.

32620	FFW_MODE			A07, A09	G1, K3, S3, G2, S1	
-	Feedforward control mode			BYTE	Reset	
-						
-	-	3	0	4	7/2	M

Description:

FFW_MODE defines the feedforward control mode to be applied on an axis-specific basis:

0 = No feedforward control

1 = Speed feedforward control with PT1 balancing

2 = Torque feedforward control (only for SINAMICS) with PT1 balancing

3 = Speed feedforward control with Tt balancing

4 = Torque feedforward control (only for SINAMICS) with Tt balancing

The high-level language instructions FFWON and FFWOF are used to activate and deactivate feedforward control for specific channels on all axes.

To prevent feedforward control from being affected by these instructions on individual axes, you can define that it is always activated or always deactivated in machine data FFW_ACTIVATION_MODE (see also FFW_ACTIVATION_MODE).

If a feedforward control mode is selected (speed or torque feedforward control), MD32630 \$MA_FFW_ACTIVATION_MODE can be used to program in addition whether feedforward control can be activated or deactivated by the part program.

Note for SINAMICS drives with torque feedforward control selected:

Alarm 26016 refers to the current machine data if

the telegram used (see MD13060 \$MN_DRIVE_TELEGRAM_TYPE) does not support the torque feedforward control function. Remedy: Use telegram 136.

Related to:

MD32630 \$MA_FFW_ACTIVATION_MODE

MD32610 \$MA_VELO_FFW_WEIGHT

MD32650 \$MA_AX_INERTIA

32630	FFW_ACTIVATION_MODE			A07, A09	K3, G2	
-	Activate feedforward control from program			BYTE	Reset	
CTEQ						
-	-	1	0	2	7/2	M

Description: MD32630 \$FFW_ACTIVATION_MODE can be used to define whether the feedforward control for this axis/spindle can be switched on and off by the part program.

0 = The feedforward control cannot be switched on or off by the high-level language elements FFWON and FFWOF respectively.

For the axis/spindle, the state specified by MD32620 \$MA_FFW_MODE is therefore always effective.

1 = The feedforward control can be switched on and off by the part program with FFWON and FFWOF respectively.

The instruction FFWON/FFWOF becomes active immediately

2 = The feedforward control can be switched on and off by the part program with FFWON and FFWOF respectively.

The instruction FFWON/FFWOF does not become active until the next axis standstill

The default setting is specified by the channel-specific MD20150 \$MC_GCODE_RESET_VALUES. This setting is valid even before the first NC block is executed.

Notes:

The last valid state continues to be active even after Reset (and therefore also with JOG).

As the feedforward control of all axes of the channel is switched on and off by FFWON and FFWOF respectively, MD32630 \$MA_FFW_ACTIVATION_MODE should be set identically for axes interpolating with one another.

Switching feedforward control on or off while the axis/spindle is traversing may cause compensation operations in the control loop. Interpolating axes are therefore stopped by the part program if such switching operations occur (internal stop Stop G09 is triggered).

Related to:

MD32620 \$MA_FFW_MODE

MD20150 \$MC_GCODE_RESET_VALUES

32640	STIFFNESS_CONTROL_ENABLE			A01, A07	TE3, G2	
-	Dynamic stiffness control			BOOLEAN	NEW CONF	
CTEQ						
-	1	FALSE	0	-	7/2	M

Description: Activate dynamic stiffness control, if bit is set.

Higher servo gain factors are possible if stiffness control is active (MD32200 \$MA_POSCTRL_GAIN).

Notes:

The availability of this function is determined by the drive used (the drive has to support the DSC function).

Note on PROFIdrive drives:

Alarm 26017 refers to this machine data if:

a. The PROFIdrive telegram used (see MD13060 \$MN_DRIVE_TELEGRAM_TYPE) does not support the DSC function or does not contain an encoder 1 (such as Tel. 118), to which the DSC scaling for PZD XERR refers. Remedy: Use a sufficiently powerful telegram which also includes encoder 1 (e.g. Tel. 106, 116).

2.3 NC machine data

b. Specifically for SINAMICS drives, if inversion of the encoder signal is parameterized in MD32110 \$MA_ENC_FEEDBACK_POL=-1 with active DSC. Remedy: Remove inversion of the encoder signal from MD32110 \$MA_ENC_FEEDBACK_POL, and enter it in SINAMICS parameter P410 instead.

32642	STIFFNESS_CONTROL_CONFIG			A01, A07	-	
-	Dynamic stiffness control configuration (DSC)			BYTE	NEW CONF	
CTEQ						
-	1	0	0	1	7/2	M

Description: Configuration of the dynamic stiffness control (DSC):

0: DSC in drive works with indirect measuring system, i.e. motor measuring system (default scenario).

1: DSC in drive works with direct measuring system.

Notes:

The availability of this function is determined by the drive used (the drive must support the DSC function).

With SINAMICS (P1193 not equal to 0), the value of this machine data must be set to 0.

32644	STIFFNESS_DELAY_TIME			A01, A07	-	
s	Dynamic stiffness control: Delay			DOUBLE	PowerOn	
CTEQ						
-	1	0.0	-0.02	0.02	7/2	M

Description: Configuration of compensation dead time of the dynamic stiffness control (DSC) with optimized PROFIBUS/PROFINET cycle, unit: seconds

32650	AX_INERTIA			EXP, A07, A09	G1, K3, S3, G2	
kgm²	Inertia for torque feedforward control			DOUBLE	NEW CONF	
-						
-	-	0.0	0.0	-	7/2	M

Description: Only with SINAMICS:

Inertia of axis. Used for torque feedforward control.

With torque feedforward control, an additional current setpoint proportional to the torque is directly injected at the input of the current controller. This value is formed using the acceleration and the moment of inertia. The equivalent time constant of the current control loop must be defined for this purpose and entered in MD32800 \$MA_EQUIV_CURRCTRL_TIME.

The total moment of inertia of the axis (drive + load) must also be entered in MD32650 \$MA_AX_INERTIA (total moment of inertia referred to motor shaft according to data supplied by machine manufacturer).

When MD32650 \$MA_AX_INERTIA and MD32800 \$MA_EQUIV_CURRCTRL_TIME are set correctly, the following error is almost zero even during acceleration (check this by looking at the "following error" in the service display).

The torque feedforward control is deactivated if MD32650 \$MA_AX_INERTIA is set to 0. However, because the calculations are performed anyway, torque feedforward control must always be deactivated with MD32620 \$MA_FFW_MODE = 0 or 1 or 3 (recommended). Because of the direct current setpoint injection, torque feedforward control is only possible on digital drives.

MD irrelevant for:

MD32620 \$MA_FFW_MODE = 0 or 1 or 3

Related to:

MD32620 \$MA_FFW_MODE

MD32630 \$MA_FFW_ACTIVATION_MODE

MD32800 \$MA_EQUIV_CURRCTRL_TIME

32652	AX_MASS	EXP, A07, A09	-
kg	Axis mass for torque feedforward control	DOUBLE	NEW CONF
-			
-	-	0.0	0.0
-	-	-	7/2
-	-	-	M

Description: SINAMICS only:
 Mass of axis for torque feedforward control.
 The MD is used on linear drives (MD13080 \$MN_DRIVE_TYPE_DP=3) instead of MD32650 \$MA_AX_INERTIA.

32700	ENC_COMP_ENABLE	A09	K3
-	Encoder/spindle error compensation.	BOOLEAN	NEW CONF
-			
-	2	FALSE, FALSE	0
-	-	-	7/2
-	-	-	M

Description: 1: LEC (leadscrew error compensation) is activated for the measuring system.
 This enables leadscrew and measuring system errors to be compensated.
 The function is not enabled internally until the relevant measuring system has been referenced (NC/PLC interface signal DB31, ... DBX60.4 / 60.5 (Referenced/synchronized 1 or 2) = 1).
 write protect function (compensation values) active.
 0: LEC is not active for the axis/measuring system.
 Related to:
 MD38000 \$MA_MM_ENC_COMP_MAX_POINTS number of interpolation points with LEC
 NC/PLC interface signal DB31, ... DBX60.4 (Referenced/synchronized 1)
 NC/PLC interface signal DB31, ... DBX60.5 (Referenced/synchronized 2)

32710	CEC_ENABLE	A09	K3
-	Enable of sag compensation	BOOLEAN	NEW CONF
-			
-	-	FALSE	0
-	-	-	7/2
-	-	-	M

Description: 1: Sag compensation is enabled for this axis.
 Inter-axis machine geometry errors (e.g. sag and angularity errors) can be compensated with sag compensation.
 The function is not activated until the following conditions have been fulfilled:

- The "Interpolatory compensation" option is set
- The associated compensation tables have been loaded into the NC user memory and enabled (SD41300 \$SN_CEC_TABLE_ENABLE[t] = 1)
- The relevant position measuring system is referenced (NC/PLC interface signal DB31, ... DBX60.4 / 60.5 = 1 (Referenced/synchronized 1 or 2)):

0: Sag compensation is not enabled for the compensation axis.
 Related to:
 MD18342 \$MN_MM_CEC_MAX_POINTS[t]
 Number of interpolation points for sag compensation
 SD41300 \$SN_CEC_TABLE_ENABLE[t]
 Enable evaluation of sag compensation table t
 SD41310 \$SN_CEC_TABLE_WEIGHT[t]
 Weighting factor of the sag compensation table t
 NC/PLC interface signal DB31, ... DBX60.4 / 60.5
 (referenced/synchronized 1 or 2)

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32711	CEC_SCALING_SYSTEM_METRIC			A09	K3, G2	
-	Measuring system of sag compensation			BOOLEAN	NEW CONF	
-						
-	-	TRUE	0	-	7/2	M

Description: Compensation data exist in:

0: inch system
1: metric system

32720	CEC_MAX_SUM			A09	K3	
mm, degrees	Maximum compensation value for sag compensation			DOUBLE	NEW CONF	
-						
-	-	1.0	0	10.0	7/2	M

Description: In sag compensation, the absolute value of the total compensation value (sum of compensation values of all active compensation relations) is monitored axially with machine data value CEC_MAX_SUM.

If the determined total compensation value is larger than the maximum value, alarm 20124 is triggered. Program processing is not interrupted. The compensation value output as the additional setpoint is limited to the maximum value.

MD irrelevant to:

- MSEC
- Backlash compensation
- Temperature compensation

Related to:

MD32710 \$MA_CEC_ENABLE

Enable sag compensation

SD41300 \$SN_CEC_TABLE_ENABLE[t]

Enable evaluation of sag compensation table t

NC/PLC interface signal DB31, ... DBX60.4 / 60.5

(referenced/synchronized 1 or 2)

32730	CEC_MAX_VELO			EXP, A09, A04	K3	
%	Change in velocity at CEC			DOUBLE	NEW CONF	
-						
-	-	10.0	0	100.0	7/2	M

Description: In sag compensation, modification of the total compensation value (sum of the compensation values of all active compensation relations) is limited axially. The maximum change value is defined in this machine data as a percentage of MD32000 \$MA_MAX_AX_VELO (maximum axis velocity).

If the change in the total compensation value is greater than the maximum value, alarm 20125 is output. Program processing is however continued. The path not covered because of the limitation is made up as soon as the compensation value is no longer subject to limitation.

MD irrelevant to:

- MSEC
- Backlash compensation
- Temperature compensation

Related to:

MD32710 \$MA_CEC_ENABLE

Enable sag compensation

MD32000 \$MA_MAX_AX_VELO
Maximum axis velocity
SD41300 \$SN_CEC_TABLE_ENABLE[t]
Enable evaluation of sag compensation table t
NC/PLC interface signal DB31, ... DBX60.4 / 60.5
(referenced/synchronized 1 or 2)

32750	TEMP_COMP_TYPE			A09	K3, W1	
-	Temperature compensation type			UBYTE	PowerOn	
CTEQ						
-	-	0	0	0x7	7/2	M

Description: The type of temperature compensation applicable to the machine axis is activated in MD32750 \$MA_TEMP_COMP_TYPE.

A distinction is made between the following types:

Bit 0 = 0:

Position-independent temperature compensation not active

Bit 0 = 1:

Position-independent temperature compensation active

Bit 1 = 0:

Position-dependent temperature compensation not active

Bit 1 = 1:

Position-dependent temperature compensation active

Bit 2 = 0:

Temperature compensation not active in tool direction

Bit 2 = 1:

Temperature compensation active in tool direction

Related to:

SD43900 \$SA_TEMP_COMP_ABS_VALUE

Position-dependent temperature compensation value

SD43920 \$SA_TEMP_COMP_REF_POSITION

Reference point for position-dependent temperature compensation

SD43910 \$SA_TEMP_COMP_SLOPE

Gradient for position-dependent temperature compensation

MD32760 \$MA_COMP_ADD_VELO_FACTOR

Excessive velocity due to compensation

32760	COMP_ADD_VELO_FACTOR			EXP, A09, A04	K3	
-	Excessive velocity due to compensation			DOUBLE	NEW CONF	
CTEQ						
-	-	0.01	0.	0.10	7/2	M

Description: The maximum distance that can be traversed because of temperature compensation in one IPO cycle can be limited by the axial MD32760 \$MA_COMP_ADD_VELO_FACTOR.

If the resulting temperature compensation value is above this maximum, it is traversed over several IPO cycles. There is no alarm.

The maximum compensation value per IPO cycle is specified as a factor referring to the maximum axis velocity (MD32000 \$MA_MAX_AX_VELO).

The maximum gradient of the temperature compensation tanbmax is also limited with this machine data.

Example of calculation of the maximum gradient tanb(max):

2.3 NC machine data

1. Calculation of the interpolator cycle time (see Description of Functions Velocities, Setpoint/Actual Value Systems, Cycle Times (G2))

Interpolator cycle time = Basic system clock rate * factor for interpolation cycle

Interpolator cycle time = MD10050 \$MN_SYSCLOCK_CYCLE_TIME ^ MD10070 \$MN_IPO_SYSCLOCK_TIME_RATIO

Example:

MD10050 \$MN_SYSCLOCK_CYCLE_TIME = 0.004 [s]

MD10070 \$MN_IPO_SYSCLOCK_TIME_RATIO = 3

-> Interpolator cycle time = 0.004 * 3 = 0.012 [s]

2. Calculation of the maximum velocity increase resulting from a change made to the temperature compensation parameter DvTmax

DvTmax = MD32000 \$MA_MAX_AX_VELO * MD32760 \$MA_COMP_ADD_VELO_FACTOR

Example: MD32000 \$MA_MAX_AX_VELO = 10 000 [mm/min]

MD32760 \$MA_COMP_ADD_VELO_FACTOR = 0.01

-> DvTmax = 10 000 * 0.01 = 100 [mm/min]

3. Calculation of the traverse distances per interpolator cycle

$$S1 \text{ (at } v_{\max}) = 10\,000 \times \frac{0.012}{60} = 2.0 \text{ [mm]}$$

$$ST \text{ (at } DvT_{\max}) = 100 \times \frac{0.012}{60} = 0.02 \text{ [mm]}$$

4. Calculation of tanbmax

$$\tan b_{\max} = \frac{ST}{S1} = \frac{0.02}{2} = 0.01 \text{ (corresponds to value for COMP\_ADD\_VELO\_FACTOR)}$$

-> bmax = arc tan 0.01 = 0.57 degrees

With larger values of SD43910 \$SA_TEMP_COMP_SLOPE, the maximum gradient (here 0.57 degrees) for the position-dependent temperature compensation value is used internally. There is no alarm.

Note:

Any additional excessive velocity resulting from temperature compensation must be taken into account when defining the limit value for velocity monitoring (MD36200 \$MA_AX_VELO_LIMIT).

MD irrelevant for:

MD32750 \$MA_TEMP_COMP_TYPE = 0, sag compensation, LEC, backlash compensation

Related to:

MD32750 \$MA_TEMP_COMP_TYPE

SD43900 \$SA_TEMP_COMP_ABS_VALUE

SD43910 \$SA_TEMP_COMP_SLOPE

MD32000 \$MA_MAX_AX_VELO

MD36200 \$MA_AX_VELO_LIMIT

MD10070 \$MN_IPO_SYSCLOCK_TIME_RATIO

MD10050 \$MN_SYSCLOCK_CYCLE_TIME

32800	EQUIV_CURRCTRL_TIME			EXP, A07, A09	G1, K3, S3, A2, A3, G2, S1, V1	
s	Equiv. time const. current control loop for feedforward control			DOUBLE	NEW CONF	
-						
-	6	0.0005, 0.0005, 0.0005, 0.0005, 0.0005, 0.0005	-	-	7/2	M

Description:

The time constant is used for parameterizing the torque feedforward control and for calculating the dynamic following error model (contour monitoring).

In order to set the torque feedforward control correctly, the equivalent time constant of the current control loop must be determined exactly by measuring the step response of the current control loop.

Closed-loop control free of following errors can be set by inputting negative values when MD32620 \$MA_FFW_MODE=4 (but positioning overshoots may then occur).

Delay values taken into account automatically by the software internally are thus compensated again until the actually active minimum symmetrizing time "0" is reached. Any other negative input values have no further effect.

Negative values input when MD32620 \$MA_FFW_MODE=2 are automatically converted internally to the input value "0", which means that they are not active in this case.

Related to:

MD32620 \$MA_FFW_MODE
Type of feedforward control

MD32650 \$MA_AX_INERTIA
Moment of inertia for torque feedforward control
or MD32652 \$MA_AX_MASS
Axis mass for torque feedforward control

MD36400 \$MA_CONTOUR_TOL
Tolerance band contour monitoring

32810	EQUIV_SPEEDCTRL_TIME			A07, A09	G1, K3, S3, A2, A3, G2, S1, V1	
s	Equiv. time constant speed control loop for feedforward control			DOUBLE	NEW CONF	
-						
-	6	0.003, 0.003, 0.003, 0.003, 0.003, 0.003, 0.003, 0.003, 0.003, 0...	-	-	7/2	M

Description:

This time constant must be equal to the equivalent time constant of the closed current control loop.

It is used for parameterizing the speed feedforward control and for calculating the dynamic following error model (contour monitoring).

In addition, this MD determines the time behavior of the closed-loop speed control circuit for simulated drives (MD30130 \$MA_CTRLOUT_TYPE 0).

In order to set the speed feedforward control correctly, the equivalent time constant of the current control loop must be determined exactly by measuring the step response of the current control loop.

Closed-loop control free of following errors can be set by inputting negative values when MD32620 \$MA_FFW_MODE=3 (but positioning overshoots may then occur).

Delay values taken into account automatically by the software internally are thus compensated again until the actually active minimum symmetrizing time "0" is reached. Any other negative input values have no further effect.

Negative values input when MD32620 \$MA_FFW_MODE=1 are automatically converted internally to the input value "0", which means that they are not active in this case.

Related to:

MD32620 \$MA_FFW_MODE (type of feedforward control)

MD32610 \$MA_VELO_FFW_WEIGHT (moment of inertia for speed feedforward control)

MD36400 \$MA_CONTOUR_TOL (tolerance band contour monitoring)

2.3 NC machine data

32890	DESVAL_DELAY_ENABLE			A07	-	
-	Axial setpoint phase filter			BOOLEAN	NEW CONF	
CTEQ						
-	-	FALSE	-	-	7/2	M

Description: With the axial setpoint phase filter (deadtime/delay), the phase response can be changed independent of the amplitude response (on the other hand, the conventional jerk filter - refer to MD32402 \$MA_AX_JERK_MODE -influences the amplitude and phase response simultaneously).

1: Setpoint phase filter (delay) is active.

0: Setpoint phase filter (delay) is inactive.

Corresponds with:

MD32895 \$MA_DESVAL_DELAY_TIME (time constant for the axial setpoint phase filter)

32895	DESVAL_DELAY_TIME			A07	-	
s	Time constant for the axial setpoint phase filter			DOUBLE	NEW CONF	
-						
-	-	0.0	0.0	-	7/2	M

Description: The time constant for the phase filter (deadtime/delay) should be entered into the MD. This means that the actual setpoint phase response can be set independently of the amplitude response

Time constants in the range from 0 up to 64 position controller clock cycles can be set, the phase filter for e.g. 2ms position controller clock cycle, can delay setpoints by 0 to 128ms.

Values entered outside these limits are implicitly limited to the specified limits (without alarm).

Note: delays in the setpoint circuit, as a result of the system, slow down or have a negative impact on the response, e.g. for thread tapping, safety retraction motion or exact stop/block change; this means that the smallest time constants possible should be set in the MD.

The MD is only effective, if MD32890 \$MA_DESVAL_DELAY_ENABLE = 1.

Corresponds with:

MD32890 \$MA_DESVAL_DELAY_ENABLE (axial setpoint phase filter)

32900	DYN_MATCH_ENABLE			A07	G21, S3, G2	
-	Dynamic response adaptation			BOOLEAN	NEW CONF	
CTEQ						
-	-	FALSE	0	-	7/2	M

Description: With dynamic response adaptation, axes with different servo gain factors can be set to the same following error with MD32910 \$MA_DYN_MATCH_TIME.

1: Dynamic response adaptation active.

0: Dynamic response adaptation inactive.

Related to:

MD32910 \$MA_DYN_MATCH_TIME[n]

(time constant of dynamic response adaptation)

32910	DYN_MATCH_TIME			A07	G1, K3, S3, A2, A3, G2, S1, V1	
s	Time constant of dynamic response adaptation			DOUBLE	NEW CONF	
-						
-	6	0.0, 0.0, 0.0, 0.0, 0.0, 0.0	0.0	-	7/2	M

Description: The time constant of the dynamic response adaptation of an axis has to be entered in this MD.

Axes interpolating with each other but having different dynamic responses can be adapted to the "slowest" control loop by means of this value.

The difference of the equivalent time constant of the "slowest" control loop to the individual axis has to be entered here as the time constant of the dynamic response adaptation.

The MD is only active if MD32900 \$MA_DYN_MATCH_ENABLE = 1.

Related to:

MD32900 \$MA_DYN_MATCH_ENABLE (dynamic response adaptation)

32920	AC_FILTER_TIME			A10	-	
s	Smoothing filter time constant for adaptive control			DOUBLE	PowerOn	
-						
-	-	0.0	0.0	-	7/2	M

Description: In the case of PROFIdrive drives (provided that they transport the following drive actual values in the PROFIdrive message frame, e.g. MD13060 \$MN_DRIVE_TELEGRAM_TYPE = 116):

With the main run variables \$AA_LOAD, \$AA_POWER, \$AA_TORQUE, and \$AA_CURR, the following drive actual values can be measured:

- Drive utilization
- Drive active power
- Drive torque setpoint value
- Current actual value of the axis or spindle

To compensate any peaks, the measured values can be smoothed with a PT1 filter. The filter time constant is defined with MD32920 \$MA_AC_FILTER_TIME (filter smoothing time constant for adaptive control).

When measuring the drive torque setpoint value or the actual current value, the filter is active in addition to the filters available in the drive. The two filters are connected in series, if both significantly and slightly smoothed values are required in the system. The filter is switched off when a smoothing time of 0 seconds is entered.

32925	LOAD_SMOOTH_FILTER_TIME			A10	-	
s	Filter time constant for smoothed drive utilization			DOUBLE	Immediately	
-						
-	-	0.0	0.0	-	7/2	M

Description: For PROFIdrive drives (assuming that these can communicate the drive utilization in the PROFIdrive telegram, e.g. MD13060 \$MN_DRIVE_TELEGRAM_TYPE = 116):

In order to equalize peaks, the measured data values can be smoothed using a PT1 filter.

32926	POWER_SMOOTH_FILTER_TIME			A10	-	
s	Filter time constant for smoothed active drive power			DOUBLE	Immediately	
-						
-	-	0.0	0.0	-	7/2	M

Description: For PROFIdrive drives (assuming that these can communicate the active drive power in the PROFIdrive telegram, e.g. MD13060 \$MN_DRIVE_TELEGRAM_TYPE = 116):

In order to equalize peaks, the measured values can be smoothed using a PT1 filter.

32930	POSCTRL_OUT_FILTER_ENABLE			A07	G2	
-	Activation of low-pass filter at position controller output			BOOLEAN	NEW CONF	
CTEQ						
-	-	FALSE	0	-	7/2	M

2.3 NC machine data

Description: Activation of low-pass filter at position controller output.
Activation of the low-pass filter is only enabled when the dynamic stiffness control is inactive MD32640=0.

32940	POSCTRL_OUT_FILTER_TIME	A07	G2
s	Time constant of low-pass filter at position controller output	DOUBLE	NEW CONF
-			
-	-	0.0	0.0
-	-	-	7/2
-	-	-	M

Description: Time constant of low-pass filter at position controller output
Related to:
MD32640 \$MA_STIFFNESS_CONTROL_ENABLE (dynamic stiffness control)

32950	POSCTRL_DAMPING	EXP, A07	G2
%	Damping of the speed control circuit.	DOUBLE	NEW CONF
-			
-	-	0.0	-
-	-	-	7/2
-	-	-	M

Description: Factor to additionally dampen the speed control loop
Purpose:
Damping an oscillating axis by additionally entering a differential position, which is derived from the difference of the two measuring systems.
Prerequisite: the axis must have two measuring systems, one encoder must be directly connected, the other indirectly.
Explanation of the scaling:
An input value of "100%" means the following: An additional torque corresponding to SINAMICS-p2003 is input, if

- for linear motors, there is a position difference of 1mm
- for rotary axes, there is a position difference of 360 degrees on the load side
- for linear axes (rot. drive), there is a position difference corresponding to MD31030 \$MA_LEADSCREW_PITCH (e.g. standard 10mm).

32960	POSCTRL_DUAL_FEEDBACK_TIME	EXP, A07	G2
s	Time constant for dual-position feedback	DOUBLE	NEW CONF
-			
-	-	0.0	0.0
-	-	-	7/2
-	-	-	M

Description: Position control with position information from two measuring systems (only active if time constant is set > 0).
The direct measuring system (DM) becomes active with the delay time that can be set in this MD by means of PT1 filtering, at the same time the indirect measuring system (IM) becomes increasingly ineffective, so that, in total, exactly one measuring system acts at the position controller input at all times
Conditions:

- The axis must have two coupled measuring systems, of which one must be connected directly and the other indirectly to an encoder.
- The measuring systems must be calibrated, MD34102 \$MA_REFP_SYNC_ENCS = 1

33000	FIPO_TYPE	EXP, A07	G1, G3, S3, G2
-	Fine interpolator type	BYTE	PowerOn
CTEQ			
-	-	2	1
-	-	3	7/2
-	-	-	M

Description: The type of the fine interpolator has to be entered in this MD:
1: differential FIPO

2: cubic FIPO

3: cubic FIPO, optimized for operation with feedforward control

Calculation time required and contour quality increase with increasing type of FIPO.

- The default setting is the cubic FIPO.
- If no feedforward control is used in the position control loop, the use of the differential FIPO reduces the calculation time while slightly increasing the contour error.
- If the position control cycle and the interpolation cycle are identical, fine interpolation does not take place, i.e. the different types of fine interpolator do not have different effects.

33050	LUBRICATION_DIST			A03, A10	A2, Z1	
mm, degrees	Traversing path for lubrication from PLC			DOUBLE	NEW CONF	
-						
-	-	1.0e8	0.0	-	7/2	I

Description: After the traversing path defined in the MD has been covered, the state of the axial interface signal "Lubrication pulse" is inverted, this can activate an automatic lubrication device.

The traversing path is summated after Power on.

The "Lubrication pulse" can be used with axes and spindles.

Application example(s):

The machine bed lubrication can be carried out as a function of the relevant traversed path.

Note:

When 0 is entered, the NC/PLC interface signal DB31, ... DBX76.0 (Lubrication pulse) is set in every cycle.

Related to:

NC/PLC interface signal DB31, ... DBX76.0 (Lubrication pulse)

33060	MAINTENANCE_DATA			A10	W6, 2.4, 6.2	
-	Configuration of maintenance data recording			DWORD	Reset	
-						
-	-	1	0	-	7/2	M

Description: Configuration of axis maintenance data recording:

Bit 0:

Recording the entire traversing path, entire traversing time and number of axis traversing procedures

Bit 1:

Recording the entire traversing path, entire traversing time and number of traversing procedures at high axis speed

Bit 2:

Recording the total sum of axis jerks, the time in which the axis is traversed with jerk, and the number of traversing procedures with jerk.

33100	COMPRESS_POS_TOL			A10	F2, B1, K1	
mm, degrees	Maximum deviation during compression			DOUBLE	NEW CONF	
CTEQ						
-	-	0.1	1.e-9	-	7/7	I

Description: The value specifies the maximum permissible path deviation for each axis with compression.

The higher the value, the more short blocks can be compressed into a long block.

Not relevant for:

2.3 NC machine data

Active programmable contour/orientation tolerance (CTOL, OTOL, ATOL)

33120	PATH_TRANS_POS_TOL			A10	K1, PGA	
mm, degrees	Maximum deviation for smoothing with G645			DOUBLE	NEW CONF	
CTEQ						
-	-	0.005	1.e-9	-	7/7	U

Description: The value specifies the maximum permitted path deviation for smoothing with G645. This is only relevant to tangential block transitions that are not acceleration-continuous.

For smoothing of corner with G645 tolerance MD33100 \$MA_COMPRESS_POS_TOL becomes active like with G642.

34000	REFP_CAM_IS_ACTIVE			A03, A11	G1, R1	
-	Axis with reference point cam			BOOLEAN	Reset	
-						
-	-	TRUE	0	-	7/2	M

Description: 1: There is at least one reference point cam for this axis
 0: This axis does not have a reference point cam (e.g. rotary axis)
 The referencing cycle starts immediately with phase 2 (see documentation)
 Machine axes that have only one zero mark over the whole travel range or rotary axes that have only one zero mark per revolution do not require an additional reference cam that selects the zero mark (select MD34000 \$MA_REFP_CAM_IS_ACTIVE = 0).
 The machine axis marked this way accelerates to the velocity specified in MD34040 \$MA_REFP_VELO_SEARCH_MARKER (reference point shutdown velocity) when the plus/minus traversing key is pressed, and synchronizes with the next zero mark.

34010	REFP_CAM_DIR_IS_MINUS			A03, A11	G1, R1	
-	Approach reference point in minus direction			BOOLEAN	Reset	
-						
-	-	FALSE	0	-	7/2	M

Description: 0: MD34010 \$MA_REFP_CAM_DIR_IS_MINUS Reference point approach in plus direction
 1: MD34010 \$MA_REFP_CAM_DIR_IS_MINUS Reference point approach in minus direction
 For incremental measuring systems:
 If the machine axis is positioned in front of the reference cam, it accelerates, depending on the plus/minus traversing key pressed, to the velocity specified in MD34020 \$MA_REFP_VELO_SEARCH_CAM (reference point approach velocity) in the direction specified in MD34010 \$MA_REFP_CAM_DIR_IS_MINUS. If the wrong traversing key is pressed, reference point approach is not started.
 If the machine axis is positioned on the reference cam, it accelerates to the velocity specified in MD34020 \$MA_REFP_VELO_SEARCH_CAM and travels in the direction opposite to that specified in MD34010 \$MA_REFP_CAM_DIR_IS_MINUS.
 For linear measuring systems with distance-coded reference marks:
 If the machine axis has a reference cam (linear measuring systems with distance-coded reference marks do not necessarily require a reference cam) and the machine axis is positioned on the reference cam, it accelerates, irrespectively of the plus/minus traversing key pressed, to the velocity specified in MD34040 \$MA_REFP_VELO_SEARCH_MARKER (reference point creep velocity) in the direction opposite to that specified in MD34010 \$MA_REFP_CAM_DIR_IS_MINUS.

34020	REFP_VELO_SEARCH_CAM			A03, A11, A04	G1, R1	
mm/min, rev/min	Reference point approach velocity			DOUBLE	Reset	
-						
-	-	(5000.0/10.0), (5000.0/10.0), (5000.0/10.0), (5000.0/10.0), (500...	(0./ 0.)	(1.e300/ 1.e300)	7/2	M

Description: The reference point approach velocity is the velocity at which the machine axis travels in the direction of the reference cam after the traversing key has been pressed (phase 1). This value should be set at a magnitude large enough for the axis to be stopped to 0 before it reaches a hardware limit switch.

MD irrelevant for:

Linear measuring systems with distance-coded reference marks

34030	REFP_MAX_CAM_DIST			A03, A11	G1, R1	
mm, degrees	Maximum distance to reference cam			DOUBLE	Reset	
-						
-	-	10000.0	0.0	-	7/2	M

Description: If the machine axis travels a maximum distance defined in MD34030 \$MA_REFP_MAX_CAM_DIST from the starting position in the direction of the reference cam, without reaching the reference cam (NC/PLC interface signal DB31, ... DBX12.7 (Reference point approach delay) is reset), the axis stops and alarm 20000 "Reference cam not reached" is output.

Irrelevant to:

Linear measuring systems with distance-coded reference marks

34040	REFP_VELO_SEARCH_MARKER			A03, A11, A04	G1, R1, S1	
mm/min, rev/min	Shutdown velocity			DOUBLE	Reset	
-						
-	2	(300.0/ 300.0)/ (1.0/ 1.0), (300.0/ 300.0)/ (1.0/ 1.0), (300.0/ ...	(0./ 0.)	(1.e300/ 1.e300)	7/2	M

Description: 1) For incremental measuring systems:
This is the velocity at which the axis travels during the time between initial detection of the reference cam and synchronization with the first zero mark (phase 2).
Traversing direction: Opposite to the direction specified for the cam search (MD34010 \$MA_REFP_CAM_DIR_IS_MINUS)
If MD34050 \$MA_REFP_SEARCH_MARKER_REVERSE (direction reversal on reference cam) is enabled, then if the axis is synchronized with a rising reference cam signal edge on the cam, the axis traverses at the velocity defined in MD34020 \$MA_REFP_VELO_SEARCH_CAM.

2) Indirect measuring system with BERO on the load-side (preferred for spindles):
At this velocity, a search is made for the zero mark associated with the BERO (zero mark selection per VDI signal). The zero mark is accepted if the actual velocity lies within the tolerance range defined in MD35150 \$MA_SPIND_DES_VELO_TOL as a deviation from the velocity specified in MD34040 \$MA_REFP_VELO_SEARCH_MARKER[n].

3) For linear measuring systems with distance-coded reference marks:
The axis crosses the two reference marks at this velocity. The maximum velocity must be low enough to ensure that the time required to travel the smallest possible reference mark distance [(x(minimum))] on the linear measuring system is longer than one position controller cycle.

The formula

Basic dist.

Meas.length

2.3 NC machine data

$$[x(\text{minimum})] \text{ [mm]} = \frac{\text{Basic distance} \times \text{Grad.cycle}}{2} - \text{Basic dist.}$$

with Basic distance [multiple of graduation cycle]
 Graduation cycle [mm]
 Measuring length [mm] yields:
 x(minimum) [mm]

$$\text{max. velocity [m/s]} = \frac{\text{Position controller cycle [ms]}}{\text{Measuring length [mm]}}$$

This limiting value consideration also applies to the other measuring systems.

Traversing direction:

- as defined in MD34010 \$MA_REFP_CAM_DIR_IS_MINUS;
- if the axis is already positioned on the cam, the axis is traversed in the opposite direction

34050	REFP_SEARCH_MARKER_REVERSE			A03, A11	G1, R1	
-	Direction reversal to reference cam			BOOLEAN	Reset	
-						
-	2	FALSE, FALSE	0	-	7/2	M

Description:

This MD can be used to set the direction of search for the zero mark:

MD34050 \$MA_REFP_SEARCH_MARKER_REVERSE = 0

Synchronization with falling reference cam signal edge

The machine axis accelerates to the velocity specified in MD34040 \$MA_REFP_VELO_SEARCH_MARKER (reference point shutdown velocity) in the opposite direction to that specified in MD34010 \$MA_REFP_CAM_DIR_IS_MINUS (reference point approach in minus direction).

If the axis leaves the reference cam (NC/PLC interface signal DB31, ... DBX12.7 (Reference point approach delay) is reset) the control is synchronized with the first zero mark.

MD34050 \$MA_REFP_SEARCH_MARKER_REVERSE = 1

Synchronization with rising reference cam signal edge

The machine axis accelerates to the velocity defined in MD34020 \$MA_REFP_VELO_SEARCH_CAM (reference point creep velocity) in the opposite direction to that specified in the MD34010 \$MA_REFP_CAM_DIR_IS_MINUS. If the axis leaves the reference cam (NC/PLC interface signal DB31, ... DBX12.7 (Reference point approach delay) is reset), the machine axis decelerates to a halt and accelerates in the opposite direction towards the reference cam at the velocity specified in MD34040: \$MA_REFP_VELO_SEARCH_MARKER. When the reference cam is reached (NC/PLC interface signal DB31, ... DBX12.7 (Reference point approach delay) is enabled) the control is synchronized with the first zero mark.

MD irrelevant to:

Linear measuring systems with distance-coded reference marks

34060	REFP_MAX_MARKER_DIST			A03, A11	G1, R1, S1	
mm, degrees	Maximum distance to reference mark			DOUBLE	Reset	
-						
-	2	(20.0/ 20.0)/(720.0/ 720.0), (20.0/ 20.0)/(720.0/ 720.0), (20.0/...	(0./ 0.)	(1.e300/ 1.e300)	7/2	M

Description:

For incremental measuring systems:

If, after leaving the reference cam (NC/PLC interface signal DB31, ... DBX12.7 (Reference point approach delay) is reset), the machine axis travels a distance defined in MD34060: \$MA_REFP_MAX_MARKER_DIST without detecting the zero mark, the axis stops and alarm 20002 "Zero mark missing" is output.

For linear measuring systems with distance-coded reference marks:

If the machine axis travels a distance defined in MD34060 \$MA_REFP_MAX_MARKER_DIST from the starting position without crossing two zero marks, the axis stops and alarm 20004 "Reference mark missing" is output.

34070	REFP_VELO_POS			A03, A11, A04	G1, R1	
mm/min, rev/min	Reference point positioning velocity			DOUBLE	Reset	
-						
-	-	(10000.0/ 20.0), (10000.0/ 20.0), (10000.0/ 20.0), (10000.0/ 20....	(0./ 0.)	(1.e300/ 1.e300)	7/2	M

Description:

For incremental measuring systems:

The axis travels at this velocity between the time of synchronization with the first zero mark and arrival at the reference point.

For linear measuring systems with distance-coded reference marks:

The axis travels at this velocity between the time of synchronization (crossing two zero marks) and arrival at the target point.

34080	REFP_MOVE_DIST			A03, A11	G1, R1, S1, S3, G2	
mm, degrees	Reference point distance			DOUBLE	NEW CONF	
-						
-	2	-2.0, -2.0	-1e15	1e15	7/2	I

Description:

1. Standard measuring system (incremental with equidistant zero marks)

Reference point positioning movement: 3rd phase of the reference point approach:

The axis traverses from the position at which the zero mark is detected with the velocity REFP_AX_VELO_POS along the path REFP_MOVE_DIST + REFP_MOVE_DIST_CORR (relative to the marker).

REFP_SET_POS is set as the current axis position at the target point.

2. Irrelevant for distance-coded measuring system.

Override switch and selection jog/continuous mode (MD JOG_INC_MODE_IS_CONT) are active.

34090	REFP_MOVE_DIST_CORR			A03, A02, A08, A11	G1, R1, S1, S3, G2	
mm, degrees	Reference point offset/absolute offset			DOUBLE	NEW CONF	
-, -						
-	2	0.0, 0.0	-1e12	1e12	7/2	I

Description:

- Incremental encoder with zero mark(s):

After detection of the zero mark, the axis is positioned away from the zero mark by the distance specified in MD34080 \$MA_REFP_MOVE_DIST + MD34090 \$MA_REFP_MOVE_DIST_CORR. After traversing this distance, the axis has reached the reference point. MD34100 \$MA_REFP_SET_POS is transferred into the actual value.

During traversing by MD34080 \$MA_REFP_MOVE_DIST + MD34090 \$MA_REFP_MOVE_DIST_CORR, the override switch and MD11300 \$MN_JOG_INC_MODE_LEVELTRIGGRD (jog/continuous mode) are active.

- Distance-coded measuring system:

MD34090 \$MA_REFP_MOVE_DIST_CORR acts as an absolute offset. It describes the offset between the machine zero and the first reference mark of the measuring system.

- Absolute encoder:

MD34090 \$MA_REFP_MOVE_DIST_CORR acts as an absolute offset.

It describes the offset between the machine zero and the zero point of the absolute measuring system.

2.3 NC machine data

Note:

In conjunction with absolute encoders, this MD is modified by the control during calibration processes and modulo offset.

With rotary absolute encoders (on linear and rotary axes), the modification frequency also depends on the setting of MD34220 \$MA_ENC_ABS_TURNS_MODULO.

Manual input or modification of this MD via the part program should therefore be followed by a Power ON Reset to activate the new value and prevent it from being lost.

The following applies to an NCU-LINK:

If a link axis uses an absolute encoder, every modification of MD34090 \$MA_REFP_MOVE_DIST_CORR on the home NCU (servo physically available) is updated only locally and not beyond the limits of the NCU. The modification is therefore not visible to the link axis. Writing MD34090 \$MA_REFP_MOVE_DIST_CORR through the link axis is rejected with alarm 17070.

34092	REFP_CAM_SHIFT			A03, A11	G1, R1	
mm, degrees	Electronic cam offset for incremental measuring systems			DOUBLE	Reset	
-						
-	2	0.0, 0.0	0.0	-	7/2	I

Description:

Electronic cam offset for incremental measuring systems with equidistant zero marks.

When the reference cam signal occurs, the zero mark search does not start immediately but is delayed until after the distance from REFP_CAM_SHIFT.

This ensures the reproducibility of the zero mark search through a defined selection of a zero mark, even with temperature-dependent expansion of the reference cam.

Because the reference cam offset is calculated by the control in the interpolation cycle, the actual cam offset is at least REFP_CAM_SHIFT and at most REFP_CAM_SHIFT+ (MD34040 \$MA_REFP_VELO_SEARCH_MARKER*interpolation cycle)

The reference cam offset is effective in the search direction of the zero mark.

The reference cam offset is only active if existing cam MD34000 \$MA_REFP_CAM_IS_ACTIVE=1.

34093	REFP_CAM_MARKER_DIST			A03, A11	R1	
mm, degrees	Reference cam/reference mark distance			DOUBLE	PowerOn	
-						
-	2	0.0, 0.0	-	-	ReadOnly	I

Description:

The value displayed corresponds to the distance between exiting the reference cam and the occurrence of the reference mark. If the values are too small, there is a risk of not being able to determine the reference point due to temperature reasons or varying operating times of the cam signal. The distance travelled may serve as a clue for setting the electronic reference cam offset.

This machine data is a display data and can therefore not be changed.

34100	REFP_SET_POS			A03, A11	G1, S3, G2, R1, S1	
mm, degrees	Reference point for incremental system			DOUBLE	Reset	
-						
-	4	0., 0., 0., 0.	-45000000	45000000	7/2	I

Description:

- Incremental encoder with zero mark(s):
The position value which is set as the current axis position after detection of the zero mark and traversal of the distance REFP_MOVE_DIST + REFP_MOVE_DIST_CORR (relative to zero mark). REFP_SET_POS of the reference point number, which is set at the instant that the edge of the reference cam signal rises (NC/PLC interface signal DB31, _DBX2.4 - 2.7 (Reference point value 1 to 4)), is set as the axis position.
- Distance-coded measuring system:

Target position which is approached when MD34330 \$MA_REFP_STOP_AT_ABS_MARKER is set to 0 (FALSE) and two zero marks have been crossed.

- Absolute encoder:

MD34100 \$MA_REFP_SET_POS corresponds to the correct actual value at the calibration position.

The reaction on the machine depends on the status of MD34210 \$MA_ENC_REFP_STATE: When MD34210 \$MA_ENC_REFP_STATE = 1, the value of MD34100 \$MA_REFP_SET_POS is transferred as the absolute value.

When MD34210 \$MA_ENC_REFP_STATE = 2 and MD34330 \$MA_REFP_STOP_AT_ABS_MARKER = 0 (FALSE), the axis approaches the target position stored in MD34100 \$MA_REFP_SET_POS.

The value of MD34100 \$MA_REFP_SET_POS that has been set via NC/PLC interface signal DB31, _DBX2.4 - 2.7 (Reference point value 1 to 4) is used.

Related to:

NC/PLC interface signal DB31, _DBX2.4 - 2.7 (Reference point value 1 to 4)

34102	REFP_SYNC_ENCS			A03, A02	R1, Z1	
-	Calibration of measuring systems			BYTE	Reset	
-						
-	-	0	0	1	7/2	M

Description:

Calibrating the measuring system to the reference measuring system can be activated for all measuring systems of this axis with this machine data.

The calibration procedure is made during reference point approach or when calibrated absolute encoders selected for the closed-loop control are switched on.

Values:

0: No measuring system calibration, measuring systems must be referenced individually

1: Calibration of all measuring systems of the axis to the position of the reference measuring system

In combination with MD30242 \$MA_ENC_IS_INDEPENDENT = 2, the passive encoder is calibrated to the active encoder but NOT referenced.

34104	REFP_PERMITTED_IN_FOLLOWUP			A03, A02	R1	
-	Enable referencing in follow-up mode			BOOLEAN	Reset	
-						
-	-	FALSE	0	-	7/2	M

Description:

An axis can also be referenced in the follow-up mode under JOG+REF mode by means of an external motion.

34110	REFP_CYCLE_NR			A03	G1, TE3, D1, R1, Z1	
-	Sequence of axes in channel-specific referencing			DWORD	Reset	
-						
-	-	1, 2, 3, 4, 5, 6, 7, 8...	-1	31	7/2	M

Description:

MD34110 \$MA_REFP_CYCLE_NR = 0 -----> axis-specific referencing

Axis-specific referencing is started separately for each machine axis with the NC/PLC interface signal DB31, ... DBX4.7 / 4.6 (Plus/minus travel keys).

Up to 8 axes (840D) can be referenced simultaneously.

The following alternatives are provided for referencing the machine axes in a specific sequence:

- The operator has to observe the correct sequence on startup.
- The PLC checks the sequence on startup or defines the sequence itself.
- The channel-specific referencing function is used.

MD34110 \$MA_REFP_CYCLE_NR = 1 -----> channel-specific referencing

2.3 NC machine data

Channel-specific referencing is started with the NC/PLC interface signal DB21-30 DBX1.0 (Activate referencing). The control acknowledges a successful start with the NC/PLC interface signal DB21-30 DBX33.0 (Referencing active). Each machine axis assigned to the channel can be referenced with channel-specific referencing (this is achieved internally on the control by simulating the plus/minus traversing keys). The axis-specific MD34110 \$MA_REFP_CYCLE_NR can be used to define the sequence in which the machine axes are referenced:

-1 means:

The machine axis is not started by channel-specific referencing, and NC start is possible without referencing this axis.

0 means:

The machine axis is not started by channel-specific referencing, and NC start is not possible without referencing this axis.

1 means:

The machine axis is started by channel-specific referencing.

2 means:

The machine axis is started by channel-specific referencing if all machine axes identified by a 1 in MD34110 \$MA_REFP_CYCLE_NR are referenced.

3 means:

The machine axis is started by channel-specific referencing if all machine axes identified by a 2 in MD34110 \$MA_REFP_CYCLE_NR are referenced.

4 to 8 :

As above for further machine axes.

Setting the channel-specific MD20700 \$MC_REF_NC_START_LOCK (NC start disable without reference point) to zero has the effect of entering -1 for all the axes of a channel.

MD irrelevant to:

Axis-specific referencing

Related to:

NC/PLC interface signal DB21-30 DBX1.0 (Activate referencing)

NC/PLC interface signal DB21-30 DBX33.0 (Referencing active)

34200	ENC_REFP_MODE			A03, A02	G1, R1, S1	
-	Referencing mode			BYTE	PowerOn	
-						
-	2	1, 1	0	8	7/2	M

Description:

The mounted position measuring systems can be classified for referencing as follows with MD34200 \$MA_ENC_REFP_MODE:

- MD34200 \$MA_ENC_REFP_MODE = 0
If an absolute encoder is available: MD34100 \$MA_REFP_SET_POS is taken over
Other encoders: Reference point approach not possible (SW2.2 and higher)
- MD34200 \$MA_ENC_REFP_MODE = 1
Referencing of incremental, rotary or linear measuring systems:
Zero pulse on the encoder track
Referencing of absolute, rotary measuring systems:
Replacement zero pulse based on the absolute information
- MD34200 \$MA_ENC_REFP_MODE = 3
Referencing on linear measuring systems with distance-coded reference marks:
Linear measuring system with distance-coded reference marks (as specified by Heidenhain)
- MD34200 \$MA_ENC_REFP_MODE = 4 :
Reserved (BERO with 2-edge evaluation)
- MD34200 \$MA_ENC_REFP_MODE = 8:
Referencing for linear measuring systems with distance-coded reference marks:
Linear measuring system with distance-coded reference marks over 4 zero marks (increased safety).

34210	ENC_REFP_STATE			A07, A03, A02	R1	
-	Adjustment status of absolute encoder			BYTE	Immediately	
-						
-	2	0, 0	0	3	7/4	I

Description:

- Absolute encoder:
This machine data contains the absolute encoder status
0: Encoder is not calibrated
1: Encoder calibration enabled (but not yet calibrated)
2: Encoder is calibrated
Default setting for recommissioning: Encoder is not calibrated.
3: No significance, has the same effect as "0"
- Incremental encoder:
This machine data contains the "Referenced status", which can be saved beyond Power On:
0: Default setting: No automatic referencing
1: Automatic referencing enabled, but encoder not yet referenced
2: Encoder is referenced and at exact stop, automatic referencing becomes active at the next encoder activation
3: The last axis position buffered before switch off is restored, no automatic referencing
Default setting for recommissioning: No automatic referencing

34220	ENC_ABS_TURNS_MODULO			A03, A02	R1	
-	Modulo range for rotary absolute encoder			DWORD	PowerOn	
-						
-	2	4096, 4096	1	100000	7/2	M

Description:

Number of encoder revolutions a rotary absolute encoder is able to resolve (see also the maximum multiturn information of the absolute encoder, see encoder data sheet or PROFIdrive parameter P979).

The absolute position of a rotary axis is reduced to this resolvable range when an absolute encoder is switched on:

In other words, a MODULO transformation takes place if the actual position sensed is larger than the position permitted by MD ENC_ABS_TURNS_MODULO.

0 degrees $\leq$ position $\leq$ n*360 degrees (with n = ENC_ABS_TURNS_MODULO)

Note:

With SW 2.2, the position is reduced to this range when the control/encoder is switched on. With SW 3.6 and higher, half of this value represents the maximum permissible travel distance with the control switched off/the encoder inactive.

Special cases:

For PROFIdrive, any integer value is permissible.

The MD is relevant only for rotary encoders (on linear and rotary axes).

Corresponds to:

PROFIdrive parameter P979

34230	ENC_SERIAL_NUMBER			A02	R1	
-	Encoder serial number			DWORD	PowerOn	
-						
-	2	0, 0	-	-	7/2	I

Description:

The encoder serial number (EnDat encoders) can be read out here.

It is updated at PowerOn or when parking is deselected.

2.3 NC machine data

"0" is supplied for encoders which do not have a serial number available.

Manipulating this MD normally causes automatic absolute encoder maladjustment (MD34200 \$MA_ENC_REFP_MODE returns to "0").

34300	ENC_REFP_MARKER_DIST			A03, A02	R1	
mm, degrees	Basic distance of reference marks of distance-coded encoders.			DOUBLE	PowerOn	
-						
-	2	10.0, 10.0	0.0	-	7/2	M

Description:

In addition to the incremental encoder track, a further encoder track is available with distance-coded measuring systems for determining the absolute encoder position. This encoder track has reference marks at defined, different distances. The basic distance between the fixed reference marks (which are the reference marks that are always the same distance from one another) can be taken from the data sheet, and directly transferred into machine data MD34300 \$MA_ENC_REFP_MARKER_DIST.

With the basic distance between the fixed reference marks (MD34300 \$MA_ENC_REFP_MARKER_DIST), the distance between two reference marks (MD34310 \$MA_ENC_MARKER_INC), and the number of encoder pulses (MD31020 \$MA_ENC_RESOL) on angular measuring systems or the graduation cycle (MD31010 \$MA_ENC_GRID_POINT_DIST) on linear measuring systems, the absolute encoder position can be determined once two successive reference marks have been crossed.

MD34300 \$MA_ENC_REFP_MARKER_DIST is also used for a plausibility check of reference mark distances.

Examples of application:

For example: Heidenhain LS186 C

MD 31010 = 0.02mm (graduation cycle)

MD 34300 = 20.00mm (basic distance between the reference marks)

MD 34310 = 0.02mm (distance between two reference marks corresponds to one graduation cycle).

34310	ENC_MARKER_INC			A03, A02	R1	
mm, degrees	Interval between two reference marks for distance-coded scales			DOUBLE	Reset	
-						
-	2	0.02, 0.02	0.0	-	7/2	M

Description:

The distances between two reference marks are defined variably, so that the position of the crossed reference marks can be determined accurately in linear measuring systems with distance-coded reference marks.

The difference between two reference mark distances is entered in MD34310 \$MA_ENC_MARKER_INC.

MD irrelevant for:

Incremental measuring systems

Special cases:

On linear measuring systems with distance-coded reference marks supplied by Heidenhain, the interval between two reference marks is always equal to one graduation cycle.

34320	ENC_INVERS			A03, A02	G2, R1	
-	Length measuring system inverse to axis movement.			BOOLEAN	Reset	
-						
-	2	FALSE, FALSE	0	-	7/2	M

Description:

- In the case of a distance-coded measuring system:

When setting a reference point, the actual position (determined by the distance-coded reference marks) on the linear measuring system is assigned to an exact machine axis position (referred to the machine zero point). The absolute offset between the machine zero point and the position of the 1st reference mark on the linear measuring system must therefore be entered in MD34090 \$MA_REFP_MOVE_DIST_CORR (reference point/absolute offset). In addition, MD34320 \$MA_ENC_INVERS must be used to set whether the linear measuring system is connected in the same or the opposite direction to the machine system.

MD irrelevant to:

Incremental encoders without distance-coded reference marks.

34330	REFP_STOP_AT_ABS_MARKER			A03	G1, R1	
-	Distance-coded linear measuring system without target point			BOOLEAN	Reset	
-						
-	2	TRUE, TRUE	0	-	7/2	M

Description:

- Distance-coded measuring system:

REFP_STOP_AT_ABS_MARKER = 0:

At the end of the reference cycle, the position entered in MD34100 \$MA_REFP_SET_POS is approached (normal case for phase 2).

REFP_STOP_AT_ABS_MARKER = 1:

The axis is braked after detection of the second reference mark (shortening of phase 2)

- Absolute encoder:

MD34330 \$MA_REFP_STOP_AT_ABS_MARKER defines the response of an axis with a valid calibration identifier (MD34210 \$MA_ENC_REFP_STATE = 2) with G74 or when a traversing key is actuated in JOG-REF:

REFP_STOP_AT_ABS_MARKER = 0:

Axis traverses to the position entered in MD34100 \$MA_REFP_SET_POS

REFP_STOP_AT_ABS_MARKER = 1:

Axis does not traverse.

MD irrelevant for:

Incremental encoders with zero mark (standard encoders)

Related to:

MD34100 \$MA_REFP_SET_POS

(reference point distance/target point for distance-coded system)

34800	WAIT_ENC_VALID			A01	-	
-	Parameter setting for part program command WAITENC			DWORD	PowerOn	
-						
-	-	0	0	1	7/2	M

Description:

Parameter setting for part program command WAITENC:

0: Axis is not taken into account when waiting for synchronized / referenced or restored position with part program command WAITENC.

1: A delay is applied in part program command WAITENC until a synchronized / referenced or restored position is available for this axis.

34990	ENC_ACTVAL_SMOOTH_TIME			A02	V1	
s	Smoothing time constant for actual values.			DOUBLE	Reset	
-						
-	2	0.0, 0.0	0.0	0.5	7/2	I

2.3 NC machine data

Description: Using low-resolution encoders, a more continuous motion of coupled path or axis motions can be achieved with smoothed actual values. The bigger the time constant, the better the smoothing of actual values and the larger the overtravel.

Smoothed actual values are used for:

- Thread-cutting (G33, G34, G35)
- Revolutional feedrate (G95, G96, G97, FPRAON)
- Display of actual position and velocity, or speed respectively.

35000	SPIND_ASSIGN_TO_MACHAX			A01, A06, A11	M1, S3, K2, S1	
-	Assignment of spindle to machine axis			BYTE	PowerOn	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	20	7/2	M

Description: Spindle definition. The spindle is defined when the spindle number has been entered in this MD.

Example:

If the corresponding axis is to be spindle 1, value "1" must be entered in this MD.

The spindle functions are possible only for modulo rotary axes. For this purpose MD30300 \$MA_IS_ROT_AX and MD30310 \$MA_ROT_IS_MODULO must be set.

The axis functionality is maintained; transition to axis operation can be performed with M70.

The gear stage-specific spindle data are set in parameter blocks 1 to 5; parameter block 0 is used for axis operation (MD35590 \$MA_PARAMSET_CHANGE_ENABLE).

The lowest spindle number is 1, the highest number depends on the number of axes in the channel.

If other spindle numbers are to be assigned, the function "spindle converter" must be used.

With multi-channel systems, the same numbers can be assigned in all channels, except for those spindles active in several channels (replacement axes/spindles MD 30550: \$MA_AXCONF_ASSIGN_MASTER_CHAN).

35010	GEAR_STEP_CHANGE_ENABLE			A06, A11	P3 pl, P3 sl, S1	
-	Parameterize gear stage change			UDWORD	Reset	
CTEQ						
-	-	0x00	0	0x2B	7/2	M

Description: Meaning of bit places:

Bit 0 = 0 and bit 1 = 0:

There is an invariable gear ratio between motor and load. The MD of the first gear stage is active. Gear stage change is not possible with M40 to M45.

Bit 0 = 1:

Gear stage change at undefined change position. The gear can have up to 5 gear stages, which can be selected with M40, M41 to M45. To support the gear stage change, the motor can carry out oscillating motions, which must be enabled by the PLC program.

Bit 1 = 1:

Same meaning as bit 0 = 1, although the gear stage change is carried out in a configured spindle position (SW 5.3 and higher). The change position is configured in MD35012 \$MA_GEAR_STEP_CHANGE_POSITION. The position is approached in the current gear stage before the gear stage change. If this bit is set, bit 0 is not taken into account!

Bit 2: Reserved

Bit 3 = 1:

The gear stage change dialog between NCK and PLC is simulated. The setpoint gear stage is output to the PLC. A checkback signal from the PLC is not awaited. The acknowledgment is generated internally in the NCK.

Bit 4: Reserved

Bit 5 = 1:

The second gear stage data set is used for tapping with G331/G332. The bit must be set for the master spindle used for tapping. Bit 0 or bit 1 must be set.

Related to:

MD35090 \$MA_NUM_GEAR_STEPS (number of gear stages 1st data set, see bit 5)

MD35092 \$MA_NUM_GEAR_STEPS2 (number of gear stages 2nd data set, see bit 5)

MD35110 \$MA_GEAR_STEP_MAX_VELO (max. speed for autom. gear stage change)

MD35112 \$MA_GEAR_STEP_MAX_VELO2 (max. speed for autom. gear stage change 2nd data set, see bit 5)

MD35120 \$MA_GEAR_STEP_MIN_VELO (min. speed for autom. gear stage change)

MD35122 \$MA_GEAR_STEP_MIN_VELO2 (min. speed for autom. gear stage change 2nd data set, see bit 5)

35012	GEAR_STEP_CHANGE_POSITION			A06, A11	S1	
mm, degrees	Gear stage change position			DOUBLE	NEW CONF	
CTEQ						
-	6	0.0, 0.0, 0.0, 0.0, 0.0, 0.0	0.0	-	7/2	M

Description:

Gear stage change position.

The value range must be within the configured modulo range.

Related to:

MD35010 \$MA_GEAR_STEP_CHANGE_ENABLE, bit 1

MD30330 \$MA_MODULO_RANGE

35014	GEAR_STEP_USED_IN_AXISMODE			A01, A06, A11	-	
-	Gear stage for axis mode with M70			DWORD	NEW CONF	
CTEQ						
-	-	0	0	5	7/2	M

Description:

With this MD, a gear stage can be defined which can be loaded into the axis mode during the transition with M70. The parameter set zero used in axis mode is to be optimized on this gear stage.

Significance of the values:

0: There is no implicit gear stage change with M70.

The current gear stage is retained.

1 ... 5:

There is a change into gear stage (1...5) during the execution of M70.

During the transition into axis mode without M70, there is monitoring for this gear stage and alarm 22022 is issued if necessary. The condition for a gear stage change is the general release of the function in MD35010 \$MA_GEAR_STEP_CHANGE_ENABLE.

Secondary conditions:

When changing from axis mode into spindle mode, the configured gear stage continues to remain active. There is no automatic return to the last active gear stage in spindle mode.

35020	SPIND_DEFAULT_MODE			A06, A10	S1	
-	Initial spindle setting			BYTE	Reset	
CTEQ						
-	-	0	0	3	7/2	M

Description:

SPIND_DEFAULT_MODE activates the set operating mode of the spindle at the time specified in MD35030 \$MA_SPIND_DEFAULT_ACT_MASK. The appropriate spindle operating modes can be set with the following values:

2.3 NC machine data

- 0 Speed mode, position control deselected
- 1 Speed mode, position control activated
- 2 Positioning mode, no check for synchronized/referenced position on NC start
- 3 Axis mode, MD34110 \$MA_REFP_CYCLE_NR can be used to configure / deactivate forced referencing on NC start

Corresponds with:

MD35030 \$MA_SPIND_DEFAULT_ACT_MASK (activate spindle initial setting)

MD20700 \$MC_REFP_NC_START_LOCK (NC start disable without reference point)

35030	SPIND_DEFAULT_ACT_MASK			A06, A10	S1	
-	Time at which initial spindle setting is effective			UBYTE	Reset	
CTEQ						
-	-	0x00	0	0x03	7/2	M

Description: SPIND_DEFAULT_ACT_MASK specifies the time at which the operating mode defined in MD35020 \$MA_SPIND_DEFAULT_MODE becomes effective. The initial spindle setting can be assigned the following values at the following points in time:

- 0 POWER ON
- 1 POWER ON and NC program start
- 2 POWER ON and RESET (M2/M30)

Special cases:

If MD35040 \$MA_SPIND_ACTIVE_AFTER_RESET = 1, the following supplementary conditions are applicable:

- SPIND_DEFAULT_ACT_MASK should be set to 0
- If this is not possible, the spindle must be at a standstill prior to activation.

Related to:

MD35020 \$MA_SPIND_DEFAULT_MODE (initial spindle setting)

MD35040 \$MA_SPIND_ACTIVE_AFTER_RESET (spindle active after reset)

35032	SPIND_FUNC_RESET_MODE			A06, A10	-	
-	Reset response of individual spindle functions			UDWORD	PowerOn	
CTEQ						
-	-	0x00	0	0x01	7/2	M

Description: This data allows the "GWPS in every operating mode" function to be selected/deselected.
 SPIND_FUNC_RESET_MODE, bit 0 = 0 : "GWPS in every operating mode" is deselected
 SPIND_FUNC_RESET_MODE, bit 0 = 1 : "GWPS in every operating mode" is selected

35035	SPIND_FUNCTION_MASK			A06, A10	K1, S1	
-	Spindle functions			UDWORD	Reset	
CTEQ						
-	-	0x510	0	0x7FFFFFFF	7/2	M

Description: This MD allows spindle-specific functions to be set.
 The MD is bit-coded, the following bits are assigned:
 Bit 0 = 1: Gear stage changes are suppressed with activated DryRun function for block programming (M40, M41 to M45), programming via FC18, and synchronized actions.
 Bit 1 = 1: Gear stage changes are suppressed with activated program test function for block programming (M40, M41 to M45), programming via FC18, and synchronized actions.
 Bit 2 = 1: Gear stage change for programmed gear stage will finally be carried out after deselection of DryRun or program test functions with REPOS.

Bit 3: reserved

Bit 4 = 1:

The programmed speed is transferred to SD 43200 \$SA_SPIND_S (incl. speed default settings via FC18 and synchronized actions).

S programmings that are not speed programmings are not written to the SD. These include, for example, S value with constant cutting speed (G96, G961), S value with revolution-related dwell time (G4).

Bit 5 = 1:

The content of SD 43200 \$SA_SPIND_S is applied as the speed setpoint for JOG. If the content is zero, then other JOG speed default settings become active (see SD 41200 JOG_SPIND_SET_VELO).

Bit 6: reserved

Bit 7: reserved

Bit 8 = 1:

The programmed cutting speed is transferred to SD 43202 \$SA_SPIND_CONSTCUT_S (incl. default settings via FC18). S programmings, that are not cutting speed programmings, are not written to the SD. These include, for example, S value outside of constant cutting speed (G96, G961, G962), S value with revolution-related dwell time (G4), S value in synchronized actions.

Bit 9: reserved

Bit 10 = 0:

SD 43206 \$SA_SPIND_SPEED_TYPE is not changed by part program or channel settings,
= 1:

For the master spindle, the value of the 15th G group (type of feedrate) is transferred to SD 43206 \$SA_SPIND_SPEED_TYPE. For all other spindles, the corresponding SD remains unchanged.

Bit 11: reserved

Bit 12 = 1:

Spindle override is active with zero mark search for M19, SPOS, and SPOSA

= 0:

Previous response (default)

The following bits 16-20 can be used to set spindle-specific M functions which are output to the VDI interface

if the corresponding M functionality has been generated implicitly for the program sequence.

Bit 16: reserved

Bit 17: reserved

Bit 18: reserved

Bit 19: "Output implicit M19 to PLC"

= 0: If MD20850 \$MC_SPOS_TO_VDI = 0 too, no auxiliary function M19 is generated for SPOS and SPOSA. As a result, the acknowledgment time for the auxiliary function is also eliminated. This can cause problems in the case of short blocks.

= 1: The implicit auxiliary function M19 is generated with the programming of SPOS and SPOSA and output to the PLC. The address is expanded in accordance with the spindle number.

Bit 20: "Output implicit M70 to PLC"

= 0: No generation of implicit auxiliary function M70. Note: A programmed auxiliary function M70 is always output to the PLC.

= 1: Auxiliary function M70 is generated implicitly and output to the PLC on transition to axis mode. The address is expanded in accordance with the spindle number.

Bit 21: reserved

Bit 22 = 0: As of NCK version 78.00.00: The NC/PLC interface signal DB31, ... DBX17.6 (invert M3/M4) is applied to the function for interpolatory tapping G331/G332.

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Bit 22 = 1: Response is compatible with SW releases prior to NCK version 78.00.00: The NC/PLC interface signal DB31, ... DBX17.6 (invert M3/M4) is not applied to the function for interpolatory tapping G331/G332.

Bit 23: "Calculation of the acceleration reduction with velocity control DRIVE"

= 0: The currently active spindle speed limit is used as the maximum speed to calculate the acceleration reduction (compatibility mode).

= 1: Only machine data MD35100 \$MA_SPIND_VELO_LIMIT, MD35130 \$MA_GEAR_STEP_MAX_VELO_LIMIT and, with position control, MD35135 \$MA_GEAR_STEP_PC_MAX_VELO_LIMIT are used for the maximum speed to calculate the acceleration reduction."

MD corresponds with:

MD20850 \$MC_SPOS_TO_VDI

MD35040 \$MA_SPIND_ACTIVE_AFTER_RESET

MD35020 \$MA_SPIND_DEFAULT_MODE

SD43200 \$SA_SPIND_S

35040	SPIND_ACTIVE_AFTER_RESET			A06, A10	S1, Z1, 2.7	
-	Own spindle RESET			BYTE	PowerOn	
CTEQ						
-	-	0	0	2	7/2	M

Description:

MD35040 \$MA_SPIND_ACTIVE_AFTER_RESET defines the response of the spindle after channel reset NC/PLC interface signal DB21-30 DBX7.7 (Reset) and program end (M2, M30).

This MD is only active in the spindle mode open-loop control mode. In positioning mode or oscillation mode, the spindle is always stopped.

MD35040 \$MA_SPIND_ACTIVE_AFTER_RESET = 0:

- Spindle stops (with M2/M30 and channel and mode group reset).
- Program is canceled.
- For spindle mode, the programmed ACC and VELOLIM are reset to 100% if MD22400 \$MC_S_VALUES_ACTIVE_AFTER_RESET and the axis-specific MD32320 \$MA_DYN_LIMIT_RESET_MASK do not specify anything else.

MD35040 \$MA_SPIND_ACTIVE_AFTER_RESET= 1:

- Spindle does not stop.
- Program is canceled.
- For spindle mode, the programmed ACC and VELOLIM are retained.

MD35040 \$MA_SPIND_ACTIVE_AFTER_RESET= 2:

- Spindle does not stop at the M function configured via MD10714 \$MN_M_NO_FCT_EOP (e.g. M32).
- However, the spindle stops at channel or mode group reset.
- For spindle mode, the programmed ACC and VELOLIM are retained.

The NC/PLC interface signal DB31, ... DBX2.2 (Delete distance-to-go/Spindle reset) is always effective, independent of MD35040 \$MA_SPIND_ACTIVE_AFTER_RESET.

Not relevant to:

- Spindle modes other than open-loop control mode.

Related to:

NC/PLC interface signal DB21-30 DBX7.7 (Reset)

NC/PLC interface signal DB31, ... DBX2.2 (Delete distance-to-go/Spindle reset)

35090	NUM_GEAR_STEPS			A06, A10	S1	
-	Number of gear stages			DWORD	Reset	
-						
-	-	5	1	5	2/2	M

Description:

Number of set gear stages.

The first gear stage is always available.

Corresponding MDs:

MD35010 \$MA_GEAR_STEP_CHANGE_ENABLE (gear stages available/functions)
 MD35012 \$MA_GEAR_STEP_CHANGE_POSITION (gear stage change position)
 MD35014 \$MA_GEAR_STEP_USED_IN_AXISMODE (gear stage for axis mode with M70)
 MD35110 \$MA_GEAR_STEP_MAX_VELO (max. speed for gear stage change)
 MD35120 \$MA_GEAR_STEP_MIN_VELO (min. speed for gear stage change)
 MD35130 \$MA_GEAR_STEP_MAX_VELO_LIMIT (max. speed of gear stage)
 MD35140 \$MA_GEAR_STEP_MIN_VELO_LIMIT (min. speed of gear stage)
 MD35200 \$MA_GEAR_STEP_SPEEDCTRL_ACCEL (acceleration in speed control mode)
 MD35210 \$MA_GEAR_STEP_POSCTRL_ACCEL (acceleration in position control mode)
 MD35310 \$MA_SPIND_POSIT_DELAY_TIME (positioning delay time)
 MD35550 \$MA_DRILL_VELO_LIMIT (maximum speeds for tapping)
 MD35092 \$MA_NUM_GEAR_STEPS2 (number of gear stages 2nd gear stage data set)

35092	NUM_GEAR_STEPS2			A06, A10	S1	
-	Number of gear stages of 2nd gear stage data set			DWORD	Reset	
-						
-	-	5	1	5	2/2	M

Description:

Number of set gear stages of the second gear stage data set for the function 'Tapping with G331/G332'.

Activation (only makes sense for master spindle on tapping): MD 35010
 \$MA_GEAR_STEP_CHANGE_ENABLE, bit 5.

The number of gear stages must not be the same in the first and second gear stage data sets.

Corresponding MD:

MD35010 \$MA_GEAR_STEP_CHANGE_ENABLE (gear stages available/functions)
 MD35112 \$MA_GEAR_STEP_MAX_VELO2 (2nd gear stage data set: max. speed for gear stage change)
 MD35122 \$MA_GEAR_STEP_MIN_VELO2 (2nd gear stage data set: min. speed for gear stage change)
 MD35212 \$MA_GEAR_STEP_POSCTRL_ACCEL2 (2nd gear stage data set: acceleration in position control mode)

35100	SPIND_VELO_LIMIT			A06, A11, A04	TE3, G2, S1, V1, Z1	
rev/min	Maximum spindle speed			DOUBLE	Reset	
CTEQ						
-	-	10000.0	1.0e-6	-	7/2	M

Description:

MD35100 \$MA_SPIND_VELO_LIMIT defines the maximum spindle speed that the spindle (the spindle chuck with the workpiece or the tool) must not exceed. The NCK limits an excessive spindle setpoint speed to this value. If the maximum spindle actual speed is exceeded, even allowing for the spindle speed tolerance (MD35150 \$MA_SPIND_DES_VELO_TOL), there is a fault with the drive and the NC/PLC interface signal DB31, ... DBX83.0 (speed limit exceeded) is set. Alarm 22100 "Maximum speed reached" is also output and all axes and spindles on the channel are decelerated (provided the encoder is still functioning correctly). The spindle has to be brought to a standstill before modifying the MD.

Corresponds with:

MD35150 \$MA_SPIND_DES_VELO_TOL (spindle speed tolerance)
 SD43235 \$SD_SPIND_USER_VELO_LIMIT (speed limitation set by user)
 NC/PLC interface signal DB31, ... DBX83.0 (speed limit exceeded)
 Alarm 22100 "Maximum speed reached"

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35110	GEAR_STEP_MAX_VELO			A06, A11, A04	A3, S1	
rev/min	Maximum speed for gear stage change			DOUBLE	NEW CONF	
CTEQ						
-	6	500., 500., 1000., 2000., 4000., 8000.	0.0	-	7/2	M

Description: MD35110 \$MA_GEAR_STEP_MAX_VELO defines the maximum speed (upper switching threshold) of the gear stage for automatic gear stage change M40 S... The speed ranges for the gear stages must be defined without gaps between them or can overlap.

Incorrect

MD35110 \$MA_GEAR_STEP_MAX_VELO [gear stage1] =1000

MD35120 \$MA_GEAR_STEP_MIN_VELO [gear stage2] =1200

Correct

MD35110 \$MA_GEAR_STEP_MAX_VELO [gear stage1] =1000

MD35120 \$MA_GEAR_STEP_MIN_VELO [gear stage2] = 950

Note:

- Programming a spindle speed which exceeds the highest numbered gear stage MD35110 \$MA_GEAR_STEP_MAX_VELO [MD35090] triggers a switch to the highest gear stage (MD35090).

Related to:

MD35120 \$MA_GEAR_STEP_MIN_VELO (min. speed for automatic gear stage selection M40)

MD35090 \$MA_NUM_GEAR_STEPS (number of gear stages)

MD35010 \$MA_GEAR_STEP_CHANGE_ENABLE (gear stage change is possible)

MD35130 \$MA_GEAR_STEP_MAX_VELO_LIMIT (maximum speed of gear stage with speed control

MD35135 \$MA_GEAR_STEP_PC_MAX_VELO_LIMIT (maximum speed of gear stage with position control

MD35140 \$MA_GEAR_STEP_MIN_VELO_LIMIT (min. speed of gear stage)

35112	GEAR_STEP_MAX_VELO2			A06, A11, A04	S1	
rev/min	2nd data set: Maximum speed for gear stage change			DOUBLE	NEW CONF	
CTEQ						
-	6	500., 500., 1000., 2000., 4000., 8000.	0.0	-	2/2	M

Description: -

The 2nd gear stage data block for tapping with G331/G332 is activated with MD 35010:\$MA_GEAR_STEP_CHANGE_ENABLE bit 5 for the master spindle.

Related to:

MD35122 \$MA_GEAR_STEP_MIN_VELO2 (minimum speed for 2nd data block gear stage selection)

MD35092 \$MA_NUM_GEAR_STEPS2 (number of gear stages 2nd gear stage data block)

MD35010 \$MA_GEAR_STEP_CHANGE_ENABLE (gear stage change, 2nd data block is possible)

MD35130 \$MA_GEAR_STEP_MAX_VELO_LIMIT (maximum speed of gear stage with speed control)

MD35135 \$MA_GEAR_STEP_PC_MAX_VELO_LIMIT (maximum speed of gear stage with position control)

MD35140 \$MA_GEAR_STEP_MIN_VELO_LIMIT (min. speed of gear stage)

35120	GEAR_STEP_MIN_VELO			A06, A11, A04	S1	
rev/min	Minimum speed for gear stage change			DOUBLE	NEW CONF	
CTEQ						
-	6	50., 50., 400., 800., 1500., 3000.	0.0	-	7/2	M

Description: -

See MD35110 \$MA_GEAR_STEP_MAX_VELO for more information.

Note:

- Programming a spindle speed which undershoots the lowest speed of the first gear stage MD35120 \$MA_GEAR_STEP_MIN_VELO[1] triggers a switch to the first gear stage.

Not relevant for:

- Programming of speed 0 (S0) if MD35120 \$MA_GEAR_STEP_MIN_VELO[1] > 0

Related to:

MD35110 \$MA_GEAR_STEP_MAX_VELO (maximum speed for automatic gear stage selection M40)

MD35090 \$MA_NUM_GEAR_STEPS (number of gear stages)

MD35010 \$MA_GEAR_STEP_CHANGE_ENABLE (gear stage change is possible)

MD35130 \$MA_GEAR_STEP_MAX_VELO_LIMIT (maximum speed of the gear stage with speed control)

MD35135 \$MA_GEAR_STEP_PC_MAX_VELO_LIMIT (maximum speed of the gear stage with position control)

MD35140 \$MA_GEAR_STEP_MIN_VELO_LIMIT (min. speed of the gear stage)

35122	GEAR_STEP_MIN_VELO2			A06, A11, A04	S1	
rev/min	2nd data set: Minimum speed for gear stage change			DOUBLE	NEW CONF	
CTEQ						
-	6	50., 50., 400., 800., 1500., 3000.	0.0	-	2/2	M

Description:

The minimum speed (lower switching threshold) of the gear stage for automatic gear stage change M40 G331 S.. is set in GEAR_STEP_MIN_VELO2 for interpolatory tapping G331, G332. The speed ranges of the gear stages must be defined so that there are no gaps between them or they can overlap.

The 2nd gear stage data block for tapping with G331/G332 is activated with MD35010 \$MA_GEAR_STEP_CHANGE_ENABLE bit 5 for the master spindle.

Related to:

MD35112 \$MA_GEAR_STEP_MAX_VELO2 (maximum speed for 2nd data block gear stage change)

MD35092 \$MA_NUM_GEAR_STEPS2 (number of gear stages 2nd gear stage data block)

MD35010 \$MA_GEAR_STEP_CHANGE_ENABLE (gear stage change, 2nd data block is possible)

MD35130 \$MA_GEAR_STEP_MAX_VELO_LIMIT (maximum speed of gear stage with speed control)

MD35135 \$MA_GEAR_STEP_PC_MAX_VELO_LIMIT (maximum speed of gear stage with position control)

MD35140 \$MA_GEAR_STEP_MIN_VELO_LIMIT (min. speed of gear stage)

35130	GEAR_STEP_MAX_VELO_LIMIT			A06, A11, A04	A2, S1, V1	
rev/min	Maximum speed of gear stage			DOUBLE	NEW CONF	
CTEQ						
-	6	500., 500., 1000., 2000., 4000., 8000.	1.0e-6	-	7/2	M

Description:

The maximum speed of the current gear stage for speed control mode (position control not active) is configured in MD35130 \$MA_GEAR_STEP_MAX_VELO_LIMIT. The speed setpoints generated taking the override into account are limited to this speed.

Note:

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- The configured speed cannot exceed the value from MD35100 \$MA_SPIND_VELO_LIMIT.
- If position control is active for the spindle, the speed is limited to the maximum speed of MD35135 \$MA_GEAR_STEP_PC_MAX_VELO_LIMIT.
- The NC/PLC interface signal "Setpoint speed limited" is set to indicate that the speed is being limited.
- The maximum speed entered here has no effect on the automatic gear stage selection M40 S..
- The upper switching threshold for the automatic gear stage selection M40 is configured in MD35110 \$MA_GEAR_STEP_MAX_VELO.

Related to:

MD35135 \$MA_GEAR_STEP_PC_MAX_VELO_LIMIT (maximum speed of the gear stage with position control)

MD35140 \$MA_GEAR_STEP_MIN_VELO_LIMIT (minimum speed of the gear stage)

MD35010 \$MA_GEAR_STEP_CHANGE_ENABLE (gear stage selection is possible)

MD35110 \$MA_GEAR_STEP_MAX_VELO (max. speed for automatic gear stage selection M40)

MD35120 \$MA_GEAR_STEP_MIN_VELO (min. speed for automatic gear stage selection M40)

35135	GEAR_STEP_PC_MAX_VELO_LIMIT			A06, A11, A04	S1	
rev/min	Maximum speed of the gear stage with position control			DOUBLE	NEW CONF	
CTEQ						
-	6	0., 0., 0., 0., 0., 0.	0	-	7/2	M

Description:

The maximum speed of the current gear stage is configured in MD35135 \$MA_GEAR_STEP_PC_MAX_VELO_LIMIT with position control active. The speed setpoints generated taking the override into account are limited to this speed.

If a value of 0 is set (default), 90% of the value from MD35130 \$MA_GEAR_STEP_MAX_VELO_LIMIT will become the maximum speed with position control active.

Note:

- The configured speed cannot exceed the value from MD35100 \$MA_SPIND_VELO_LIMIT.
- The NC/PLC interface signal "Setpoint speed limited" is set to indicate that the speed is being limited.
- The maximum speed entered here has no effect on the automatic gear stage selection M40 S..
- The upper switching threshold for the automatic gear stage selection M40 is configured in MD35110 \$MA_GEAR_STEP_MAX_VELO.

Related to:

MD35130 \$MA_GEAR_STEP_MAX_VELO_LIMIT (maximum speed of the gear stage with speed control)

MD35140 \$MA_GEAR_STEP_MIN_VELO_LIMIT (minimum speed of the gear stage)

MD35010 \$MA_GEAR_STEP_CHANGE_ENABLE (gear stage selection is possible)

MD35110 \$MA_GEAR_STEP_MAX_VELO (max. speed for automatic gear stage selection M40)

MD35120 \$MA_GEAR_STEP_MIN_VELO (min. speed for automatic gear stage selection M40)

35140	GEAR_STEP_MIN_VELO_LIMIT				A06, A11, A04	S1, V1	
rev/min	Minimum speed of gear stage				DOUBLE	NEW CONF	
CTEQ							
-	6	5., 5., 10., 20., 40., 80.	0.0	-	7/2	M	

Description:

The minimum speed of the current gear stage is configured in MD35140 \$MA_GEAR_STEP_MIN_VELO_LIMIT. The minimum speed is applied only if the spindle is in speed control mode. The speed setpoints generated taking the override into account do not undershoot the minimum speed.

Note:

- If an S value lower than the minimum speed is programmed, the setpoint speed is increased to the minimum speed.
- The NC/PLC interface signal "Setpoint speed increased" is set to indicate that the speed has been increased.
- The minimum speed entered here has no effect on the automatic gear stage selection M40 S..
- The lower switching threshold for the automatic gear stage selection M40 is configured in MD35120 \$MA_GEAR_STEP_MIN_VELO.

Not relevant for:

- Spindle oscillation mode (gear stage change)
- Positioning and axis spindle modes
- Signals which cause the spindle to stop

Related to:

MD35130 \$MA_GEAR_STEP_MAX_VELO_LIMIT (maximum speed of gear stage with speed control)

MD35135 \$MA_GEAR_STEP_PC_MAX_VELO_LIMIT (maximum speed of gear stage with position control)

MD35010 \$MA_GEAR_STEP_CHANGE_ENABLE (gear stage change is possible)

MD35110 \$MA_GEAR_STEP_MAX_VELO (max. speed for automatic gear stage selection M40)

MD35120 \$MA_GEAR_STEP_MIN_VELO (min. speed for automatic gear stage selection M40)

35150	SPIND_DES_VELO_TOL			A03, A05, A06, A10, A04	R1, S1, Z1	
-	Spindle speed tolerance			DOUBLE	Reset	
-						
-	-	0.1	0.0	1.0	7/2	M

Description:

In spindle control mode, the set speed (programmed speed x spindle offset, allowing for limits) is compared with the actual speed.

- If the actual speed deviates from the set speed by more than MD35150 \$MA_SPIND_DES_VELO_TOL, the NC/PLC interface signal is DB31, ... DBX83.5 (Spindle in setpoint range) is set to zero.
- If the actual speed deviates from the set speed by more than MD35150 \$MA_SPIND_DES_VELO_TOL, the path feed is disabled (positioning axes continue traversing).
- If the actual speed exceeds the maximum spindle speed (MD35100 \$MA_SPIND_VELO_LIMIT) by more than MD35150 \$MA_SPIND_DES_VELO_TOL, the NC/PLC interface signal is DB31, ... DBX83.0 (Speed limit exceeded) is enabled and alarm 22050 "Maximum speed reached" is output. All axes and spindles on the channel are decelerated.

MD irrelevant to:

- Spindle oscillation mode
- Spindle positioning mode

Example:

MD 35150 \$MA_SPIND_DES_VELO_TOL = 0.1

The actual spindle speed must not deviate from the set speed by more than +/- 10%.

Related to:

MD35500 \$MA_SPIND_ON_SPEED_AT_IPO_START

(feed enable for spindle in setpoint range)

MD35100 \$MA_SPIND_VELO_LIMIT

(maximum spindle speed)

NC/PLC interface signal DB31, ... DBX83.5 (Spindle in setpoint range)

NC/PLC interface signal DB31, ... DBX83.0 (Speed limit exceeded)

Alarm 22050 "Maximum speed reached"

2.3 NC machine data

35160	SPIND_EXTERN_VELO_LIMIT			A06, A04	A3, S1, V1, Z1	
rev/min	Spindle speed limitation from PLC			DOUBLE	NEW CONF	
CTEQ						
-	-	1000.0	1.0e-6	-	7/2	M

Description: A limiting value for the maximum spindle speed is entered in MD35160 \$MA_SPIND_EXTERN_VELO_LIMIT, which is taken into account exactly when the NC/PLC interface signal DB31, ... DBX3.6 (Velocity/speed limitation) is set.
The control limits a spindle speed which is too high to this value.

35200	GEAR_STEP_SPEEDCTRL_ACCEL			A06, A11, A04	S1	
rev/s²	Acceleration in speed control mode			DOUBLE	NEW CONF	
CTEQ						
-	6	30.0, 30.0, 25.0, 20.0, 15.0, 10.0	1.0e-7	-	7/2	M

Description: If the spindle is in speed control mode, the acceleration is entered in MD35200 \$MA_GEAR_STEP_SPEEDCTRL_ACCEL.
The spindle is in speed control mode with the function SPCOF.
Special cases:
The acceleration in speed control mode (MD35200 \$MA_GEAR_STEP_SPEEDCTRL_ACCEL) can be set so that the electric current limit is reached.
Related to:
MD35210 \$MA_GEAR_STEP_POSCTRL_ACCEL (acceleration in position control mode)
MD35220 \$MA_ACCEL_REDUCTION_SPEED_POINT (speed limit for reduced acceleration)

35210	GEAR_STEP_POSCTRL_ACCEL			A06, A11, A04	S1	
rev/s²	Acceleration in position control mode			DOUBLE	NEW CONF	
CTEQ						
-	6	30.0, 30.0, 25.0, 20.0, 15.0, 10.0	1.0e-7	-	7/2	M

Description: The acceleration in position control mode must be set so that the electric current limit is not reached.
Related to:
MD35200 \$MA_GEAR_STEP_SPEEDCTRL_ACCEL
MD35212 \$MA_GEAR_STEP_POSCTRL_ACCEL2

35212	GEAR_STEP_POSCTRL_ACCEL2			A06, A11, A04	S1	
rev/s²	2nd data set: Acceleration in position control mode			DOUBLE	NEW CONF	
CTEQ						
-	6	30.0, 30.0, 25.0, 20.0, 15.0, 10.0	1.0e-3	-	2/2	M

Description: Second gear stage data set for maximum acceleration capability of the gear stages in position control mode.
The acceleration in position control mode must be set so that the electric current limit is not reached.
The 2nd data set for tapping with G331/G332 is activated by MD35010 \$MA_GEAR_STEP_CHANGE_ENABLE, bit 5 for the master spindle.
Related to:
MD35210 \$MA_GEAR_STEP_POSCTRL_ACCEL
MD35200 \$MA_GEAR_STEP_SPEEDCTRL_ACCEL
MD35220 \$MA_ACCEL_REDUCTION_SPEED_POINT

35220	ACCEL_REDUCTION_SPEED_POINT			A06, A04	S1, S3, B2	
-	Speed for reduced acceleration			DOUBLE	Reset	
-						
-	-	1.0	0.0	1.0	7/2	M

Description:

This machine data defines the threshold speed/velocity for spindles/positioning/path axes from which the acceleration reduction is to start. The reference is the defined maximum speed/velocity. The starting point is a percentage of the maximum values.

The maximum speed for spindles is determined as the lowest value from machine data MD35100 \$MA_SPIND_VELO_LIMIT, MD35130 \$MA_GEAR_STEP_MAX_VELO_LIMIT and, with position control, MD35135 \$MA_GEAR_STEP_PC_MAX_VELO_LIMIT.

Example: MD35220 \$MA_ACCEL_REDUCTION_SPEED_POINT = 0.7, the maximum speed is 3000 rpm. Acceleration reduction starts at $v_{on} = 2100$ rpm, i.e. the maximum acceleration capacity is utilized in the speed range 0...2099.99 rpm. Reduced acceleration is used from 2100 rpm to the maximum speed.

Related to:

MD32000 \$MA_MAX_AX_VELO (maximum axis velocity)

MD35100 \$MA_SPIND_VELO_LIMIT (maximum spindle speed)

MD35130 \$MA_GEAR_STEP_MAX_VELO_LIMIT (maximum gear stage speed)

MD35135 \$MA_GEAR_STEP_PC_MAX_VELO_LIMIT (maximum gear stage speed with position control)

MD35230 \$MA_ACCEL_REDUCTION_FACTOR (reduced acceleration)

35230	ACCEL_REDUCTION_FACTOR			A06, A04	S1, S3, B2	
-	Reduced acceleration			DOUBLE	Reset	
CTEQ						
-	-	0.0	0.0	0.95	7/2	M

Description:

The machine data contains the factor by which the acceleration of the spindle/positioning/path axes is reduced with reference to the maximum speed/velocity. The acceleration is reduced by this factor between the threshold speed/velocity defined in MD35220 \$MA_ACCEL_REDUCTION_SPEED_POINT and the maximum speed/velocity.

Example:

$a = 10 \text{ rev/s}^2$, $v_{on} = 2100 \text{ rpm}$, MD35230 \$MA_ACCEL_REDUCTION_FACTOR = 0.3.

Acceleration and deceleration take place within the speed range 0...2099.99 rpm with an acceleration of 10 rev/s^2 . From a speed of 2100 rpm up to the maximum speed, the acceleration is reduced from 10 rev/s^2 to 7 rev/s^2 .

MD irrelevant to:

Errors that lead to rapid stop.

Related to:

MD32300 \$MA_MAX_AX_ACCEL (axis acceleration)

MD35200 \$MA_GEAR_STEP_SPEEDCTRL_ACCEL
(acceleration in speed control mode)

MD35210 \$MA_GEAR_STEP_POSCTRL_ACCEL
(acceleration in position control mode)

MD35242 \$MA_ACCEL_REDUCTION_SPEED_POINT
(speed for reduced acceleration)

35240	ACCEL_TYPE_DRIVE			A04	B1, B2	
-	Acceleration curve DRIVE for axes ON/OFF			BOOLEAN	Reset	
CTEQ						
-	-	FALSE	0	-	7/2	M

2.3 NC machine data

Description: Basic setting of the acceleration response of the axis (positioning, oscillation, JOG, path motions):

FALSE: No acceleration reduction

TRUE: Acceleration reduction active

MD is active only when MD32420 \$MA_JOG_AND_POS_JERK_ENABLE = FALSE.

The settings in MD35220 \$MA_ACCEL_REDUCTION_SPEED_POINT and MD35230 \$MA_ACCEL_REDUCTION_FACTOR are always active for spindles (in spindle mode).

Remark:

This MD also influences the path motion with SOFT, BRISK, TRAFO

35242	ACCEL_REDUCTION_TYPE			A04	B1, B2	
-	Type of acceleration reduction			BYTE	Reset	
CTEQ						
-	-	1	0	2	7/2	M

Description: Shape of acceleration reduction characteristic with DRIVE velocity control

0: Constant

1: Hyperbolic

2: Linear

The end point of the acceleration curve for spindles depending on MD35035 \$MA_SPIND_FUNCTION_MASK Bit23 is selected either from the maximum speed determined from MD35100 \$MA_SPIND_VELO_LIMIT, MD35130 \$MA_GEAR_STEP_MAX_VELO_LIMIT and MD35135 \$MA_GEAR_STEP_PC_MAX_VELO_LIMIT or the relevant currently active speed limit.

35300	SPIND_POSCTRL_VELO			A06, A04	P3 pl, P3 sl, R1, S1	
rev/min	Position control activation speed			DOUBLE	NEW CONF	
CTEQ						
-	6	500.0, 500.0, 500.0, 500.0, 500.0, 500.0	0.0	-	7/2	M

Description: When positioning a spindle that is not in position control mode from a high speed, the position control is not activated until the spindle has reached or falls below the velocity defined in MD35300 \$MA_SPIND_POSCTRL_VELO.

The speed can be changed with FA[Sn] from the part program. Please refer to the documentation:

/FB1/ Function Manual, Basic Functions; Spindles (S1), section "Spindle mode 'positioning operation'" for a description of the spindle behavior under various supplementary conditions (positioning from rotation, positioning from standstill).

Note:

The active speed from MD35300 \$MA_SPIND_POSCTRL_VELO cannot exceed the max. speed set in MD35135 \$MA_GEAR_STEP_PC_MAX_VELO_LIMIT. If MD35135 \$MA_GEAR_STEP_PC_MAX_VELO_LIMIT = 0, the value is limited to 90% of MD35130 \$MA_GEAR_STEP_MAX_VELO_LIMIT.

Related to:

MD35350 \$MA_SPIND_POSITIONING_DIR (direction of rotation during positioning from standstill, if no synchronization is available)

MD35100 \$MA_SPIND_VELO_LIMIT (chuck speed)

35310	SPIND_POSIT_DELAY_TIME			A06, A04	S1	
s	Positioning delay time			DOUBLE	NEW CONF	
CTEQ						
-	6	0.0, 0.05, 0.1, 0.2, 0.4, 0.8	0.0	-	7/2	M

Description: Positioning delay time.

After reaching the positioning end (exact stop fine), there is a waiting time equal to the time set in this MD. The position matching the currently set gear stage is selected. The delay time is activated for:

- Gear stage change at defined spindle position. After reaching the position configured in MD35012 \$MA_GEAR_STEP_CHANGE_POSITION, there is a waiting period equal to the time specified here. After expiry of this time, the position control is switched off for an active direct measuring system, and the NC/PLC interface signals DB31, ... DBX82.3 (Change gear) and DB31, ... DBX82.0 - .2 (Setpoint gear stage A-C) are output.
- Block search upon the output of an accumulated positioning block (SPOS, SPOSA, M19).

35350	SPIND_POSITIONING_DIR			A06	S1	
-	Direction of rotation when positioning			BYTE	Reset	
CTEQ						
-	-	3	3	4	7/2	M

Description: When SPOS or SPOSA is programmed, the spindle is switched to position control mode and accelerates with the acceleration defined in MD35210 \$MA_GEAR_STEP_POSCTRL_ACCEL (acceleration in position control mode) if the spindle is not synchronized. The direction of rotation is defined by MD35350 \$MA_SPIND_POSITIONING_DIR (direction of rotation for positioning from standstill).

MD35350 \$MA_SPIND_POSITIONING_DIR = 3 ---> Clockwise direction of rotation
MD35350 \$MA_SPIND_POSITIONING_DIR = 4 ---> Counterclockwise direction of rotation

Related to:
MD35300 \$MA_SPIND_POSCTRL_VELO (position control activation speed)

35400	SPIND_OSCILL_DES_VELO			A06, A04	P3 pl, P3 sl, S1	
rev/min	Oscillation speed			DOUBLE	NEW CONF	
CTEQ						
-	-	500.0	0.0	-	7/2	M

Description: During oscillation, the NC/PLC interface signal DB31, ... DBX18.5 (Oscillation speed) is used to select a motor speed for the spindle motor. This motor speed is defined in MD35400 \$MA_SPIND_OSCILL_DES_VELO. The motor speed defined in this MD is independent of the current gear stage. In the AUTOMATIC and MDI displays, the oscillation speed is displayed in the "Spindle setpoint" window until the gear is changed.

MD irrelevant to:
All spindle modes except oscillation mode

Special cases:
The acceleration during oscillation (MD35410 \$MA_SPIND_OSCILL_ACCEL) is valid for the oscillation speed defined in this MD.

Related to:
MD35410 \$MA_SPIND_OSCILL_ACCEL (acceleration during oscillation)
NC/PLC interface signal DB31, ... DBX18.5 (Oscillation speed)
NC/PLC interface signal DB31, ... DBX18.4 (Oscillation via PLC)

35410	SPIND_OSCILL_ACCEL			A06, A04	S1, Z1	
rev/s²	Acceleration during oscillation			DOUBLE	NEW CONF	
CTEQ						
-	-	16.0	1.0e-7	-	7/2	M

Description: The acceleration specified here is only effective for the output of the oscillation speed (MD35400 \$MA_SPIND_OSCILL_DES_VELO) to the spindle motor. The oscillation speed is selected using the NC/PLC interface signal DB31, ... DBX18.5 (Oscillation speed).

MD irrelevant to:
All spindle modes except oscillation mode

2.3 NC machine data

Related to:

MD35400 \$MA_SPIND_OSCILL_DES_VELO (oscillation speed)

NC/PLC interface signal DB31, ... DBX18.5 (Oscillation speed)

NC/PLC interface signal DB31, ... DBX18.4 (Oscillation via PLC)

35430	SPIND_OSCILL_START_DIR			A06	S1	
-	Start direction during oscillation			BYTE	Reset	
CTEQ						
-	-	0	0	4	7/2	M

Description:

With the NC/PLC interface signal DB31, ... DBX18.5 (Oscillation speed), the spindle motor accelerates to the speed specified in MD35400: \$MA_SPIND_OSCILL_DES_VELO.

The start direction is defined by MD35430 \$MA_SPIND_OSCILL_START_DIR if the NC/PLC interface signal DB31, ... DBX18.4 (Oscillation via PLC) is not enabled.

MD35430 \$MA_SPIND_OSCILL_START_DIR = 0 ---> Start direction same as the last direction of rotation

MD35430 \$MA_SPIND_OSCILL_START_DIR = 1 ---> Start direction counter to the last direction of rotation

MD35430 \$MA_SPIND_OSCILL_START_DIR = 2 ---> Start direction counter to the last direction of rotation

MD35430 \$MA_SPIND_OSCILL_START_DIR = 3 ---> Start direction is M3

MD35430 \$MA_SPIND_OSCILL_START_DIR = 4 ---> Start direction is M4

MD irrelevant to:

All spindle modes except oscillation mode

Related to:

MD35400 \$MA_SPIND_OSCILL_DES_VELO (oscillation speed)

NC/PLC interface signal DB31, ... DBX18.5 (Oscillation speed)

NC/PLC interface signal DB31, ... DBX18.4 (Oscillation via PLC)

35440	SPIND_OSCILL_TIME_CW			A06	S1, Z1	
s	Oscillation time for M3 direction			DOUBLE	NEW CONF	
CTEQ						
-	-	1.0	0.0	-	7/2	M

Description:

The oscillation time defined here is active in the M3 direction.

MD irrelevant to:

- All spindle modes except oscillation mode
- Oscillation via PLC (NC/PLC interface signal DB31, ... DBX18.4 (Oscillation via PLC) enabled)

Related to:

MD35450 \$MA_SPIND_OSCILL_TIME_CCW (oscillation time for M4 direction)

MD10070 \$MN_IPO_SYSCLOCK_TIME_RATIO (interpolator cycle)

NC/PLC interface signal DB31, ... DBX18.5 (Oscillation speed)

NC/PLC interface signal DB31, ... DBX18.4 (Oscillation via PLC)

35450	SPIND_OSCILL_TIME_CCW			A06	S1, Z1	
s	Oscillation time for M4 direction			DOUBLE	NEW CONF	
CTEQ						
-	-	0.5	0.0	-	7/2	M

Description:

The oscillation time defined here is active in the M4 direction.

MD irrelevant to:

- All spindle modes except oscillation mode
- Oscillation via PLC (NC/PLC interface signal DB31, ... DBX18.4 (Oscillation via PLC) enabled)

Related to:

MD35440 \$MA_SPIND_OSCILL_TIME_CW (oscillation time for M3 direction)

MD10070 \$MN_IPO_SYSCLOCK_TIME_RATIO (interpolator cycle)

NC/PLC interface signal DB31, ... DBX18.5 (Oscillation speed)

NC/PLC interface signal DB31, ... DBX18.4 (Oscillation via PLC)

35500	SPIND_ON_SPEED_AT_IPO_START			A03, A06, A10	S1, Z1	
-	Feedrate enable for spindle in the set range			BYTE	Reset	
CTEQ						
-	-	1	0	2	7/2	M

Description:

For SW 4.2 and higher:

Byte = 0:

The path interpolation is not affected

Byte = 1:

The path interpolation is not enabled (positioning axes continue traversing) until the spindle has reached the specified speed. The tolerance range can be set in MD 35150: \$MA_SPIND_DES_VELO_TOL. If a measuring system is active, the actual speed is monitored, otherwise the set speed. Path axes traversing in continuous-path mode (G64) are not stopped.

Byte = 2:

In addition to 1, traversing path axes are also stopped before machining begins, e.g. continuous-path mode (G64) and the change from rapid traverse (G0) to a machining block (G1, G2,...). The path is stopped at the last G0 block, and does not start traversing until the spindle is within the set speed range. If the spindle speed is re-programmed between two machining blocks, and the spindle speed is not yet in the setpoint range during transition from the first to the second machining block, the traversing path axes are also braked.

Restriction:

If the spindle is re-programmed by the PLC (FC18) or a synchronized action "shortly" before the end of the last G0 block, the path decelerates on the basis of the dynamic limitations. Since the spindle programming is asynchronous, a traverse can be made into the machining block if necessary. If the spindle has reached the setpoint speed range, machining starts from this position.

Byte = 3:

No longer available for SW 5.3 and higher.

Related to:

MD35150 \$MA_SPIND_DES_VELO_TOL (Spindle speed tolerance)

NC/PLC interface signal DB31, ... DBX83.5 (Spindle in setpoint range)

35510	SPIND_STOPPED_AT_IPO_START			A03, A06, A10	S1	
-	Feedrate enable for spindle stopped			BOOLEAN	Reset	
CTEQ						
-	-	FALSE	0	-	7/2	M

Description:

When a spindle is stopped (M5), the path feed is disabled (positioning axes continue traversing) if MD35510 \$MA_SPIND_STOPPED_AT_IPO_START is enabled and the spindle is in control mode.

When the spindle has come to a standstill (NC/PLC interface signal DB31, ... DBX61.4 (Axis/spindle stationary) enabled), the path feed is enabled.

Related to:

MD35500 \$MA_SPIND_ON_SPEED_AT_IPO_START (feed enable for spindle in setpoint range)

2.3 NC machine data

35550	DRILL_VELO_LIMIT			A06, A11, A04	-	
rev/min	Maximum speeds for tapping			DOUBLE	NEW CONF	
CTEQ						
-	6	10000., 10000., 10000., 10000., 10000., 10000.	0.1	-	7/2	M

Description: Limit speed values for tapping without compensating chuck with G331/G332.
The maximum speed of the linear motor characteristic range (constant acceleration capacity) must be specified depending on the gear stage.

35590	PARAMSET_CHANGE_ENABLE			EXP, A05	TE3, A2, S1, Z1	
-	Parameter set can be changed			BYTE	PowerOn	
CTEQ						
-	-	0	0	2	7/2	M

Description: 0: Parameter set changes cannot be controlled.

For axes and spindles in axis mode: The first parameter set is always active. In the case of spindles the parameter set is set as appropriate for the gear stage (1st gear stage uses 2nd parameter set). Exceptions: See below.

1: The parameter set applied in the servo is defined via the VDI interface or SCPARA. Parameter sets 1 to 6 can be selected. Sets are selected using the NC/PLC interface signal DB31, ... DBX9.0 - .2 (selection of parameter set servo A, B, C) in the binary-coded value range 0 to 5. Binary values 6 and 7 select parameter set no. 6. Exceptions: See below.

For 0 and 1:

With G33, G34, G35, G331, G332, the parameter set number for the axes involved is activated in accordance with the master spindle gear stage, increased by one (corresponds with parameter set numbers 2 to 6).

For spindles, parameter sets 2 to 6 are always active, depending on the set gear stage plus one.

2: The parameter set is only ever defined via the VDI interface or SCPARA. Parameter sets 1 to 6 can be selected. Sets are selected using the NC/PLC interface signal DB31, ... DBX9.0 - .2 (selection of parameter set servo A, B, C) in the binary-coded value range 0 to 5. Binary values 6 and 7 select parameter set no. 6.

Secondary conditions:

Changeover response is determined by whether the KV factor differs between the active parameter set and the new parameter set.

Changing a parameter set where the load gearbox factors differ between the active parameter set and the new parameter set will reset the referenced signal, provided that the axis has an indirect measuring system.

The parameter set contains the following axial machine data:

MD36200 \$MA_AX_VELO_LIMIT
MD32200 \$MA_POSCTRL_GAIN
MD32800 \$MA_EQUIV_CURRCTRL_TIME
MD32810 \$MA_EQUIV_SPEEDCTRL_TIME
MD32910 \$MA_DYN_MATCH_TIME
MD31050 \$MA_DRIVE_AX_RATIO_DENOM
MD31060 \$MA_DRIVE_AX_RATIO_NUMERA

Corresponds with:

NC/PLC interface signals DB31, ... DBX9.0 - .2 (selection of parameter set servo A, B, C) and DB31, ... DBX69.0 - .2 (selected parameter set servo A, B, C)

References:

/FB/, H2, "Output of Auxiliary Functions to PLC"

36000	STOP_LIMIT_COARSE	A05	TE1, A3, B1, G2, S1, Z1
mm, degrees	Exact stop coarse	DOUBLE	NEW CONF
-			
-	-	0.04, 0.04, 0.04, 0.04, 0.04, 0.04, 0.04, 0.04...	0.0

Description:

Threshold for exact stop coarse

An NC block is considered as terminated if the actual position of the path axes is away from the setpoint position by the value entered for the exact stop limit. If the actual position of a path axis is not within this limit, the NC block is considered as not terminated, and further part program execution is not possible. The magnitude of the value entered influences the transition to the next block. The larger the value, the earlier the block change is initiated.

If the specified exact stop limit is not reached, then

- the block is considered as not terminated,
- further traversing of the axis is not possible,
- alarm 25080 Positioning monitoring is output after expiry of the time specified in MD36020 \$MA_POSITIONING_TIME (monitoring time for exact stop fine),
- the direction of movement +/- is indicated for the axis in the positioning display. The exact stop window is also evaluated for spindles in position control mode (SPCON instruction).

Special cases:

MD36000 \$MA_STOP_LIMIT_COARSE must not be set smaller than MD36010 \$MA_STOP_LIMIT_FINE (exact stop fine). To achieve the identical block change behavior as with the "exact stop fine" criterion, the exact stop coarse window may be identical to the exact stop fine window. MD36000 \$MA_STOP_LIMIT_COARSE must not be set equal to or greater than MD36030 \$MA_STANDSTILL_POS_TOL (standstill tolerance).

Related to:

MD36020 \$MA_POSITIONING_TIME (delay time, exact stop fine)

36010	STOP_LIMIT_FINE	A05	TE1, A3, B1, D1, G2, S1, Z1
mm, degrees	Exact stop fine	DOUBLE	NEW CONF
-			
-	-	0.01, 0.01, 0.01, 0.01, 0.01, 0.01, 0.01, 0.01...	0.0

Description:

Threshold for exact stop fine

See also MD36000 \$MA_STOP_LIMIT_COARSE (exact stop coarse)

Special cases:

MD36010 \$MA_STOP_LIMIT_FINE must not be set greater than MD36000 \$MA_STOP_LIMIT_COARSE (exact stop coarse).

MD36010 \$MA_STOP_LIMIT_FINE must not be set greater than or equal to MD36030 \$MA_STANDSTILL_POS_TOL (standstill tolerance).

Related to:

MD 36020: \$MA_POSITIONING_TIME (delay time, exact stop fine)

36012	STOP_LIMIT_FACTOR	A05	G1, A3, B1, G2, S1, Z1
-	Factor for exact stop coarse/fine and standstill	DOUBLE	NEW CONF
-			
-	6	1.0, 1.0, 1.0, 1.0, 1.0, 1.0	0.001

Description:

With this factor,

MD36000 \$MA_STOP_LIMIT_COARSE,

MD36010 \$MA_STOP_LIMIT_FINE,

2.3 NC machine data

MD36030 \$MA_STANDSTILL_POS_TOL

can be re-assessed as a function of the parameter set. The relationship between these three values always remains the same.

Application examples:

Adapting the positioning behavior if the mass relationships change significantly with a gear change, or if it is desired to save on machine positioning time at the cost of accuracy in various operating conditions.

Related to:

MD36000 \$MA_STOP_LIMIT_COARSE,

MD36010 \$MA_STOP_LIMIT_FINE,

MD36030 \$MA_STANDSTILL_POS_TOL

36020	POSITIONING_TIME			A05	TE1, A3, B1, G2	
s	Delay time exact stop fine			DOUBLE	NEW CONF	
-						
-	-	1.0	0.0	-	7/2	M

Description:

The following error must have reached the limit value for exact stop fine by the expiry of the time entered in this MD for traveling into the position (position setpoint has reached the destination).

The current following error is therefore continuously monitored for the time limit MD36010 \$MA_STOP_LIMIT_FINE. If this time is exceeded, alarm 25080 "Positioning monitoring" is output, and the axis stopped. The time entered in this MD should be long enough to ensure that the monitoring function is not triggered under normal operating conditions, taking into account any settling times.

Related to:

MD 36010: \$MA_STOP_LIMIT_FINE (exact stop fine)

36030	STANDSTILL_POS_TOL			A05	G1, A3, D1, G2	
mm, degrees	Standstill tolerance			DOUBLE	NEW CONF	
-						
-	-	0.2, 0.2, 0.2, 0.2, 0.2, 0.2, 0.2, 0.2...	0.0	-	7/2	M

Description:

This MD serves as a tolerance band for the following monitoring functions:

- After termination of a traversing block (position partial setpoint=0 at the end of the movement), whether the following error has reached the limit value for MD36030 \$MA_STANDSTILL_POS_TOL (standstill tolerance) is monitored after the programmable MD36040 \$MA_STANDSTILL_DELAY_TIME (delay time, standstill monitoring).
- After termination of a positioning action (exact stop fine reached), positioning monitoring is replaced by standstill monitoring. The axis is monitored for moving from its position by more than defined in MD36030 \$MA_STANDSTILL_POS_TOL (standstill tolerance).

If the setpoint position is over- or undershot by the standstill tolerance, alarm 25040 "Standstill monitoring" is output and the axis stopped.

Special cases:

The standstill tolerance must be greater than the "exact stop limit coarse".

Related to:

MD36040 \$MA_STANDSTILL_DELAY_TIME (delay time, standstill monitoring)

36040	STANDSTILL_DELAY_TIME			A05	TE1, A3, F1, G2	
s	Delay time for standstill monitoring			DOUBLE	NEW CONF	
-						
-	-	0.4	0.0	-	7/2	M

Description:

See MD36030 \$MA_STANDSTILL_POS_TOL (standstill tolerance)

36042	FOC_STANDSTILL_DELAY_TIME	A05	F1
s	Delay time for standstill monitoring w/ active torque or force limitation.	DOUBLE	NEW CONF
-			
-	-	0.4	0.0
-	-	-	7/2
-	-	-	M

Description: Only for PROFIdrive telegrams including a torque/force limiting value:
Waiting time between the end of a movement and activation of standstill monitoring with active torque/force limitation.
If the configurable end of block criterion occurs within this time, then standstill monitoring is activated.

36050	CLAMP_POS_TOL	A05	A3, D1, Z1
mm, degrees	Clamping tolerance	DOUBLE	NEW CONF
-			
-	-	0.5	0.0
-	-	-	7/2
-	-	-	M

Description: With NC/PLC interface signal DB31, ... DBX2.3 (Blocking action active), blocking monitoring is activated. If the monitored axis is forced away from the setpoint position (exact stop limit) by more than the blocking tolerance, alarm 26000 "Blocking monitoring" is output and the axis stopped.
Threshold value for clamping tolerance (half width of window).
Special cases:
The clamping tolerance must be greater than the "exact stop limit coarse".
Related to:
NC/PLC interface signal DB31, ... DBX2.3 (Blocking action active)

36051	CLAMP_POS_TOL_TIME	A05	A3, D1, Z1
s	Alarm delay time for clamping monitoring	DOUBLE	NEW CONF
-			
-	-	0.0	0.0
-	-	-	7/2
-	-	-	M

Description: The MD defines the length of time for which the clamping tolerance can be exceeded before alarm 26000 "Clamping monitoring" is output.
If the clamping tolerance is exceeded before the expiry of this time, the user is first informed via the NC/PLC interface signal DB31, ... DBX102.3 (Clamping tolerance exceeded) (without alarm)
If the clamping tolerance is undershot before the expiry of this time, the clamping monitoring is reset with the NC/PLC interface signal DB31, ... DBX102.3 (Clamping tolerance exceeded) (without alarm)
See MD36050 \$MA_CLAMP_POS_TOL (clamping tolerance).
Related to:
NC/PLC interface signal DB31, ... DBX2.3 (Clamping process active)
NC/PLC interface signal DB31, ... DBX102.3 (Clamping tolerance exceeded)

36052	STOP_ON_CLAMPING	A10	A3
-	Special functions with clamped axis	UBYTE	NEW CONF
CTEQ			
-	-	0	0
-	-	0x07	2/1
-	-	-	M

Description: This MD defines how a blocked axis is taken into account.
Bit 0 =0:
If a blocked axis is to be traversed again in continuous-path mode, it must be ensured via the part program that the path axes are stopped and that there is time for releasing the blockage.

2.3 NC machine data

Bit 0 =1:

If a blocked axis is to be traversed again in continuous-path mode, the LookAhead function stops the path motion if required until the position controller is allowed to traverse the blocked axis again, i.e. until the controller enable is set again.

Bit 1 is relevant only if bit 0 is set:

Bit 1 =0:

If a blocked axis is to be traversed again in continuous-path mode, the LookAhead function does not release the blockage.

Bit 1 =1:

If a blocked axis is to be traversed again in continuous-path mode, a traversing command for the blocked axis is given in the preceding G0 blocks so that the PLC releases the axis blockage again.

Bit 2 =0:

If an axis is to be blocked in continuous-path mode, it must be ensured in the part program that the path axes are stopped to make sure that there is time for setting the blockage.

Bit 2 =1:

If an axis is to be blocked in continuous-path mode, the LookAhead function stops the path motion prior to or in the next non-G0 block, if the axis has not yet been blocked by that time, i.e. the PLC has not yet set the feedrate override to zero.

36060	STANDSTILL_VELO_TOL			A05, A04	TE1, A2, A3, D1, Z1	
mm/min, rev/min	Threshold velocity/speed 'Axis/spindle in stop'			DOUBLE	NEW CONF	
-						
-	-	(5.0/ 1.0), (5.0/ 1.0), (5.0/ 1.0), (5.0/ 1.0), (5.0/ 1.0), (5.0...	(0./ 0.)	(1.e300/ 1.e300)	7/2	M

Description:

This MD defines the standstill range for the axis velocity / spindle speed. If the actual velocity of the axis or the actual speed of the spindle is less than the value entered in this MD, the NC/PLC interface signal DB31, ... DBX61.4 (Axis/spindle stationary) is set.

To bring the axis/spindle to a standstill under control, the pulse enable should not be removed until the axis/spindle is at a standstill. Otherwise the axis will coast down.

Related to:

NC/PLC interface signal DB31, ... DBX61.4 (Axis/spindle stationary)

36100	POS_LIMIT_MINUS			A03, A05, A11	TE1, R2, T1, A3, Z1	
mm, degrees	1st software limit switch minus			DOUBLE	NEW CONF	
CTEQ						
-	-	-1.0e8	-	-	7/2	M

Description:

Same meaning as 1st software limit switch plus, however the traversing range limitation is in the negative direction.

The MD becomes active after reference point approach if the NC/PLC interface signal DB31, ... DBX12.2 (2nd software limit switch minus) is not set.

MD irrelevant:

if axis is not referenced.

Related to:

NC/PLC interface signal DB31, ... DBX12.2 (2nd software limit switch minus)

36110	POS_LIMIT_PLUS	A03, A05, A11	TE1, R2, T1, G2, A3, Z1
mm, degrees	1st software limit switch plus	DOUBLE	NEW CONF
CTEQ			
-	-	1.0e8	- - 7/2 M

Description: A software limit switch can be activated in addition to the hardware limit switch. The absolute position in the machine axis system of the positive range limit of each axis is entered.

The MD is active after reference point approach if NC/PLC interface signal DB31, ... DBX12.3 (2nd software limit switch plus) has not been set.

MD irrelevant:

if axis is not referenced.

Related to:

NC/PLC interface signal DB31, ... DBX12.3 (2nd software limit switch plus)

36120	POS_LIMIT_MINUS2	A03, A05	TE1, A3, Z1
mm, degrees	2nd software limit switch minus	DOUBLE	NEW CONF
CTEQ			
-	-	-1.0e8	- - 7/2 M

Description: Same meaning as 2nd software limit switch plus, but the traversing range limitation is in the negative direction.

The PLC can select whether software limit switch 1 or 2 is to be active by means of the interface signal.

For example:

DB31, ... DBX12.2 = 0 (1st software limit switch minus) active for 1st axis

DB31, ... DBX12.2 = 1 (2nd software limit switch minus) active for 1st axis

MD irrelevant:

if axis is not referenced.

Related to:

NC/PLC interface signal DB31, ... DBX12.2 (2nd software limit switch minus)

36130	POS_LIMIT_PLUS2	A03, A05	TE1, A3, Z1
mm, degrees	2nd software limit switch plus	DOUBLE	NEW CONF
CTEQ			
-	-	1.0e8	- - 7/2 M

Description: This machine data can define a 2nd software limit switch position in the positive direction in the machine axis system. The PLC can select which of the two software limit switches 1 or 2 is to be active by means of an interface signal.

For example:

DB31, ... DBX12.3 = 0 (1st software limit switch plus) active for 1st axis

DB31, ... DBX12.3 = 1 (2nd software limit switch plus) active for 1st axis

MD irrelevant:

if axis is not referenced.

Related to:

NC/PLC interface signal DB31, ... DBX12.3 (2nd software limit switch plus)

36200	AX_VELO_LIMIT	A05, A11, A04	TE3, A3, G2, S1, V1
mm/min, rev/min	Threshold value for velocity monitoring	DOUBLE	NEW CONF
CTEQ			
-	6	-	(0./ 0.) (1.e300/ 1.e300) 7/2 M

2.3 NC machine data

Description:

The threshold value for actual velocity monitoring is entered in this machine data. If the axis has at least one active encoder and if this encoder is below its limit frequency, alarm 25030 "Actual velocity alarm limit" is triggered when the threshold value is exceeded, and the axis is stopped.

Settings:

- For axes, a value should be selected that is 10-15 % higher than that in MD32000 \$MA_MAX_AX_VELO (maximum axis velocity).

When temperature compensation is active MD32750 \$MA_TEMP_COMP_TYPE, the maximum axis velocity is increased by an additional factor, which is obtained from MD32760 \$MA_COMP_ADD_VELO_FACTOR (velocity increase as a result of compensation). Therefore, the following should apply for the threshold value of the velocity monitoring:

MD36200 \$MA_AX_VELO_LIMIT[n] > MD32000 \$MA_MAX_AX_VELO * (1,1 ... 1,15 + MD32760 \$MA_COMP_ADD_VELO_FACTOR)

- For spindles, a value should be selected for each gear stage that is 10-15 % above MD35130 \$MA_GEAR_STEP_MAX_VELO_LIMIT[n] (maximum speed of the gear stage).

The index of the machine data has the following coding: [control parameter set no.]: 0-5

36210	CTRLOUT_LIMIT			EXP, A05	A3, D1, G2	
%	Maximum speed setpoint			DOUBLE	NEW CONF	
CTEQ						
-	1	110.0	0	200	7/2	M

Description:

This MD defines the maximum speed setpoint in percent. 100% is the maximum speed setpoint, this corresponds to 10 V for an analog interface or the maximum speed for PROFIdrive drives (manufacturer-specific adjustable parameter in the drive, e.g. p1082 and, if applicable, p2000 for SINAMICS).

The maximum speed setpoint depends on whether there are any setpoint limitations in the speed and current controller.

An alarm is output and the axis is stopped when the limit is exceeded.

The limit is to be selected so that the maximum velocity (rapid traverse) can be reached, and an appropriate additional control margin is available.

36220	CTRLOUT_LIMIT_TIME			EXP, A05	A3	
s	Delay time for speed setpoint monitoring			DOUBLE	NEW CONF	
-						
-	1	0.0	0.0	-	7/2	M

Description:

This MD defines how long the speed setpoint may be within the limit CTRLOUT_LIMIT[n] (max. speed setpoint) until the monitoring function is triggered.

Monitoring (and with it also this machine data) is always active.

Reaching the limit renders the position control loop non-linear, which results in contour errors provided that the speed setpoint limited axis is participating in contour generation. That is why this MD has default value 0, i.e. the monitoring function responds as soon as the speed setpoint reaches the limit.

36300	ENC_FREQ_LIMIT			EXP, A02, A05, A06	A3, D1, R1, Z1	
-	Encoder limit frequency			DOUBLE	PowerOn	
-						
-	2	3.0e5, 3.0e5	0.0	-	7/2	M

Description:

This MD is used to enter the encoder frequency, which, in general, is a manufacturer specification (type plate, documentation).

For PROFIdrive:

No automatic, software-internal limitation for encoders on the PROFIdrive drive; here, the limit values of the measuring circuit module depend on the drive hardware used, i.e. known only by the drive. Therefore, it is the user who is responsible for taking into account the limit frequency of the measuring circuit module.

36302	ENC_FREQ_LIMIT_LOW			EXP, A02, A05, A06	A3, R1, S1, Z1	
%	Encoder limit frequency for new encoder synchronization.			DOUBLE	NEW CONF	
-						
-	2	99.9, 99.9	0	100	7/2	M

Description:

Encoder frequency monitoring uses a hysteresis.

MD36300 \$MA_ENC_FREQ_LIMIT defines the encoder limit frequency. The encoder is switched off when this frequency is exceeded. The encoder is switched on again when the frequency falls below that defined in MD36302 \$MA_ENC_FREQ_LIMIT_LOW.

MD36300 \$MA_ENC_FREQ_LIMIT is entered directly in Hertz,

whereas MD36302 \$MA_ENC_FREQ_LIMIT_LOW is a fraction, expressed as a percentage, of MD36300 \$MA_ENC_FREQ_LIMIT.

MD36302 \$MA_ENC_FREQ_LIMIT_LOW is therefore already correctly preset for most of the encoders used.

Exception: In the case of absolute encoders with an En-Dat interface, the limit frequency of the absolute track is significantly lower than the limit frequency of the incremental track. A low value in MD36302 \$MA_ENC_FREQ_LIMIT_LOW ensures that the encoder is not switched on again until it falls below the limit frequency of the absolute track, and therefore is not referenced until permitted by the absolute track. For spindles, this referencing is carried out automatically.

Example EnDat encoder EQN 1325:

Limit frequency of the electronics of the incremental track: 430 kHz

==> MD36300 \$MA_ENC_FREQ_LIMIT = 430 kHz

The limit frequency of the absolute track is approx. 2000 encoder rpm at 2048 increments/encoder revolution, i.e. the limit frequency is $2000/60 * 2048 \text{ Hz} = 68 \text{ kHz}$

==> MD36302 \$MA_ENC_FREQ_LIMIT_LOW = $68/430 = 15\%$

36310	ENC_ZERO_MONITORING			EXP, A02, A05	A3, R1	
-	Zero mark monitoring			DWORD	NEW CONF	
-						
-	2	0, 0	0	-	7/2	M

Description:

This MD is used to activate zero mark monitoring.

For PROFIdrive drives (the corresponding diagnostics system variables are not currently supplied for incremental measuring systems):

For PROFIdrive, the permissible deviation must be set in the drive, *not* in the NC. Zero mark monitoring reported by the drive is mapped to the NCK according to the following rule:

0: no zero mark monitoring
 100: no zero mark monitoring together with suppression of all encoder monitoring operations, i.e. not only alarm 25020 but also alarms 25000, 25010 etc. are suppressed.
 >0 but less than 100: direct triggering of power ON alarm 25000 (or 25001).
 >100: attenuated error message: reset alarm 25010 (25011) is output instead of power ON alarm 25000 (25001).

For absolute measuring systems (MD30240 \$MA_ENC_TYPE=4):

Permissible deviation in 1/2 coarse increments between the absolute and the incremental encoder track (one 1/2 coarse increment is sufficient).

2.3 NC machine data

36312	ENC_ABS_ZEROMON_WARNING			EXP, A02, A05	A3	
-	Zero mark monitoring warning level			DWORD	NEW CONF	
-						
-	2	10, 10	0	-	7/2	M

Description: Only for absolute measuring systems (MD30240 \$MA_ENC_TYPE=4):
 This MD activates zero mark diagnostics.
 0: no zero mark diagnostics
 >0: permissible deviation in 1/2 coarse increments between the absolute and the incremental encoder track (one 1/2 coarse increment is sufficient).

36314	ENC_ABS_ZEROMON_INITIAL			EXP, A02, A05	A3	
-	Warning level for absolute encoder power ON			DWORD	NEW CONF	
-						
-	2	1000, 1000	0	-	7/2	M

Description: Only for absolute measuring systems (MD30240 \$MA_ENC_TYPE=4):
 Parameterization in 1/2 coarse increments
 At absolute encoder power ON (deselect parking and similar) this MD parameterizes the previously permissible position offset (comparison of the new absolute position with the information last saved in SRAM). When the warning level is exceeded, system variable \$VA_ENC_ZERO_MON_ERR_CNT is incremented in coarse increments by the value 10000.

36400	CONTOUR_TOL			A05, A11	A3, D1, G2	
mm, degrees	Tolerance band for contour monitoring			DOUBLE	NEW CONF	
-						
-	-	1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0...	0.0	-	7/2	M

Description: Tolerance band for axial contour monitoring (dynamic following error monitoring).
 The permissible deviation between the real and the modelled following error is entered in this MD.
 The input of the tolerance band is intended to avoid spurious tripping of the dynamic following error monitoring caused by minor speed fluctuations, which occur during normal closed-loop control operations (e.g. during first cut).
 Following error modelling and thus the input of this MD depend on the position control gain MD32200 \$MA_POSCTRL_GAIN
 and, in the case of precontrol or simulation, on the accuracy of the controlled system model MD32810 \$MA_EQUIV_SPEEDCTRL_TIME (equivalent time constant for precontrol of speed control loop), as well as on the accelerations and velocities used.

36500	ENC_CHANGE_TOL			A02, A05	G1, K6, K3, A3, D1, G2, Z1	
mm, degrees	Tolerance at actual position value change.			DOUBLE	NEW CONF	
-						
-	-	0.1	0.0	-	7/2	M

Description: The permissible deviation between the actual values of the two measuring systems is entered in this MD.
 This difference must not be exceeded when switching over the measuring system used for closed-loop control, in order to avoid compensating processes that are too strong. Otherwise, the error message 25100 "Axis %1 Switchover of measuring system not possible" is generated and the switchover does not take place.
 This MD is relevant only if MD30200 \$MA_NUM_ENCS = 2.

MD36500 also limits, in the form of a ramp, the rate of change of the backlash compensation values in MD32450 \$MA_BACKLASH. The limitation depends on the setting of the position controller cycle. The lower the value in MD36500, the longer the duration of the backlash compensation during the change of direction.

This MD is relevant only if MD30200 \$MA_NUM_ENC_S = 1 or 2.

36510	ENC_DIFF_TOL	A02, A05	A3, G2
mm, degrees	Tolerance of measuring system synchronization	DOUBLE	NEW CONF
-			
-	-	0.0	0.0
-	-	-	7/2
-	-	-	M

Description: Permissible deviation between the actual values of the two measuring systems. This difference must not be exceeded during the cyclic comparison of the two measuring systems used, as otherwise error message 25105 (measuring systems deviate) would be generated.

The corresponding monitoring function is not active

- with MD input value=0,
- if less than 2 measuring systems are active/available in the axis
- or if the axis has not been referenced (at least act. closed-loop control meas. system).

With modulo axes, it is always the absolute value of the shortest/direct position difference that is monitored.

36520	DES_VELO_LIMIT	A02, A05	-
%	Threshold for setpoint velocity monitoring	DOUBLE	NEW CONF
-			
-	-	125.0	0.0
-	-	-	7/2
-	-	-	M

Description: Maximum permissible setpoint velocity as a percentage of the maximum axis velocity/spindle speed.

With MD36520 \$MA_DES_VELO_LIMIT, the position setpoint is monitored for abrupt changes. If the permissible limit value is exceeded, alarm 1016 error code 550010 is output.

With axes, this machine data refers to MD32000 \$MA_MAX_AX_VELO.

With spindles, this MD refers to the lower of the speeds set in

MD35130 \$MA_GEAR_STEP_MAX_VELO_LIMIT of the current gear stage and MD35100 \$MA_SPIND_VELO_LIMIT.

36600	BRAKE_MODE_CHOICE	EXP, A05	A3, Z1
-	Deceleration response on hardware limit switch	BYTE	PowerOn
CTEQ			
-	-	1	0
-	-	1	7/2
-	-	-	M

Description: If a rising edge of the axis-specific hardware limit switch is detected while the axis is traversing, the axis is braked immediately.

The type of braking is determined by this machine data:

Value = 0:

Controlled braking along the acceleration ramp defined by MD32300 \$MA_MAX_AX_ACCEL (axis acceleration).

Value = 1:

Rapid braking (selection of setpoint = 0) with reduction of following error.

Related to:

NC/PLC interface signal DB31, ... DBX12.1 / 12.0 (Hardware limit switch plus or minus)

2.3 NC machine data

36610	AX_EMERGENCY_STOP_TIME	A05	TE3, K3, A2, A3, N2, Z1
s	Maximum time for braking ramp in case of error.	DOUBLE	NEW CONF
-			
-	-	0.05	0.0
		1.0e15	7/2
			M

Description:

This MD defines the braking ramp time that an axis or spindle requires to brake from maximum velocity/speed to a standstill in the event of errors (e.g. EMERGENCY STOP). At the same lead/brake acceleration, standstill is reached correspondingly earlier from lower velocities/speeds.

Mechanically robust axes are normally stopped abruptly with speed setpoint 0; values in the lower ms range are appropriate in these cases (default setting).

However, high moving masses or limited mechanical conditions (e.g. gear load capacity) often have to be taken into account for spindles. This means that the MD has to be changed to set a longer braking ramp.

Notice:

- With interpolating axes or axis/spindle couplings, it cannot be ensured that the contour or coupling will be maintained during the braking phase.
- If the time set for the braking ramp for error states is too long, the controller enable will be removed although the axis/spindle is still moving. Depending on the drive type used and the activation of the pulse enable, either an immediate stop with speed setpoint 0 will be initiated or the axis/spindle will coast down without power. The time selected in MD36610 \$MA_AX_EMERGENCY_STOP_TIME should therefore be shorter than the time in MD36620 \$MA_SERVO_DISABLE_DELAY_TIME (cutout delay, controller enable) so that the configured braking ramp can be fully active throughout the entire braking operation.
- The braking ramp may be ineffective or not maintained if the active drive follows its own braking ramp logic (e.g. SINAMICS).

Related to:

MD36620 \$MA_SERVO_DISABLE_DELAY_TIME (cutout delay controller enable)

MD36210 \$MA_CTRLOUT_LIMIT (maximum speed setpoint)

36620	SERVO_DISABLE_DELAY_TIME	A05	TE3, K3, A2, A3, N2, Z1
s	Cutout delay servo enable	DOUBLE	NEW CONF
-			
-	-	0.1	0.0
		1.0e15	7/2
			M

Description:

Maximum time delay for removal of "controller enable" after faults. The speed enable (controller enable) of the drive is removed internally within the controller after the set delay time, at the latest.

The delay time entered becomes active as a result of the following events:

- Errors that lead to immediate stopping of the axes
- Removal of the interface signal DB31, ... DBX2.1 (Controller enable) from the PLC

As soon as the actual speed reaches the standstill range (MD36060

\$MA_STANDSTILL_VELO_TOL), the "controller enable" for the drive is removed. The time set should be long enough to enable the axis / spindle to brake down to a standstill from maximum traversing velocity or maximum speed. If the axis / spindle is stationary, the "controller enable" for the drive is removed immediately (i.e. the time defined in MD36620 \$MA_SERVO_DISABLE_DELAY_TIME is terminated prematurely).

Application example(s):

Speed control of the drive should be retained long enough to enable the axis / spindle to brake down to standstill from maximum traversing velocity or maximum speed.

Notice:

If the cutout delay controller enable is set too short, controller enable will be removed although the axis/spindle is still moving. This axis/spindle then coasts down without power (which may be appropriate for grinding wheels, for example); otherwise the time set in MD36620 \$MA_SERVO_DISABLE_DELAY_TIME should be longer than the duration of the braking ramp for error states (MD36610 \$MA_AX_EMERGENCY_STOP_TIME).

Related to:

NC/PLC interface signal DB31, ... DBX2.1 (Controller enable)

MD36610 \$MA_AX_EMERGENCY_STOP_TIME

For SINAMICS drives: Drive parameter P1082 (maximum speed / velocity)

36700	DRIFT_ENABLE			EXP, A07, A09	G2	
-	Automatic drift compensation			BOOLEAN	NEW CONF	
-						
-	-	FALSE	0	-	1/1	M

Description: Only for special analog and hydraulic drives (not active with PROFIdrive drives):
Automatic drift compensation is activated with MD36700 \$MA_DRIFT_ENABLE.
1: Automatic drift compensation active (only for position-controlled axes/spindles).
With automatic drift compensation, while the axis is at a standstill, the control continually calculates the additional drift value still required to ensure that the following error reaches the value 0 (compensation criterion). The total drift value is, therefore, formed from the drift basic value (MD36720 \$MA_DRIFT_VALUE) and the drift additional value.
0: Automatic drift compensation not active.
The drift value is formed only from the drift basic value (MD36720 \$MA_DRIFT_VALUE).
Not relevant for:
Non-position-controlled spindles
Related to:
MD36710 \$MA_DRIFT_LIMIT drift limit value for automatic drift compensation
MD36720 \$MA_DRIFT_VALUE drift basic value

36710	DRIFT_LIMIT			EXP, A07, A09	-	
%	Drift limit value for automatic drift compensation			DOUBLE	NEW CONF	
-						
-	1	0.0	0	1.e9	1/1	M

Description: Only for special analog and hydraulic drives (not active with PROFIdrive drives):
The magnitude of the drift additional value calculated during automatic drift compensation can be limited with MD36710 \$MA_DRIFT_LIMIT.
If the drift additional value exceeds the limit value entered in MD36710 \$MA_DRIFT_LIMIT, alarm 25070 "Drift value too large" is output and the drift additional value is limited to this value.
Not relevant for:
MD36700 \$MA_DRIFT_ENABLE = 0

36720	DRIFT_VALUE			EXP, A07, A09	-	
%	Basic drift value			DOUBLE	NEW CONF	
-						
-	1	0.0	-1e15	1e15	1/1	M

Description: Only for special analog and hydraulic drives (not active with PROFIdrive drives):
The value entered in MD36720 \$MA_DRIFT_VALUE is always added as an offset to the manipulated variable. Whereas automatic drift compensation is active only for position-controlled axes, this machine data is always active.
Special case: the following applies to PROFIdrive drives:

2.3 NC machine data

This MD can also be used for "simple" drives that have drift problems due to drive-internal implementation as analog drives. To avoid erroneous settings, this static drift compensation only becomes active with PROFIdrive if MD32250 \$MA_RATED_OUTVAL != 0 (i.e. the MD has no effect in the case of automatic interface adjustment between the NC and the drive).

Note:

Drift compensation must not be active if the DSC function (MD32640 \$MA_STIFFNESS_CONTROL_ENABLE=1) is being used, otherwise unexpected speed oscillations will occur when DSC is enabled/disabled.

Standardization: The input value is related to the corresponding interface standardization in

MD32250 \$MA_RATED_OUTVAL,

MD32260 \$MA_RATED_VELO, and

MD36210 \$MA_CTRLOUT_LIMIT.

36730	DRIVE_SIGNAL_TRACKING			A10	B3	
-	Acquisition of additional drive actual values			BYTE	PowerOn	
-						
-	-	0	0	4	7/2	M

Description: MD36730 \$MA_DRIVE_SIGNAL_TRACKING = 1 activates the acquisition of the following drive actual values (if they are made available by the drive):

- \$AA_LOAD Drive load
- \$AA_POWER Drive active power
- \$AA_TORQUE Drive torque setpoint
- \$AA_CURR Smoothed current setpoint (q-axis current) of drive

MD36730 \$MA_DRIVE_SIGNAL_TRACKING = 2 activates the acquisition of the following drive actual values:

With PROFIdrive, it must be ensured that the stated values are also transmitted in the drive actual message frame (provide sufficient message frame length on the bus, assign the values to the message frame content in the drive, e.g. use message frame 116).

- \$VA_DP_ACT_TEL shows actual value message frame words

Note: Values 3 and 4 are reserved

Note: The value range of MD36730 \$MA_DRIVE_SIGNAL_TRACKING can be restricted because of reduced functions of control systems

36750	AA_OFF_MODE			A10	2.4, 5.3, 6.2	
-	Effect of value assignment for axial override of synchr. action.			UBYTE	PowerOn	
CTEQ						
-	-	0	0	0xF	7/2	M

Description: Mode setting for axial offset \$AA_OFF
Bit 0: Effect of value assignment within a synchronized action

0: Absolute value

1: Incremental value (integrator)

Bit 1: Response of \$AA_OFF on RESET

0: \$AA_OFF is deselected on RESET

1: \$AA_OFF is retained beyond RESET

Bit 2: \$AA_OFF in JOG mode

0: No superimposed motion due to \$AA_OFF

1: A superimposed motion due to \$AA_OFF is interpolated

Bit 3: \$AA_OFF motion remains active on NC stop

0: Motion is interrupted on NC stop

1: Motion remains active on NC stop

36901	SAFE_FUNCTION_ENABLE			A05	FBSI	
-	Enable safety functions			UDWORD	PowerOn	
-						
-	-	0	0	0x81FFFB	7/2	M

Description:

The safe operation functions can be enabled for an axis/spindle with this data.

For each axis, only as many axes/spindles can be enabled for safe operation as are enabled by the global option.

The more subfunctions are set, the more CPU time the safety functions need.

Bit 0: Enables safe velocity, safe operational stop

Bit 1: Enables safe limit switches

Bit 2: Reserved for functions with absolute references (such as SE/SN)

Bit 3: Enables actual value synchronization, 2-encoder system

Bit 4: Enables external ESR activation (STOP E)

Bit 5: Enables SG offset

Bit 6: Enables external stop requests

Bit 7: Enables cam synchronization

Bit 8: Enables safe cams, pair 1, cam +

Bit 9: Enables safe cams, pair 1, cam -

Bit 10: Enables safe cams, pair 2, cam +

Bit 11: Enables safe cams, pair 2, cam -

Bit 12: Enables safe cams, pair 3, cam +

Bit 13: Enables safe cams, pair 3, cam -

Bit 14: Enables safe cams, pair 4, cam +

Bit 15: Enables safe cams, pair 4, cam -

Bit 16: Enables synchronization "n < nx", hysteresis and filtering

Bit 23: Enables deactivation of SBH/SG monitoring during external stop A

Special cases:

- When one of the bits from bit 1 is set, bit 0 also has to be set because the control switches to safe operational stop with STOP C, D, E (parameterization alarm 27033 is displayed if there is an error).
- If the global option does not enable enough axes/spindles for safe operation, then this data can be overwritten with the value 0 during runup.

Related to: Global option

36902	SAFE_IS_ROT_AX			A01, A06	FBSI	
-	Rotary axis			BOOLEAN	PowerOn	
-						
-	-	FALSE	-	-	7/2	M

Description:

States whether the axis for safe operation is a rotary axis/spindle or a linear axis.

0: Linear axis

1: Rotary axis/spindle

The value in this MD must be equal to that in MD30300 \$MA_IS_ROT_AX. A parameterization error is displayed if there is a difference.

36903	SAFE_CAM_ENABLE			A05	-	
-	Function enable safe cam track			UDWORD	PowerOn	
-						
-	-	0	0	0x3FFFFFFF	7/2	M

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Description:

With this data, 30 safe cams can be enabled for the "safe cam track" function for an axis/spindle.

The enables must only be set if the cam enable in MD36901 \$MA_SAFE_FUNCTION_ENABLE is not used.

If the "safe cam track" function is enabled, cam synchronization is automatically activated with it.

Bit 0: Enables safe cam track, cam 1
 Bit 1: Enables safe cam track, cam 2
 Bit 2: Enables safe cam track, cam 3
 Bit 3: Enables safe cam track, cam 4
 Bit 4: Enables safe cam track, cam 5
 Bit 5: Enables safe cam track, cam 6
 Bit 6: Enables safe cam track, cam 7
 Bit 7: Enables safe cam track, cam 8
 Bit 8: Enables safe cam track, cam 9
 Bit 9: Enables safe cam track, cam 10
 Bit 10: Enables safe cam track, cam 11
 Bit 11: Enables safe cam track, cam 12
 Bit 12: Enables safe cam track, cam 13
 Bit 13: Enables safe cam track, cam 14
 Bit 14: Enables safe cam track, cam 15
 Bit 15: Enables safe cam track, cam 16
 Bit 16: Enables safe cam track, cam 17
 Bit 17: Enables safe cam track, cam 18
 Bit 18: Enables safe cam track, cam 19
 Bit 19: Enables safe cam track, cam 20
 Bit 20: Enables safe cam track, cam 21
 Bit 21: Enables safe cam track, cam 22
 Bit 22: Enables safe cam track, cam 23
 Bit 23: Enables safe cam track, cam 24
 Bit 24: Enables safe cam track, cam 25
 Bit 25: Enables safe cam track, cam 26
 Bit 26: Enables safe cam track, cam 27
 Bit 27: Enables safe cam track, cam 28
 Bit 28: Enables safe cam track, cam 29
 Bit 29: Enables safe cam track, cam 30

Related to:

MD36901: \$MA_SAFE_FUNCTION_ENABLE

36904	SAFE_ADD_FUNCTION_MASK			A05	FBSI	
-	Enable additional functions for Safety Integrated			UDWORD	PowerOn	
-						
-	-	0	0	0x1	7/2	M

Description:

Bit 0: On the NCK side, braking is with stops B and C and not by the default "Speed setpoint 0". The braking on the drive side is based on the OFF3 ramp.

36905	SAFE_MODULO_RANGE			A01, A06	FBSI	
degrees	Modulo value Safe cams			DOUBLE	PowerOn	
-						
-	-	0.0	0.0	737280.0	7/2	M

Description: Actual value range in which the safe cams are calculated for rotary axes. The axis must be a rotary axis (MD36902 \$MA_SAFE_IS_ROT_AX = 1).

0: Modulo compensation after +/- 2048 revolutions (that is after 737,280 degrees)

>0 And multiples of 360 degrees: Modulo compensation after this value, for example: value = 360 --> then the actual value range lies between 0 and 359.999 degrees. That is modulo compensation is made after each revolution.

Special cases:

- If the value of this data is not 0 or a multiple of 360 degrees then a corresponding alarm is issued during power on.
- The parameterized actual value ranges of the cam positions are also checked during power on. A corresponding alarm is issued if there is a parameterization error.
- The actual value ranges set by MD36905 \$MA_SAFE_MODULO_RANGE and MD30330 \$MA_MODULO_RANGE must be integers and divisible without a remainder.

Related to:

MD30330: \$MA_MODULO_RANGE

MD36935: \$MA_SAFE_CAM_POS_PLUS[n]

MD36937: \$MA_SAFE_CAM_POS_MINUS[n]

36906	SAFE_CTRLOUT_MODULE_NR			A01	-	
-	SI drive assignment			BYTE	PowerOn	
-						
-	-	1, 2, 3, 4, 5, 6, 7, 8...	1	31	7/2	M

Description: Assignment of the drive for SI motion monitoring.

The entry refers to data field MD10393 \$MN_SAFE_DRIVE_LOGIC_ADDRESS.

The drive assigned must be the same as the one selected using MD30110 \$MA_CTRLOUT_MODULE_NR and MD13050 \$MN_DRIVE_LOGIC_ADDRESS.

36907	SAFE_DRIVE_PS_ADDRESS			A01	-	
-	PROFIsafe address of the drive			UDWORD	PowerOn	
-						
-	-	0	0x0	0x7FFFFFFF	ReadOnly	S

Description: This NCK MD contains the PROFIsafe address of the drive assigned to this axis. This MD is read from drive parameter r9810 during power on. This address must be unique across all axes.

This MD cannot be written, the PROFIsafe address must be parameterized in the drive.

The value of this MD is included in the calculation of MD36998 \$MA_SAFE_ACT_CHECKSUM[2].

36909	SAFE_ENC_MEAS_STEPS_RESOL			A02	FBSI	
mm	Resolving measurement steps for linear absolute encoders			DOUBLE	PowerOn	
-						
-	-	0.0001	0.0	4295	ReadOnly	S

Description: Sets the resolution of the absolute position for a linear absolute encoder.

When powering up, this information for linear DRIVE-CLiQ encoders is read from drive parameter r0469 and is compared with the value last saved. This MD is then overwritten. If not equal, then alarm 27036 is output.

The value of this MD is incorporated in the checksum calculation of MD36998 \$MA_SAFE_ACT_CHECKSUM[0].

Corresponds with:

MD36913: \$MA_SAFE_ENC_MEAS_STEPS_POS1

MD36917: \$MA_SAFE_ENC_GRID_POINT_DIST

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36912	SAFE_ENC_INPUT_NR			A01, A02	FBSI	
-	Actual value assignment			BYTE	PowerOn	
-						
-	-	1	1	3	7/2	M

Description: Number of the actual value input through which the safe actual values are recorded.
 Related to:
 p9526, p0189

36913	SAFE_ENC_MEAS_STEPS_POS1			A02	FBSI	
-	Non-safety-relevant measurement steps POS1			DWORD	PowerOn	
-						
-	-	22000	0	-	ReadOnly	S

Description: Sets the non safety-relevant measurement steps of the position value POS1.
 When powering up, this information for linear DRIVE-CLiQ encoders is read out of drive parameter r0473 and compared with the value last saved here. This MD is then overwritten. If not equal, then alarm 27036 is output.
 The value of this MD is incorporated in the checksum calculation of MD36998
 \$MA_SAFE_ACT_CHECKSUM[0].
 Corresponds with:
 MD36909: \$MA_SAFE_ENC_MEAS_STEPS_RESOL
 MD36917: \$MA_SAFE_ENC_GRID_POINT_DIST

36914	SAFE_SINGLE_ENC			A01, A02	-	
-	SI single-encoder system			BOOLEAN	PowerOn	
-						
-	-	TRUE	-	-	7/2	M

Description: Identifier that SI is carried out with an encoder. This MD must be parameterized to 0 if different encoders are used for the Safety Integrated monitoring functions in the NCK and in the drive.

36916	SAFE_ENC_IS_LINEAR			A02	FBSI	
-	Linear encoder			BOOLEAN	PowerOn	
-						
-	-	FALSE	-	-	7/2	M

Description: Defines whether a linear or a rotary encoder is connected.
 0: Rotary encoder is connected, its resolution is defined in MD36918
 \$MA_SAFE_ENC_RESOL, and converted with MD36920 \$MA_SAFE_ENC_GEAR_PITCH, MD36921
 \$MA_SAFE_ENC_GEAR_DENOM[n], and MD36922 \$MA_SAFE_ENC_GEAR_NUMERA[n] on the load side.
 MD36917 \$MA_SAFE_ENC_GRID_POINT_DIST has no meaning.
 1: Linear encoder is connected, its resolution is defined in MD36917
 \$MA_SAFE_ENC_GRID_POINT_DIST. MD36918 \$MA_SAFE_ENC_RESOL, MD36920
 \$MA_SAFE_ENC_GEAR_PITCH, MD36921 \$MA_SAFE_ENC_GEAR_DENOM[n], and MD36922
 \$MA_SAFE_ENC_GEAR_NUMERA[n] have no meaning. If the value changes, alarm 27036 is
 triggered.
 Related to:
 With 0:
 MD36918 \$MA_SAFE_ENC_RESOL
 MD36920 \$MA_SAFE_ENC_GEAR_PITCH
 MD36921 \$MA_SAFE_ENC_GEAR_DENOM[n]
 MD36922 \$MA_SAFE_ENC_GEAR_NUMERA[n]

With 1:

MD36917 \$MA_SAFE_ENC_GRID_POINT_DIST

36917	SAFE_ENC_GRID_POINT_DIST			A02	FBSI	
mm	Scale division for linear scale			DOUBLE	PowerOn	
-						
-	-	0.01	0.00001	250	7/2	M

Description: Definition of the grid spacing of the linear scale used.
Not relevant for a rotary encoder.
Alarm 27036 is triggered if the value changes.

36918	SAFE_ENC_RESOL			A02	FBSI	
-	Encoder lines per revolution			DWORD	PowerOn	
-						
-	-	2048	1	100000000	7/2	M

Description: Definition of the lines per revolution for a rotary encoder.
Not relevant for a linear encoder.
Alarm 27036 is triggered if the value changes.

36919	SAFE_ENC_PULSE_SHIFT			A02	-	
-	Shift factor of encoder multiplication			BYTE	PowerOn	
-						
-	-	11	2	18	ReadOnly	S

Description: Slide factor of the multiplication factor (high-resolution) of the encoder used for the Safety Integrated monitoring functions in the NCK. The encoder value must be divided by 2, the number of times needed to get the number of encoder lines. A slide factor of 11 corresponds to an encoder multiplication factor of 2048. If the drive provides this information (r0979[3,13,23]), this MD is automatically assigned internally after power ON of the drive. If the value changes during this process, alarm 27036 is triggered.

36920	SAFE_ENC_GEAR_PITCH			A02	FBSI	
mm	Leadscrew pitch			DOUBLE	PowerOn	
-						
-	-	10.0	0.1	10000.	7/2	M

Description: Gear ratio between encoder and load for a linear axis with a rotary encoder.

36921	SAFE_ENC_GEAR_DENOM			A02	FBSI	
-	Denominator of gearbox encoder/load			DWORD	PowerOn	
-						
-	8	1, 1, 1, 1, 1, 1, 1, 1	1	2147000000	7/2	M

Description: Numerator of the gearbox between encoder and load, that is the numerator of the fraction: number of encoder revolutions / number of load revolutions
n = 0, 1, ... , 7 stand for gear stages 1, 2, ... 8
The current value is selected via safety-relevant input signals (SGE).
Related to:
MD36922: \$MA_SAFE_ENC_GEAR_NUMERA[n]

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36922	SAFE_ENC_GEAR_NUMERA			A02	FBSI	
-	Numerator of gearbox encoder/load			DWORD	PowerOn	
-						
-	8	1, 1, 1, 1, 1, 1, 1, 1	1	2147000000	7/2	M

Description: Numerator of the gearbox between encoder and load, that is the numerator of the fraction: number of encoder revolutions / number of load revolutions
 $n = 0, 1, \dots, 7$ stand for gear stages 1, 2, ... 8
The current value is selected via safety-relevant input signals (SGE).
Related to:
MD36921: \$MA_SAFE_ENC_GEAR_DENOM[n]

36923	SAFE_INFO_ENC_RESOL			A02, A08	-	
mm, degrees	Safe encoder resolution			DOUBLE	PowerOn	
-						
-	8	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	-	-	ReadOnly	S

Description: Display data:
Resolution of the encoder used in the relevant gear stage for the Safety Integrated monitoring functions. A single encoder system can monitor safe positions with this accuracy. This MD is 0 if different encoders are used in the drive and in the NCK for the Safety Integrated monitoring functions.

36924	SAFE_ENC_NUM_BITS			A02	-	
-	Bit information of the redundant actual value			DWORD	PowerOn	
-						
-	4	16,2,16,16	-16	32	ReadOnly	S

Description: Information about the redundant actual value:

- Array index 0: Number of valid bits of the redundant actual value
- Array index 1: Number of fine resolution bits of the redundant actual value
- Array index 2: Number of relevant bits of the redundant actual value
- Array index 3: Most significant bit of the redundant coarse position

This information is read out when powering up (for DRIVE-CLiQ encoders from drive parameters p0470, p0471, p0472, and p0475; the default values apply for SMI/SMC/SME encoders) and compared with the most recent values saved here. This MD is then overwritten. In the case of inequality, alarm 27035 or 27036 is output. The values from MD36924 \$MA_SAFE_ENC_NUM_BITS[0,1] are included in the calculation of MD36998 \$MA_SAFE_ACT_CHECKSUM[1]. The values from MD36924 \$MA_SAFE_ENC_NUM_BITS[2,3] are included in the calculation of MD36998 \$MA_SAFE_ACT_CHECKSUM[0].

If the combination of several values is incorrect or the number of relevant bits (index 2) is equal to 0, then alarm 27038 is output.

36925	SAFE_ENC_POLARITY			A02	FBSI	
-	Direction reversal of actual value			DWORD	PowerOn	
-						
-	-	1	-1	1	7/2	M

Description: A direction reversal of the actual value can be set with this data.

-1: Direction reversal
0: No direction reversal or
1: No direction reversal

36926	SAFE_ENC_IS_GEAR_REVERSAL			A02	FBSI	
-	Direction reversal of gear			BOOLEAN	PowerOn	
-						
-	8	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE	-	-	7/2	M

Description: Setting the direction reversal for the gear.
 0 (FALSE): No direction reversal
 1 (TRUE): Direction reversal
 n = 0, 1, ... 7 stand for gear stages 1, 2, ... 8
 The current value is selected via safety-related input signals (SGE).

36927	SAFE_ENC_MOD_TYPE			A02	-	
-	Encoder evaluation type			BYTE	PowerOn	
-						
-	-	1	-	-	ReadOnly	S

Description: Type of encoder evaluation used for Safety Integrated on this axis.
 1 = Sensor Module (SMI, SMC, SME)
 2 = DRIVE-CLiQ encoder
 3 = EnDatV2.2 converter
 This type is read out from drive parameter r9527 when powering up. If a valid value has not been entered, alarm 27038 is output. If the drive parameter contains a valid value, this is compared with the last value stored in this MD. This MD is then overwritten. In the event of inequality, alarm 27035 is output. The value of this MD is included in the calculation of MD36998 \$MA_SAFE_ACT_CHECKSUM[1].

36928	SAFE_ENC_IDENT			A02	-	
-	Encoder identification			UDWORD	PowerOn	
-						
-	3	0, 0, 0	0x0	0xFFFFFFFF	ReadOnly	S

Description: Identification of the encoder evaluation used for Safety Integrated on this axis. This identification is read out during power-on by the encoder evaluation (drive parameter r9881), and compared with the last value stored here. This MD is then overwritten. The value of this MD is included in the calculation of MD36998 \$MA_SAFE_ACT_CHECKSUM[1].
 Related to:
 r9881: SI Motion Sensor Module Node Identifier second channel

36929	SAFE_ENC_CONF			A02	-	
-	Configuration of the redundant actual value			UDWORD	PowerOn	
-						
-	-	0	0x0	0x7FFFFFFF	ReadOnly	S

Description: Configuration of the redundant actual value for DRIVE-CLiQ encoders:
 Bit 0: Up-down counter
 = 0: Down counter
 = 1: Up counter
 Bit 1: Encoder CRC: Processing of redundant coarse position
 = 0: Most significant byte first
 = 1: Least significant byte first
 Bit 2: Redundant coarse position MSB-/LSB-justified

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= 0: Redundant coarse position LSB-justified
 = 1: Redundant coarse position MSB-justified
 Bit 4: Binary comparison not possible
 = 0: Binary comparison possible
 = 1: Binary comparison not possible

This information is read out from drive parameter r0474 during ramp-up for DRIVE-CLiQ encoders, and compared with the last value stored here (the default values apply to SMI/SMC/SME encoders). This MD is then overwritten. In the event of inequality, alarm 27035 is output. The value of this MD is included in the calculation of MD36998 \$MA_SAFE_ACT_CHECKSUM[1].

If an unknown bit is set in drive parameter r0474, alarm 27038 is output. The alarm output at this location can be suppressed using MD10096 \$MN_SAFE_DIAGNOSIS_MASK, bit 3 = 1.

36930	SAFE_STANDSTILL_TOL			A05	FBSI	
mm, degrees	Standstill tolerance			DOUBLE	PowerOn	
-						
-	-	1.	0.	100.	7/2	M

Description: Definition of the tolerance for safe operational stop.

The control triggers alarm 27010 with STOP B if the difference between position limit value and actual position value is greater than this tolerance when safe operational stop is selected. The position limit value is the actual position value at the time safe operational stop was selected.

Related to:

MD36956: \$MA_SAFE_PULSE_DISABLE_DELAY

36931	SAFE_VELO_LIMIT			A05, A04	FBSI	
mm/min, rev/min	Limit value for safe velocity			DOUBLE	PowerOn	
-						
-	4	2000., 2000., 2000., 2000.	0.0	-	7/2	M

Description: Definition of the limit values for the safe velocities 1, 2, 3 and 4.

If SG1, SG2, SG3 or SG4 is selected and the current velocity exceeds this limit value, the control triggers alarm 27011 with the stop response configured in MD36961 \$MA_SAFE_VELO_STOP_MODE or MD36963 \$MA_SAFE_VELO_STOP_REACTION.

n = 0, 1, 2, 3 stand for the limit values of SG1, SG2, SG3, SG4

Special cases:

- In a 1-encoder system with SBH/SG active, the velocity is monitored according to the encoder frequency limit. A corresponding alarm is output if this is exceeded.

Related to:

MD36961: \$MA_SAFE_VELO_STOP_MODE

MD36963: \$MA_SAFE_VELO_STOP_REACTION

36932	SAFE_VELO_OVR_FACTOR			A05, A04	FBSI	
%	SG offset values			DOUBLE	PowerOn	
-						
-	16	100.0, 100.0, 100.0, 100.0, 100.0, 100.0, 100.0, 100.0, 100.0,	1.0	100.0	7/2	M

Description: Overrides for the limit value of safe velocities 2 and 4 can be selected via the SGEs, and the associated override value (percentage values) can be set with this MD.

n = 0, 1, ... , 15 stand for overrides 0, 1, ... 15

Note:

The function "Override safe speed" is enabled by MD 36901 \$MA_SAFE_FUNCTION_ENABLE. This override is inactive for the limit values of velocities 1 and 3.

Related to:

MD36978: \$MA_SAFE_OVR_INPUT[n]

MD36931: \$MA_SAFE_VELO_LIMIT[n]

36933	SAFE_DES_VELO_LIMIT			A05, A04	FBSI	
%	SG setpoint speed limit			DOUBLE	Reset	
-						
-	4	0.0,0.0,0.0,0.0	0	100	7/2	M

Description:

Weighting factors for determining the setpoint velocity limit.

The active weighting factor is selected via the axis-specific NC/PLC interface DB31, ... DBX34.0 - .1 .

Parameterization:

To set this MD optimally, it may be necessary to make a number of changes to take the dynamic performance of the drives into account.

Effect of SI monitoring with NCK involvement:

- When 0% is entered, the setpoint velocity limit is inactive.
- When 100% is entered, the setpoint is limited to the active SG stage.
- The active actual velocity limit is weighted with the selected factor, and specified to the interpolator as the setpoint limit.
- If SBH is selected, setpoint 0 is specified.
- This data is not included in the cross-check with the drive.
- This data is not included in the axis-specific checksum MD36998 \$MA_SAFE_ACT_CHECKSUM[], as it involves a 1-channel function.

Effect of drive-autonomous SI monitoring:

- The precondition is that the connection has been activated in the NCK via SIC (MD37950 \$MA_SAFE_INFO_ENABLE, bit 0).
- When 0% is entered, the NCK influence on the setpoint limit is inactive. The setpoint limit corresponds to the value read from the drive via SIC.
- When values > 0% are entered, the NCK influence on the setpoint velocity limit is active. It affects the setpoint limit read from the drive via SIC.
- The value read from the drive via SIC is weighted with the selected factor, and specified to the interpolator as the setpoint limit.
- The parameterizable setpoint limit in the drive (p9533) is active independently of the NCK limit.

Special cases:

- If the PLC user program does not contain any settings for selecting the weighting factor, the MD value from MD36933 \$MA_SAFE_DES_VELO_LIMIT[0] applies.

36934	SAFE_POS_LIMIT_PLUS			A03, A05	FBSI	
mm, degrees	Upper limit of safe end position			DOUBLE	PowerOn	
-						
-	2	100000., 100000.	-2147000	2147000	7/2	M

Description:

Definition of the upper limit value for safe end positions 1 and 2.

If SE1 or SE2 is selected and the current actual position is greater than this limit value, the control triggers alarm 27012 with the stop response configured in MD36962 \$MA_SAFE_POS_STOP_MODE and switches to SBH. Stop responses STOP B and A follow if SBH is violated.

n = 0, 1 stand for the upper limit values of SE1, SE2

Related to:

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MD36962: \$MA_SAFE_POS_STOP_MODE

MD36935: \$MA_SAFE_POS_LIMIT_MINUS[n]

MD36901: \$MA_SAFE_FUNCTION_ENABLE

Special cases:

- A parameterization error is displayed if a value is entered in MD36934 \$MA_SAFE_POS_LIMIT_PLUS[n] which is less than or equal to that in MD36935 \$MA_SAFE_POS_LIMIT_MINUS[n].

36935	SAFE_POS_LIMIT_MINUS			A03, A05	FBSI	
mm, degrees	Lower limit of safe end position			DOUBLE	PowerOn	
-						
-	2	-100000., -100000.	-2147000	2147000	7/2	M

Description:

Definition of the lower limit value for safe end positions 1 and 2.

If SE1 or SE2 is selected and the current actual position is less than this limit value, the control triggers alarm 27012 with the stop response configured in MD36962 \$MA_SAFE_POS_STOP_MODE and switches to SBH. Stop responses STOP B and A follow if SBH is violated.

n = 0, 1 stand for the lower limit values of SE1, SE2

Related to:

MD36962: \$MA_SAFE_POS_STOP_MODE

MD36934: \$MA_SAFE_POS_LIMIT_PLUS[n]

Special cases:

- A parameterization error is displayed if a value is entered in MD36934 \$MA_SAFE_POS_LIMIT_PLUS[n] which is less than or equal to that in MD36935 \$MA_SAFE_POS_LIMIT_MINUS[n].

36936	SAFE_CAM_POS_PLUS			A03, A05	FBSI	
mm, degrees	Plus cam position for safe cams			DOUBLE	PowerOn	
-						
-	30	10., 10., 10., 10., 10., 10., 10., 10., 10., 10., 10., 10., 10.,	-2147000	2147000	7/2	M

Description:

Definition of the plus cam positions for the safe cams SN1 +, SN2 +, SN3 + and SN4 +, ...

The following applies to the function "Safe cams":

If, with activated safe cams (MD36901 \$MA_SAFE_FUNCTION_ENABLE), the actual position is greater than this value, the corresponding safety-relevant output signal (SGA) is set to 1. If the actual position falls below this value, the SGA is set to 0.

n = 0, 1, 2, 3 stand for plus cam positions of SN1 +, SN2 +, SN3 +, SN4 +

The following applies to the function "Safe cam track":

If the function "Safe cam track" has been enabled (MD36903 \$MA_SAFE_CAM_ENABLE), the safety-related output signals "Cam track" and "Cam range" are set in accordance with the parameterization in MD36938 \$MA_SAFE_CAM_TRACK_ASSIGN[n].

n = 0 ... 29 stand for plus cam positions of SN1+, SN2+, ..., SN30+.

Related to:

MD36901: \$MA_SAFE_FUNCTION_ENABLE[n]

MD36903: \$MA_SAFE_CAM_ENABLE

MD36937: \$MA_SAFE_CAM_POS_MINUS[n]

MD36938: \$MA_SAFE_CAM_TRACK_ASSIGN[n]

MD36988: \$MA_SAFE_CAM_PLUS_OUTPUT[n]

MD37900: \$MA_SAFE_CAM_TRACK_OUTPUT[n]

MD37901/37902/37903/37904: \$MA_SAFE_CAM_RANGE_OUTPUT_1/2/3/4[n]

MD37906/37907/37908/37909: \$MA_SAFE_CAM_RANGE_BIN_OUTPUT_1/2/3/4[n]

36937	SAFE_CAM_POS_MINUS			A03, A05	FBSI	
mm, degrees	Minus cam position for safe cams			DOUBLE	PowerOn	
-						
-	30	-10., -10., -10., -10., -10., -10., -10., -10., -10., -10.,	-2147000	2147000	7/2	M

Description: Definition of the minus cam position for the safe cams SN1 -, SN2 -, SN3 -, ...

The following applies to the function "Safe cams":

If, with activated safe cams (MD36901 \$MA_SAFE_FUNCTION_ENABLE), the actual position is greater than this value, the corresponding safety-related output signal (SGA) is set to 1. If the actual position falls below this value, the SGA is set to 0.

n = 0, 1, 2, 3 stand for minus cam positions of SN1 -, SN2 -, SN3 -, SN4 -

The following applies to the function "Safe cam track":

If the function "Safe cam track" has been enabled (MD36903 \$MA_SAFE_CAM_ENABLE), the safety-related output signals "Cam track" and "Cam range" are set in accordance with the parameterization in MD36938 \$MA_SAFE_CAM_TRACK_ASSIGN[n].

n = 0 ... 29 stand for minus cam positions of SN1-, SN2-, ..., SN30-.

Related to:

MD36901: \$MA_SAFE_FUNCTION_ENABLE

MD36903: \$MA_SAFE_CAM_ENABLE

MD36936: \$MA_SAFE_CAM_POS_PLUS[n]

MD36938: \$MA_SAFE_CAM_TRACK_ASSIGN[n]

MD36989: \$MA_SAFE_CAM_MINUS_OUTPUT[n]

MD37900: \$MA_SAFE_CAM_TRACK_OUTPUT[n]

MD37901/37902/37903/37904: \$MA_SAFE_CAM_RANGE_OUTPUT_1/2/3/4[n]

MD37906/37907/37908/37909: \$MA_SAFE_CAM_RANGE_BIN_OUTPUT_1/2/3/4[n]

36938	SAFE_CAM_TRACK_ASSIGN			A01, A05	FBSI	
-	Cam track assignment			DWORD	PowerOn	
-						
-	30	100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112,	100	414	7/2	M

Description: Assignment of the individual cams to the max. 4 cam tracks including definition of the numerical value for SGA "Cam range".

>The hundreds digit defines to which cam track the cam is assigned. Valid values are 1, 2, 3 or 4.

The tens and ones digits include the numerical value that is to be reported to the safe logics as SGA "Cam range" and processed there. Valid values are 0 to 14, while each numerical value per cam track may be used only once.

Therefore the valid value range of this machine data is:

100...114, 200...214, 300...314, 400...414

Examples:

MD36938 \$MA_SAFE_CAM_TRACK_ASSIGN[0] = 207: cam 1 (index 0) is assigned to cam track 2.

If the position is within the range of this cam, a 7 is entered in SGA "Cam range" of the 2nd cam track.

MD36938 \$MA_SAFE_CAM_TRACK_ASSIGN[5] = 100: cam 6 (index 5) is assigned to cam track 1.

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If the position is within the range of this cam, a 0 is entered in SGA "Cam range" of the 1st cam track.

Related to:

MD36903: \$MA_SAFE_CAM_ENABLE

MD36936: \$MA_SAFE_CAM_POS_PLUS[n]

MD36937: \$MA_SAFE_CAM_POS_MINUS[n]

MD37900: \$MA_SAFE_CAM_TRACK_OUTPUT[n]

MD37901/37902/37903/37904: \$MA_SAFE_CAM_RANGE_OUTPUT_1/2/3/4[n]

MD37906/37907/37908/37909: \$MA_SAFE_CAM_RANGE_BIN_OUTPUT_1/2/3/4[n]

36940	SAFE_CAM_TOL			A05	FBSI	
mm, degrees	Tolerance for safe cams			DOUBLE	PowerOn	
-						
-	-	0.1	0.001	10	7/2	M

Description: As a result of differing encoder mounting positions and differing cycle and run times, the cam signals of the two monitoring channels never switch at exactly the same position or at exactly the same time.

This data defines the tolerance as a load-side path for all cams, within which the monitoring channels can have different signal states for the same cam without triggering alarm 27001.

Recommendation:

Enter a value equal to or slightly larger than that in MD36942 \$MA_SAFE_POS_TOL.

36942	SAFE_POS_TOL			A05	FBSI	
mm, degrees	Tolerance actual value cross-check			DOUBLE	PowerOn	
-						
-	-	0.1	0.001	360	7/2	M

Description: Because of varying installation locations for the encoder, backlash, torsion, leadscrew error etc, the two actual positions acquired simultaneously by NCK and drive may differ from one another.

The tolerance for the cross-check of the actual positions in the two monitoring channels is entered in this data.

Special cases:

- The prime consideration for defining this tolerance are the values from the machine-specific risk analysis.
- If this tolerance is exceeded, stop reaction STOP F ensues.

36944	SAFE_REFP_POS_TOL			A05	FBSI	
mm, degrees	Tolerance actual value check (referencing)			DOUBLE	PowerOn	
-						
-	-	0.01	0	36	7/2	M

Description: This data defines the tolerance for checking the actual values after referencing (for an incremental encoder) or during power-on (for an absolute encoder).

Referencing determines an absolute actual position of the axis. A second absolute actual position is derived from the last stored standstill position before the control was switched off and the path traversed since power-on. The control checks the actual values after referencing with these two absolute positions, the path traversed and this data.

The following influences must be taken into account when determining the tolerance values:

backlash, leadscrew error, compensations (max. compensation values with LEC, sag and temperature compensation), temperature errors, torsion (2-encoder system), gear tolerance in variable gears, coarser resolution (2-encoder system), oscillation distance with variable gears.

Note:

If the two absolute actual positions differ by more than the value in this data when the user enable is given, alarm 27001 is displayed with error code 1003, and a new user enable is required for referencing.

36945	SAFE_VELO_X_FILTER_TIME			A04, A05	FBSI	
s	Filter n < nx			DOUBLE	PowerOn	
-						
-	-	0	0	0.5	7/2	M

Description: Setting the filter time to form the SGA "n < nx"
The filtering must be activated by setting bit 16 in MD36901 \$MA_SAFE_FUNCTION_ENABLE.
Filtering is not active with default value 0.
Parameterizing a filter time not equal to 0 increases the reaction time of SGA "n < nx".
Related to:
MD36946: \$MA_SAFE_VELO_X
MD36947: \$MA_SAFE_VELO_X_HYSTERESIS

36946	SAFE_VELO_X			A04, A05	FBSI	
mm/min, rev/min	Velocity limit n < nx			DOUBLE	PowerOn	
-						
-	-	(20./ 20)	(0./0.)	(1000./1000.)	7/2	M

Description: This data defines the limit velocity n_x for the SGA "n < nx".
SGA "n < nx" is set if this velocity limit is undershot.
If this machine data has the value 0, the function "n < nx" is not active.
Note:
To evaluate SGA "n < nx", an I/O assignment must be made in MD36985 \$MA_SAFE_VELO_X_STATUS_OUTPUT.

36947	SAFE_VELO_X_HYSTERESIS			A04, A05	FBSI	
mm/min, rev/min	Velocity hysteresis n < nx			DOUBLE	PowerOn	
-						
-	-	(10./10)	(0./0.)	(500./500.)	7/2	M

Description: Setting of the hysteresis threshold to form the SGA "n < nx".
This MD is used in addition to the hysteresis to check the velocity in both monitoring channels at the threshold n_x . The velocity must not differ more than the value of this MD, otherwise a Stop F will be output with error code 2.
MD36947 \$MA_SAFE_VELO_X_HYSTERESIS must be less than or equal to 3/4 MD36946 \$MA_SAFE_VELO_X.
The function "Synchronization "n < nx", hysteresis and filtering" must be active (MD36901 \$MA_SAFE_FUNCTION_ENABLE, bit 16 = 1).
Related to:
MD36945: \$MA_SAFE_VELO_X_FILTER_TIME
MD36946: \$MA_SAFE_VELO_X

2.3 NC machine data

36948	SAFE_STOP_VELO_TOL			A04, A05	FBSI	
mm/min, rev/min	Velocity tolerance for Safe monitoring of acceleration			DOUBLE	PowerOn	
-						
-	-	(300./ 50.)	(0./ 0.)	(120000./ 20000.)	7/2	M

Description: Tolerance of the actual velocity for safe monitoring of the acceleration (SBR).
This tolerance is added to the actual velocity after safe monitoring of the acceleration has been activated (by triggering a Stop B or C).
The actual velocity must not be greater than the limit thus defined.
Otherwise a Stop A is triggered. This reveals an acceleration of the drive as quickly as possible.

36949	SAFE_SLIP_VELO_TOL			A04, A05	FBSI	
mm/min, rev/min	Slip velocity tolerance			DOUBLE	PowerOn	
-						
-	-	(6./ 1.)	(0./ 0.)	(1000./ 1000.)	7/2	M

Description: Difference in velocity between the motor and load sides that is tolerated in a 2-encoder system, without the data cross-check between drive and NCK signaling an error.
MD36949 \$MA_SAFE_SLIP_VELO_TOL is only evaluated if MD36901 \$MA_SAFE_FUNCTION_ENABLE, bit3 is set.

36950	SAFE_MODE_SWITCH_TIME			A05	FBSI	
s	Tolerance time for SGE switchover			DOUBLE	PowerOn	
-						
-	-	0.5	0	10.	7/2	M

Description: SGE switchovers are not active simultaneously because the data transfer runtimes of the SGEs differ in the two monitoring channels. The data cross-check would report an error in this case.
This data defines the length of time after SGE switchovers during which the actual values and the monitoring results are not cross-checked (the machine data continue to be compared!). The selected monitoring continues to run uninterrupted in both monitoring channels.
A safe function becomes active in a monitoring channel as soon as the selection or switchover is detected in this channel.
The differing runtime is mainly determined by the PLC cycle time.
System-related minimum tolerance time: 2 x PLC cycle time (maximum cycle) + 1 x IPO cycle time.
The runtime differences must also be taken into account in the external circuit (e.g. relay switching times).

36951	SAFE_VELO_SWITCH_DELAY			A05	FBSI	
s	Delay time for velocity changeover			DOUBLE	PowerOn	
-						
-	-	0.1	0	600.	7/2	M

Description: A timer with this value is started on transition from a higher to a lower safe velocity or on selection of the safe operating stop when safe velocity is active.
The parameterized value selected must be as low as possible.
The last selected velocity limit value continues to be monitored while the timer is running. During this time, the axis/spindle can be decelerated, for example via the PLC user program, without the monitoring reporting an error and triggering a stop response.
Special cases:

- The timer is canceled immediately on switching to a limit greater than or equal to the previously active SG limit.
- The timer is canceled immediately on switching to "Non-safe operation" (SGE "Deselect SBH/SG=1).
- The timer is retriggered (restarted) on switching to a limit less than the previously active SG limit or to SBH while the timer is running.

36952	SAFE_STOP_SWITCH_TIME_C			A05	FBSI	
s	Transition time STOP C to safe standstill			DOUBLE	PowerOn	
-						
-	-	0.1	0	600.	7/2	M

Description: This data defines the time after which a switch is made to safe operational stop when a STOP C has been triggered.

The parameterized value selected must be as low as possible.

Safe operational stop is monitored after this time has expired. STOP A or B is triggered if the axis/spindle could not be stopped.

36953	SAFE_STOP_SWITCH_TIME_D			A05	FBSI	
s	Transition time STOP D to safe standstill			DOUBLE	PowerOn	
-						
-	-	0.1	0	600.	7/2	M

Description: This data defines the time after which a switch is made to safe operational stop when a STOP D has been triggered.

The parameterized value selected must be as low as possible.

Safe operational stop is monitored after this time has expired. STOP B is triggered if the axis/spindle could not be stopped.

36954	SAFE_STOP_SWITCH_TIME_E			A05	FBSI	
s	Transitional period STOP E to safe standstill			DOUBLE	PowerOn	
-						
-	-	0.1	0	600.	7/2	M

Description: Time period is specified in this data after which switchover to safe operating stop is performed if a STOP E is triggered.

The parameterized value selected must be as small as possible.

After the time has elapsed, monitoring for safe operating stop is performed. If the axis/spindle has still not been stopped, STOP B is triggered.

36955	SAFE_STOP_SWITCH_TIME_F			A05	FBSI	
s	Transition time STOP F to STOP B			DOUBLE	PowerOn	
-						
-	-	0.0	0	600.	7/2	M

Description: Time period after which a switch over takes place from stop F to stop B with active monitoring functions.

The parameterized value selected must be as low as possible.

During this time, another deceleration reaction can be activated, e.g. by means of synchronized actions.

The switch over also takes place if a C/D/E stop occurs during this time.

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36956	SAFE_PULSE_DISABLE_DELAY			A05	FBSI	
s	Delay time for pulse suppression			DOUBLE	PowerOn	
-						
-	-	0.1	0	600.	7/2	M

Description: On STOP B, deceleration is made with "speed setpoint 0" (or OFF3 ramp) , and changed to STOP A for pulse suppression after the delay time defined with this data.
The parameterized value selected must be as low as possible.

Special cases:

- The pulse suppression is performed earlier than defined in this data if the condition for pulse suppression is present via MD36960 \$MA_SAFE_STANDSTILL_VELO_TOL or via MD36620 \$MA_SERVO_DISABLE_DELAY_TIME.
- If the time is set in this data to ZERO, then on STOP B an immediate change is made to STOP A (immediate pulse suppression).

Relating to:
MD36960: \$MA_SAFE_STANDSTILL_VELO_TOL
MD36620: \$MA_SERVO_DISABLE_DELAY_TIME
MD36060: \$MA_STANDSTILL_VELO_TOL

36957	SAFE_PULSE_DIS_CHECK_TIME			A05	FBSI	
s	Time for checking pulse suppression			DOUBLE	PowerOn	
-						
-	-	0.1	0	10	7/2	M

Description: Definition of the time after which pulses have to be disabled after a request to disable pulses.
The time between resetting SGA "Enable pulse" and detecting the disabling of pulses via SGE "Status pulses disabled" must not exceed the value of this data.

Note:
STOP A is triggered if this time is exceeded.

36958	SAFE_ACCEPTANCE_TST_TIMEOUT			A05	FBSI	
s	Time limit for acceptance test duration			DOUBLE	PowerOn	
-						
-	-	40.0	5	100	7/2	M

Description: On the NCK side, a time limit can be specified for the duration of an acceptance test. The NCK terminates the test if an acceptance test takes longer than the time defined in this MD.
The acceptance test status is set to zero on the NCK side. When the acceptance test status is reset, SI power-on alarms are reset again from reset-acknowledgeable to power-on-acknowledgeable on the NCK and drive sides.
The NCK clears alarm 27007 and the drive clears message C01799 .
This MD is also used to limit the duration of an SE (safe limit position) acceptance test. After the programmed time has elapsed, the SE acceptance test is canceled and alarm 27008 cleared. The software limit positions then again act as defined in the machine data.

36960	SAFE_STANDSTILL_VELO_TOL			A05, A04	FBSI	
mm/min, rev/min	Creep speed for pulse suppression			DOUBLE	PowerOn	
-						
-	-	(0./ 0.)	(0./ 0.)	(1000./ 1000.)	7/2	M

Description: Speed below which the axle/spindle is regarded as being at a standstill and the pulses are disabled with STOP B (through transition to STOP A).

Related to:

MD36956: \$MA_SAFE_PULSE_DISABLE_DELAY

36961	SAFE_VELO_STOP_MODE			A05	FBSI	
-	Stop reaction for safe velocity			BYTE	PowerOn	
-						
-	-	5	0	14	7/2	M

Description:

The stop reaction defined in this data is triggered if the limit value for the safe velocity 1, 2, 3 or 4

is exceeded.

= 0, 1, 2, 3 correspond to STOP A, B, C, D, common to each safe velocity stage

= 5 means that the stop reaction can be configured specifically for each safe velocity in MD36963 \$MA_SAFE_VELO_STOP_REACTION.

The units digit defines the selection of the stop reaction when the safe velocity is exceeded.

The tens digit defines the behavior in the case of failure of communication to the drive if a time greater than 0 is parameterized in MD10089 \$MN_SAFE_PULSE_DIS_TIME_BUSFAIL.

0: Stop A

1: Stop B

2: Stop C

3: Stop D

4: Stop E

5: MD36961 \$MA_SAFE_VELO_STOP_MODE invalid, stop reaction is parameterized via MD36963 \$MA_SAFE_VELO_STOP_REACTION

10: Stop A, additionally, in the event of failure of communication to the drive, pulses are not disabled immediately if safe velocity is active

11: Stop B, additionally, in the event of failure of communication to the drive, pulses are not disabled immediately if safe velocity is active

12: Stop C, additionally, in the event of failure of communication to the drive, pulses are not disabled immediately if safe velocity is active

13: Stop D, additionally, in the event of failure of communication to the drive, pulses are not disabled immediately if safe velocity is active

14: Stop E, additionally, in the event of failure of communication to the drive, pulses are not disabled immediately if safe velocity is active

Special cases:

- If the value in this MD is 5, the stop reaction for each safe velocity stage is defined selectively in MD36963 \$MA_SAFE_VELO_STOP_REACTION.

Related to:

MD36931: \$MA_SAFE_VELO_LIMIT[n]

MD36963: \$MA_SAFE_VELO_STOP_REACTION[n]

36962	SAFE_POS_STOP_MODE			A05	FBSI	
-	Stop reaction for safe end position			BYTE	PowerOn	
-						
-	-	2	2	4	7/2	M

Description:

The stop reaction defined in this data is triggered if safe end position 1 or 2 is overrun.

2: Stop C

3: Stop D

4: Stop E

Related to:

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MD36934: \$MA_SAFE_POS_LIMIT_PLUS[n]

MD36935: \$MA_SAFE_POS_LIMIT_MINUS[n]

36963	SAFE_VELO_STOP_REACTION			A05	FBSI	
-	Stop reaction for safe velocity			BYTE	PowerOn	
-						
-	4	2, 2, 2, 2	0	14	7/2	M

Description:

The stop response defined in this data is triggered if the limit value for the safe velocity 1, 2, 3 or 4 is exceeded.

n = 0, 1, 2, 3 stand for SG1, SG2, SG3, SG4

The units digit defines the selection of the stop response for each specific safe velocity when the safe velocity is exceeded.

The tens digit defines the behavior in the case of a failure of communication to the drive for each specific safe velocity if a time greater than 0 has been parameterized in MD10089 \$MN_SAFE_PULSE_DIS_TIME_BUSFAIL.

Value Meaning

0: Stop A

1: Stop B

2: Stop C

3: Stop D

4: Stop E

10: Stop A, additionally, in the event of failure of communication to the drive, pulses are not disabled immediately if this safe velocity level is active

11: Stop B, additionally, in the event of failure of communication to the drive, pulses are not disabled immediately if this safe velocity level is active

12: Stop C, additionally, in the event of failure of communication to the drive, pulses are not disabled immediately if this safe velocity level is active

13: Stop D, additionally, in the event of failure of communication to the drive, pulses are not disabled immediately if this safe velocity level is active

14: Stop E, additionally, in the event of failure of communication to the drive, pulses are not disabled immediately if this safe velocity level is active

Note:

This MD is only active when MD36961 \$MA_SAFE_VELO_STOP_MODE and drive parameter p9561 have the value 5.

Related to:

MD10089: \$MN_SAFE_PULSE_DIS_TIME_BUSFAIL

MD36961: \$MA_SAFE_VELO_STOP_MODE

36964	SAFE_IPO_STOP_GROUP			A01, A05	FBSI	
-	Safety-integrated IPO-response grouping			BYTE	Reset	
-						
-	-	0	0	1	7/2	M

Description:

This MD is only active with Safety Integrated axes and spindles.

It influences the channel-wide IPO response distribution of Safety Integrated:

0 = Default: All other axes/spindles in the channel are informed of the IPO stop response of this axis.

1 = For internal stops, the axes and machining spindles interpolating with the axis in question are also influenced via the triggered safety alarms.

Other axes/spindles in the channel, however, continue without disturbance. In the case of external stops (without an alarm) all other axes/spindles are not influenced by the safety axis/spindle stop. This allows, for example, the safe cancelation of the pulses of a spindle (using external Stop A) so that the spindle can be turned manually but still move the axes safely with monitoring.

If the other axes/spindles stop together with the safety axis/spindle in certain machining situations, the user must implement this at his own responsibility using the PLC or synchronous action operations.

36965	SAFE_PARK_ALARM_SUPPRESS			A01	FBSI	
-	Alarm suppression on parking axis			BOOLEAN	PowerOn	
-						
-	-	FALSE	-	-	7/2	M

Description: This MD is only active for Safety Integrated axes/spindles.

0 = Default setting: Alarms 27000/A01797 are displayed when parking is selected.

1 = Alarms 27000/A01797 are not displayed when parking is selected. This is necessary for axes that are disconnected on the encoder side during the machining process (e.g. dressing axes). The alarms are displayed when parking is deselected again.

36966	SAFE_BRAKETEST_TORQUE			A05	FBSI	
%	Holding torque for brake test (NC-controlled)			DOUBLE	PowerOn	
CTEQ						
-	-	5.0	0.0	800.0	7/2	M

Description: Definition of the torque and force for the NC-controlled functional test of the brake mechanism.

This torque and force is exerted on the applied brake during the test without the axis being allowed to move.

The percentage value entered here is related to drive parameter p2003 of the axis.

The following supplementary conditions apply:

If the current torque is more than 85% of the test torque when the brake test is selected (that is, with the brake off), the brake test is canceled with alarm 20095. This ensures that the motor can stop the axis even if the brake is defective.

If the brake test is performed with the drive parameter p1532 (MD36968 \$MA_SAFE_BRAKETEST_CONTROL bit0 = 0), the safety margin required is increased by double the difference between the current holding torque and the value in parameter p1532.

Release of the corresponding test function via MD37000 \$MA_FIXED_STOP_MODE bit 1.

Related to:

MD36969: \$MA_SAFE_BRAKETEST_TORQUE_NORM

36967	SAFE_BRAKETEST_POS_TOL			A05	FBSI	
mm, degrees	Position tolerance for brake test (NC-controlled)			DOUBLE	PowerOn	
CTEQ						
-	-	1.0	0.0	-	7/2	M

Description: Maximum position tolerance for the functional test of the brake mechanics.

The functional test of the brake mechanics is canceled if the axis position deviates by more than this tolerance from the position at selection of the brake test.

The corresponding test function is enabled by MD37000 \$MA_FIXED_STOP_MODE, bit 1. MD37000 \$MA_FIXED_STOP_MODE bit 1.

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36968	SAFE_BRAKETEST_CONTROL				A05	-	
-	Advanced settings for the brake test				UDWORD	PowerOn	
CTEQ							
-	-	0	0	0x7	7/2	M	

Description:

Advanced settings for the NC-controlled and SINAMICS brake test.

Bit 0: Selection of the average value for the torque limit

= 0: Drive parameter p1532 is used as the average value of the torque limit

= 1: The torque measured at the time of selection of the brake test is used as the average value of the torque limit

Bit 1: Criterion for reaching the torque limit in the PLC

= 0: The torque limit must be reached during the programmed traversing distance

= 1: The torque limit must be reached during the programmed time (PLC)

Bit 2: Selection of the positioning behavior at the end of the SINAMICS brake test

= 0: Positioning at the current axis position

= 1: Positioning at the last programmed axis position

36969	SAFE_BRAKETEST_TORQUE_NORM			A05	FBSI	
kgm²	Reference variable for brake test holding torque			DOUBLE	PowerOn	
CTEQ						
-	-	0.0	-	-	ReadOnly	S

Description:

Setting of the reference variable for torques

All torques indicated as relative value refer to this reference variable.

This MD is an image of drive parameter p2003

36970	SAFE_SVSS_DISABLE_INPUT			A01	FBSI	
-	Input assignment SBH/SG deselection			UDWORD	PowerOn	
-						
-	-	0	0x00000000	0x8403073F	7/2	M

Description:

This data defines the NC input for selecting/deselecting the functions SBH and SG.

Signal Meaning

= 0 SG or SBH is selected

= 1 SG and SBH are deselected

Structure (general):

The machine data for assignment of the safe inputs are structured as follows:

\$MA_SAFE_..._INPUT = is mm xx nnH

	Bit position	Permissible values	Meaning
i	31...28	= 0	Do not invert signal before processing
		= 8	Invert signal before processing
s	27...24	= 4	Assignment to SPL interface
mm	23...16	= 1	Addressing of the internal SPL interface \$A_OUTSI
		= 2	Addressing of the external SPL interface \$A_INSE
xx	15...8	= 1...6	Number of the system variable word
nn	7...0	= 1...20H	Bit number in the system variable word

Special cases:

- Entry of 0 means there is no existing assignment, the input remains fixed at 0, SG and SBH cannot be deselected.
- Entry of 80 00 00 00 means there is no existing assignment, the input remains fixed at 1.
- Multiple input signals can be parameterized to the same system variable.

36971	SAFE_SS_DISABLE_INPUT			A01	FBSI	
-	Input assignment SBH deselection			UDWORD	PowerOn	
-						
-	-	0	0x00000000	0x8403073F	7/2	M

Description: Assignment of the NC input for deselecting the function safe operational stop.
 Structure: See MD36970 \$MA_SAFE_SVSS_DISABLE_INPUT
 Input assignment to the safe functions if either safe velocity or safe operational stop have been activated.
 Signal Meaning
 = 0 Safe operational stop is selected
 = 1 Safe operational stop is deselected (only if other functions have not triggered a STOP C, D or E)
 Special cases:
 • This input is irrelevant if SG and SBH have been deselected (see MD36970 \$MA_SAFE_SVSS_DISABLE_INPUT).

36972	SAFE_VELO_SELECT_INPUT			A01	FBSI	
-	Input assignment SG selection			UDWORD	PowerOn	
-						
-	2	0, 0	0x00000000	0x8403073F	7/2	M

Description: This data defines the two inputs for selecting SG1, SG2, SG3 or SG4.
 Structure: See MD36970 \$MA_SAFE_SVSS_DISABLE_INPUT
 n = 1, 0 stand for bit 1, 0 for selecting SG1 to SG4
 Assignment of the input bits to the safe velocities:

Bit 1	Bit 0	Selected SG
0	0	SG1
0	1	SG2
1	0	SG3
1	1	SG4

36973	SAFE_POS_SELECT_INPUT			A01	FBSI	
-	Input assignment SE selection			UDWORD	PowerOn	
-						
-	-	0	0x00000000	0x8403073F	7/2	M

Description: This data defines the input for selecting safe limit positions 1 or 2.
 Structure see: MD36970 \$MA_SAFE_SVSS_DISABLE_INPUT
 Signal Meaning
 = 0 SE1 is active
 = 1 SE2 is active

36974	SAFE_GEAR_SELECT_INPUT			A01	FBSI	
-	Input assignment speed ratio selection			UDWORD	PowerOn	
-						
-	3	0, 0, 0	0x00000000	0x8403073F	7/2	M

Description: Input assignment for selecting the gear ratio (gear stage).
 Structure: See MD36970 \$MA_SAFE_SVSS_DISABLE_INPUT
 n = 2, 1, 0 stand for bit 2, 1, 0 for selecting gear stages 1 to 8

Bit 2	Bit 1	Bit 0	Active gear stage

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0	0	0	Stage 1
0	0	1	Stage 2
0	1	0	Stage 3
...	...	...	...
1	1	1	Stage 8

36977	SAFE_EXT_STOP_INPUT			A01	FBSI	
-	Input assignment for external stop request			UDWORD	PowerOn	
-						
-	4	0, 0, 0, 0	0x00000000	0x8403073F	7/2	M

Description: This data defines the NC inputs for selecting/deselecting the external brake requests.
 n = 0, 1, 2, 3 stand for the various braking modes
 n = 0: Assignment for "Deselect external stop A" (SH, disabling of pulses)
 n = 1: Assignment for "Deselect external stop C" (braking at the current limit/OFF3 ramp)
 n = 2: Assignment for "Deselect external stop D" (path braking)
 n = 3: Assignment for "Deselect external stop E" (ESR + path braking)
 Structure: See MD36970 \$MA_SAFE_SVSS_DISABLE_INPUT
 Special cases:

- The signal "Deselect external stop A" cannot be parameterized inverted. A parameter error is reported if there is an error.

36978	SAFE_OVR_INPUT			A01	FBSI	
-	Input assignment for SG override			UDWORD	PowerOn	
-						
-	4	0, 0, 0, 0	0x00000000	0x8403073F	7/2	M

Description: Assignment of the NC inputs for the override of the limit values of safe velocities 2 and 4.
 Structure: See MD36970 \$MA_SAFE_SVSS_DISABLE_INPUT
 n = 3, 2, 1, 0 stand for the override selection bits 3, 2, 1, 0
 Assignment of the input bits to the SG override values:

Bit 3	Bit 2	Bit 1	Bit 0	
0	0	0	0	Override 0 is selected
0	0	0	1	Override 1 is selected
to ...				
1	1	1	1	Override 15 is selected

The following machine data defines the override factor itself (percentage value):
 MD36932: \$MA_SAFE_VELO_OVR_FACTOR[n]
 Note:
 The function "Override safe velocity" is enabled in MD36901 \$MA_SAFE_FUNCTION_ENABLE, bit 5.
 Related to:
 MD36932: \$MA_SAFE_VELO_OVR_FACTOR[n]

36980	SAFE_SVSS_STATUS_OUTPUT			A01	FBSI	
-	Output assignment SBH/SG active			UDWORD	PowerOn	
-						
-	-	0	0x00000000	0x8403073F	7/2	M

Description: Assignment of the output for reporting the status of the functions safe velocity and safe operating stop.

36981	SAFE_SS_STATUS_OUTPUT			A01	FBSI	
-	Output assignment SBH active			UDWORD	PowerOn	
-						
-	-	0	0x00000000	0x8403073F	7/2	M

Signal	Meaning
= 0	SBH is inactive
= 1	SBH is active

36982	SAFE_VELO_STATUS_OUTPUT			A01	FBSI	
-	Output assignment for active SG selection			UDWORD	PowerOn	
-						
-	2	0, 0	0x00000000	0x8403073F	7/2	M

$= 0$	$= 0$	SG1 active if SBH/SG are active and SBH is not active
		SBH active if SBH/SG are active and SBH is active
$= 1$	$= 0$	SG2 active
$= 0$	$= 1$	SG3 active
$= 1$	$= 1$	SG4 active

2.3 NC machine data

36985	SAFE_VELO_X_STATUS_OUTPUT			A01	FBSI	
-	Output assignment n < n_x			UDWORD	PowerOn	
-						
-	-	0	0x00000000	0x8403073F	7/2	M

Description: This data defines the output or the system variable for the message "n < nx".
 Structure see: MD36980 \$MA_SAFE_SVSS_STATUS_OUTPUT
 Signal Meaning
 = 0 Actual speed is greater than the limit speed in MD36946 \$MA_SAFE_VELO_X
 = 1 Actual speed is less than or equal to the limit speed in \$MA_SAFE_VELO_X
 Related to:
 MD36946 \$MA_SAFE_VELO_X

36987	SAFE_REFP_STATUS_OUTPUT			A01	FBSI	
-	Output assignment axis safely referenced			UDWORD	PowerOn	
-						
-	-	0	0x00000000	0x8403073F	7/2	M

Description: This data defines the output for the message "Axis safely referenced".
 Structure see: MD36980 \$MA_SAFE_SVSS_STATUS_OUTPUT
 Signal Meaning
 = 0 Axis is not safely referenced (that is the safe limit monitoring is inactive!)
 = 1 Axis is safely referenced

36988	SAFE_CAM_PLUS_OUTPUT			A01	FBSI	
-	Output assignment SN1 + to SN4 +			UDWORD	PowerOn	
-						
-	4	0, 0, 0, 0	0x00000000	0x8403073F	7/2	M

Description: This data defines the outputs for the cam signals SN1 + to SN4 +.
 Structure: See MD36980 \$MA_SAFE_SVSS_STATUS_OUTPUT
 n = 0, 1, 2, 3 correspond to the assignments for plus cams SN1 +, SN2 +, SN3 +, SN4 +
 Signal Meaning
 = 0 Axis is left of the cam (actual value < cam position)
 = 1 Axis is right of the cam (actual value > cam position)
 Special cases:
 • If a cam is inverted and assigned to an output with another cam, the two cams are ANDed, resulting in a single cam signal for range detection.

36989	SAFE_CAM_MINUS_OUTPUT			A01	FBSI	
-	Output assignment SN1 - to SN4 -			UDWORD	PowerOn	
-						
-	4	0, 0, 0, 0	0x00000000	0x8403073F	7/2	M

Description: This data defines the outputs for the minus cams SN1 - to SN4 -.
 Structure see: MD36980 \$MA_SAFE_SVSS_STATUS_OUTPUT
 n = 0, 1, 2, 3 correspond to the assignments for minus cams SN1 -, SN2 -, SN3 -, SN4 -
 Signal Meaning
 = 0 Axis is left of the cam (actual value < cam position)
 = 1 Axis is right of the cam (actual value > cam position)
 Special cases:

- If a cam is negated and placed with another cam on an output, it is AND-ed and a single cam signal is generated for range recognition.

36990	SAFE_ACT_STOP_OUTPUT			A01	FBSI	
-	Output assignment of active stop			UDWORD	PowerOn	
-						
-	4	0, 0, 0, 0	0x00000000	0x8403073F	7/2	M

Description: Assignment of the output signals for displaying the currently active stop.

Structure: see MD36980 \$MA_SAFE_SVSS_STATUS_OUTPUT

Index 0: Assignment for "Stop A/B active"

Index 1: Assignment for "Stop C active"

Index 2: Assignment for "Stop D active"

Index 3: Assignment for "Stop E active"

36992	SAFE_CROSSCHECK_CYCLE			A01, A08	FBSI	
s	Display of axis-specific cross-check cycle			DOUBLE	PowerOn	
-						
-	-	0.0	-	-	ReadOnly	S

Description: Display data:

Effective axis-specific cross-check cycle in seconds.

The cycle derives from MD10091 \$MN_INFO_SAFETY_CYCLE_TIME and the number of data to be cross-checked.

36993	SAFE_CONFIG_CHANGE_DATE			A08	FBSI	
-	Date/time of last change of SI axis MD			STRING	PowerOn	
-						
-	7	, , , , , , ,	-	-	ReadOnly	S

Description: Display data:

Date and time of the last configuration change to safety related NCK axis machine data.

Changes to the machine data included in the calculation of axis-specific checksums MD36998 \$MA_SAFE_ACT_CHECKSUM[] are recorded.

36995	SAFE_STANDSTILL_POS			EXP, A08	FBSI	
-	Standstill position			DWORD	PowerOn	
-						
-	-	0	-	-	ReadOnly	S

Description: This MD displays the current standstill position.

In order to be able to test the referencing of the axis for plausibility at the next control Power ON, the current position of the axis is stored in non-volatile memory in the following cases:

- On selection of safe operational stop (SBH)
- Cyclically, if SE/SN are activated

Special cases:

- If the MD is changed manually, this will be detected at the next Power ON and plausibility test. Another user agreement is required after referencing.

36997	SAFE_ACKN			A08	FBSI	
-	User acknowledge			UDWORD	PowerOn	
-						
-	-	0	0x0	0xFFFFFFFF	7/2	M

2.3 NC machine data

Description:

This data displays the status of the user agreement.

The user agreement can be given or withdrawn by the user by means of a corresponding screen.

If the software detects internally that the reference to the machine has been lost, then it is "automatically" withdrawn (e.g. on changing gear or if the plausibility comparison with the stored standstill position fails during referencing).

Special cases:

- If the MD is changed manually, then this will be detected at the next Power ON and plausibility test. Another user agreement is required after referencing.

36998	SAFE_ACT_CHECKSUM			A01, A08	FBSI	
-	Actual checksum			UDWORD	PowerOn	
-						
-	3	0, 0, 0	0x00000000	0xFFFFFFFF	ReadOnly	S

Description:

The actual checksum calculated across the current values of the safety-related machine data after PowerOn or on RESET is entered here.

Assignment of the field indices:

Index 0: Axis-specific monitoring functions

Index 1: Hardware component recognition

Index 2: Drive assignment

36999	SAFE_DES_CHECKSUM			A01, A08	FBSI	
-	Desired (expected) checksum			UDWORD	PowerOn	
-						
-	3	0, 0, 0	0x00000000	0xFFFFFFFF	7/1	M

Description:

This data contains the set checksum calculated across the current values of the safety-related machine data and stored at the last machine acceptance.

Assignment of the field indices:

Index 0: Axis-specific monitoring functions

Index 1: Hardware component recognition

Index 2: Drive assignment

37000	FIXED_STOP_MODE			A10	-	
-	Travel to fixed stop mode			UBYTE	PowerOn	
CTEQ						
-	-	0x0	0x0	0x3	7/2	M

Description:

Activation of subfunctions of "Travel to fixed stop".

Bit 0: Reserved

Bit 1: Enable the Safe brake test (NC-controlled)

= 0: Safe brake test not available

= 1: Safe brake test can be executed under the control of the PLC

Note: The user must ensure that Travel to fixed stop and Safe brake test are not assigned simultaneously.

37002	FIXED_STOP_CONTROL			A10	F1	
-	Sequence control for travel to fixed stop			UBYTE	PowerOn	
-						
-	-	0x0	0x0	0x3	7/2	M

Description:

Sequence control for travel to fixed stop.

Bit 0: behavior on pulse disable at fixed stop

= 0: travel to fixed stop is canceled

= 1: travel to fixed stop is interrupted, i.e. the drive is without power.

As soon as the pulse disable is canceled again, the drive continues with the limited torque.

Control of the torque injection see bit 1.

Bit 1: behavior after pulse disable at the fixed stop

= 0: the torque is applied in steps.

= 1: the torque is applied in ramps (see MD37012 \$MA_FIXED_STOP_TORQUE_RAMP_TIME)

37010	FIXED_STOP_TORQUE_DEF	A10	-
%	Default fixed stop clamping torque	DOUBLE	PowerOn
CTEQ			
-	-	5.0	0.0
		100.0	7/2
			M

Description: The clamping torque is set in this machine data as a % of the maximum motor torque (in the case of FDD this corresponds to the % of the max. current setpoint).

The clamping torque becomes active as soon as the fixed stop is reached or the NC/PLC interface signal DB31, ... DBX1.1 (Acknowledge fixed stop reached) has been set.

The entered value is a default and is active only as long as

- no clamping torque has been programmed with command FXST[x]
- the clamping torque set in SD 43510: FIXED_STOP_TORQUE was not changed after fixed stop had been reached.

In the case of "Travel to fixed stop" with an analog drive (611-A) and fixed clamping torque, the torque limit set in the drive should be the same as the limit entered in MD37070 \$MA_FIXED_STOP_ANA_TORQUE.

Related to:

MD37070 \$MA_FIXED_STOP_ANA_TORQUE

SD 43510: FIXED_STOP_TORQUE

37012	FIXED_STOP_TORQUE_RAMP_TIME	A10	-
s	Time period until reaching the changed torque limit	DOUBLE	NEW CONF
-			
-	-	0.0	0.0
		-	7/2
			M

Description: Period in seconds until the changed torque limit is reached.

The value 0.0 deactivates the ramp function.

37014	FIXED_STOP_TORQUE_FACTOR	A10	TE3
-	Adaption factor torque limit	DOUBLE	NEW CONF
-			
-	-	1.0	0.0
		-	7/2
			M

Description: Interface factor torque limit.

With this factor, the torque limit of linked slave axes (MD 37250) can be weighted additionally.

Even with different motors, the torque limits can be kept equal in all linked axes.

37020	FIXED_STOP_WINDOW_DEF	A05, A10	-
mm, degrees	Default fixed-stop monitoring window	DOUBLE	PowerOn
CTEQ			
-	-	1.0	0.0
		1.0e15	7/2
			M

Description: This machine data is used to enter the default for the standstill monitoring window at fixed stop.

2.3 NC machine data

Fixed stop monitoring becomes active as soon as the fixed stop is reached, i.e. NC/PLC interface signal DB31, ... DBX62.5 (Fixed stop reached) is set.

If the position at which the fixed stop is detected is left by more than the tolerance specified in MD37020 \$MA_FIXED_STOP_WINDOW_DEF alarm 20093 "Fixed stop monitoring has responded" is output and the "FXS" function is deselected.

The value entered is a default setting and is active only as long as

- no fixed stop monitoring window is programmed with command FXSW[x],
- the fixed stop monitoring window is not changed via SD 43520: FIXED_STOP_WINDOW (after reaching of fixed stop).

Related to:

SD43520 \$SA_FIXED_STOP_WINDOW (fixed stop monitoring window)

37030	FIXED_STOP_THRESHOLD			A10	-	
mm, degrees	Threshold for fixed stop detection			DOUBLE	NEW CONF	
-						
-	-	2.0	0.0	1.0e15	7/2	M

Description: Threshold value for fixed stop detection.

The contour deviation is checked for this threshold as a criterion for reaching the fixed stop. Waiting until the set torque limit is reached is a further condition for digital drives.

This machine data is only active if MD37040 \$MA_FIXED_STOP_BY_SENSOR = 0.

The NC/PLC interface signal DB31, ... DBX62.5 (Fixed stop reached) is set if the axial contour deviation exceeds the threshold value set in MD37030 \$MA_FIXED_STOP_THRESHOLD.

MD irrelevant to:

MD37040 \$MA_FIXED_STOP_BY_SENSOR = 1

Related to:

NC/PLC interface signal DB31, ... DBX62.5 (Fixed stop reached)

37040	FIXED_STOP_BY_SENSOR			A10	-	
-	Fixed stop detection by sensor			BYTE	Immediately	
CTEQ						
-	-	0	0	3	7/2	M

Description: This machine data defines how the criterion "Fixed stop reached" is determined.

A change of this machine data becomes active with the next selection of travel to fixed stop.

MD=0

The criterion "Fixed stop reached" is determined internally on the basis of the axial FIXED_STOP_THRESHOLD.

MD=1

The criterion "Fixed stop reached" is determined via an external sensor and signalled to the NC via the NC/PLC interface signal DB31, ... DBX1.2 (Sensor fixed stop).

MD=2

The criterion "Fixed stop reached" is accepted if either the contour monitoring (MD = 0) or the signal of the external sensor (MD = 1) has responded.

MD=3

Triggering through movement analysis (only as an alternative to triggering via sensor)

Related to:

MD37030 \$MA_FIXED_STOP_THRESHOLD

(threshold for fixed stop detection)

NC/PLC interface signal DB31, ... DBX1.2 (Sensor fixed stop)

37050	FIXED_STOP_ALARM_MASK			A05, A10	-	
-	Enable of the fixed stop alarms			BYTE	NEW CONF	
-						
-	-	1	0	31	7/2	M

Description: This machine data defines whether the alarms

20091 "Fixed stop not reached",

20094 "Fixed stop canceled" and

25042 "FOC: Standstill monitoring" are output.

MD= 0

Suppression of alarm 20091 "Fixed stop not reached"

MD= 2

Suppression of alarms

20091 "Fixed stop not reached" and

20094 "Fixed stop canceled" (SW 4 and higher)

MD=3

Suppression of alarm 20094 "Fixed stop canceled" (SW 4 and higher)

Add value 8

Suppression of alarm 25042 "FOC: Standstill monitoring" (SW 7 and higher)

Add value 16

Trigger alarm 20095 only if the brake test torque is less than the holding torque

Errors occurring during travel to fixed stop can be read out from the status variable \$AA_FXS irrespective of the setting of the alarm screen.

Standard: 1 = Alarms 20091, 20094 and 25042 are triggered

37052	FIXED_STOP_ALARM_REACTION			A05, A10	-	
-	Reaction with fixed stop alarms			UBYTE	PowerOn	
-						
-	-	0	0	-	7/1	M

Description: Behavior of VDI signal "Mode group ready" in case of fixed stop alarms:

Bit value = 0: "Mode group ready" will be deleted (drives de-energized)

Bit value = 1: "Mode group ready" remains active

Bit0: Alarm 20090 Travel to fixed stop not possible

Bit1: Alarm 20091 Fixed stop not reached

Bit2: Alarm 20092 Travel to fixed stop still active

Bit3: Alarm 20093 Standstill monitoring at fixed stop has triggered

Bit4: Alarm 20094 Travel to fixed stop canceled

All other bits without meaning.

Standard: 0 = All alarms de-energize the drives

37060	FIXED_STOP_ACKN_MASK			A10	-	
-	Waiting for PLC acknowledgments during travel to fixed stop			UBYTE	PowerOn	
CTEQ						
-	-	0x0	0x0	0x3	7/2	M

Description: This machine data defines whether or not the NC waits for acknowledgment messages from the PLC when the "Travel to fixed stop" function is active.

Bit 0 = 0

Once the NC has transmitted the interface signal DB31, ... DBX62.4 (Activate travel to fixed stop) to the PLC, it starts the programmed traversing.

2.3 NC machine data

Bit 0 = 1

After the NC has transmitted the interface signal DB31, ... DBX62.4 (Activate travel to fixed stop) to the PLC, it waits for the PLC to acknowledge with the interface signal DB31, ... DBX3.1 (Enable travel to fixed stop) and then starts the programmed traversing.

Bit 0 = 1 should be set for analog drives so that the motion is not started before the PLC has limited the torque in the drive.

Bit 1 = 0

Once the NC has transmitted the interface signal DB31, ... DBX62.5 (Fixed stop reached) to the PLC, the program advances to the next block.

Bit 1 = 1

After the NC has transmitted the interface signal DB31, ... DBX62.5 (Fixed stop reached) to the PLC, it waits for the PLC to acknowledge with the interface signal DB31, ... DBX1.1 (Acknowledge fixed stop reached), outputs the programmed torque and then advances to the next block.

Bit 1 should be set for analog drives so that the PLC can switch the drive to torque-controlled operation if a programmable clamping torque has to be specified.

With digital drives (PROFIdrive), the "Travel to fixed stop" function can be executed without any acknowledgments, thus allowing program run times to be reduced.

Related to:

NC/PLC interface signal DB31, ... DBX62.4 (Activate travel to fixed stop)

NC/PLC interface signal DB31, ... DBX3.1 (Enable travel to fixed stop)

NC/PLC interface signal DB31, ... DBX62.5 (Fixed stop reached)

NC/PLC interface signal DB31, ... DBX1.1 (Acknowledge fixed stop reached)

37070	FIXED_STOP_ANA_TORQUE			A10	-	
%	Torque limit when approaching the fixed stop for analog drives			DOUBLE	PowerOn	
CTEQ						
-	-	5.0	0.0	100.0	7/2	M

Description:

Only for analog drives (not relevant for PROFIdrive digital drives):

This machine data defines an internal NC torque limit for analog drives. It is specified as a percentage of the maximum drive torque (corresponds to % of max. current setpoint with FDD).

This torque limit is active in the NC from the start of the motion (acceleration torque) until the instant the fixed stop is reached.

The torque limit must have the same effect as the torque limit set in the drive.

This torque limit is required to ensure that:

- There are no step changes in torque during switchover from speed-controlled to current-controlled or torque-controlled operation
- The acceleration is reduced to the correct value in the NC

37080	FOC_ACTIVATION_MODE			A10	-	
-	Initial setting of modal torque/force limitation			UBYTE	PowerOn	
-						
-	-	0x0	0x0	0x3	7/2	M

Description:

The initial setting of the modal torque/force limitation is set with this MD after reset and PowerOn:

Bit 0: Response after PowerON

= 0 : FOCOF

= 1 : FOCON (modal)

Bit 1: Response after reset

= 0 : FOCOF

= 1 : FOCOF (modal)

Default setting: FOCOF after reset and PowerOn

37100	GANTRY_AXIS_TYPE			A01, A10	G1, TE1, Z3	
-	Gantry axis definition			BYTE	PowerOn	
CTEQ						
-	-	0	0	33	7/2	M

Description: General: decimal representation, with a b

a

0: Leading axis

1: Synchronized axis

b

0: No gantry axis

1: Axis in gantry grouping 1

2: Axis in gantry grouping 2

3: Axis in gantry grouping 3

...

A max. of 8 gantry groupings is possible.

Examples:

11: Axis is a synchronized axis in a gantry grouping 1

2: Axis is a leading axis in gantry a grouping 2

12: Axis is a synchronized axis in a gantry grouping 2

3: Axis is a leading axis in a gantry grouping 3

13: Axis is a synchronized axis in a gantry grouping 3

Special cases:

Alarm 10650 "Incorrect gantry machine data" and 10651 "Gantry unit not defined" in the case of an incorrect gantry axis definition.

Related to:

MD37110 \$MA_GANTRY_POS_TOL_WARNING (gantry warning limit)

MD37120 \$MA_GANTRY_POS_TOL_ERROR (gantry trip limit)

MD37130 \$MA_GANTRY_POS_TOL_REF (gantry trip limit during referencing)

37110	GANTRY_POS_TOL_WARNING			A05, A10	G1, Z3	
mm, degrees	Gantry warning limit			DOUBLE	Reset	
-						
-	-	0.0	-1e15	1e15	7/2	M

Description: Value > 0

With gantry axes, the difference between the actual position values of the leading and synchronized axes is constantly monitored.

MD37110 \$MA_GANTRY_POS_TOL_WARNING is used to define a limit value for the actual position value difference; when the limit is exceeded, warning 10652 "Warning limit exceeded" is output. However, the gantry axes are not stopped internally in the control. The warning threshold must therefore be selected so that the machine can withstand the actual position value deviation between the gantry axes without sustaining mechanical damage.

Furthermore, the NC/PLC interface signal DB31, ... DBX101.3 (Gantry warning limit exceeded) to the PLC is set to "1". The PLC user program can thus initiate the necessary measures (e.g. program interruption at block end) when the warning limit is exceeded.

2.3 NC machine data

As soon as the actual current position value difference has dropped below the warning limit again, the message is canceled and the interface signal "Gantry warning limit exceeded" is reset.

Effect of the gantry warning limit on the gantry synchronization process:

The actual position value difference between the leading and synchronized axes is determined during gantry synchronization. If the deviation is less than the gantry warning limit, the synchronizing motion of the gantry axes is automatically started internally in the control.

Otherwise the synchronizing motion has to be initiated via the PLC interface (interface signal DB31, ... DBX29.4 (Start gantry synchronization process))

Value = 0

The setting MD37110 \$MA_GANTRY_POS_TOL_WARNING = 0 is the monitoring for violation of the warning limit deactivated.

The gantry synchronization is not initiated internally in the control.

Special cases:

Alarm 10652 "Warning limit exceeded" in response to violation of the gantry warning limit.

Related to:

MD37100 \$MA_GANTRY_AXIS_TYPE Gantry axis definition

MD37120 \$MA_GANTRY_POS_TOL_ERROR Gantry trip limit

MD37130 \$MA_GANTRY_POS_TOL_REF

Gantry trip limit during referencing

NC/PLC interface signal DB31, ... DBX101.3 (Gantry warning limit exceeded)

NC/PLC interface signal DB31, ... DBX29.4 (Start gantry synchronization process)

37120	GANTRY_POS_TOL_ERROR			A05, A10	G1, Z3	
mm, degrees	Gantry trip limit			DOUBLE	PowerOn	
-						
-	-	0.0	-1e15	1e15	7/2	M

Description:

With gantry axes, the difference between the actual position values of the leading and synchronized axes is continuously monitored. MD37120 \$MA_GANTRY_POS_TOL_ERROR defines the maximum permissible deviation in actual position value between the synchronized axis and the leading axis in the gantry axis grouping. Violation of this limit value is monitored only if the gantry axis grouping is already synchronized (NC/PLC interface signal DB31, ... DBX101.5 (Gantry grouping is synchronized) = 1); otherwise the value set in MD37130 \$MA_GANTRY_POS_TOL_REF is used.

When this limit value is exceeded, alarm 10653 "Error limit exceeded" is output. The gantry axes are immediately stopped internally in the control to prevent any damage to the machine.

In addition, the NC/PLC interface signal DB31, ... DBX101.2 (Gantry trip limit exceeded) to the PLC is set to "1".

Special cases:

Alarm 10653 "Error limit exceeded" in response to violation of the gantry trip limit.

Related to:

MD37100 \$MA_GANTRY_AXIS_TYPE Gantry axis definition

MD37110 \$MA_GANTRY_POS_TOL_WARNING Gantry warning limit

MD37130 \$MA_GANTRY_POS_TOL_REF

Gantry trip limit during referencing

NC/PLC interface signal DB31, ... DBX101.5 (Gantry grouping is synchronized)

NC/PLC interface signal DB31, ... DBX101.2 (Gantry trip limit exceeded)

37130	GANTRY_POS_TOL_REF				A05, A10	G1, Z3	
mm, degrees	Gantry trip limit during referencing				DOUBLE	PowerOn	
-							
-	-	0.0	-1e15	1e15	7/2	M	

Description: With gantry axes, the difference between the actual position values of the leading and synchronized axes is continuously monitored. MD37130 \$MA_GANTRY_POS_TOL_REF defines the maximum permissible difference between the actual position values of the synchronized axis and the leading axis that is monitored if the gantry axis grouping has not yet been synchronized (NC/PLC interface signal DB31, ... DBX101.5 (Gantry grouping is synchronized) = 0).

Alarm 10653 "Error limit exceeded" is output if the limit value is exceeded. The gantry axes are immediately stopped internally in the control to prevent any damage to the machine.

In addition, the NC/PLC interface signal DB31, ... DBX101.2 (Gantry trip limit exceeded) to the PLC is set to "1".

Special cases:

Alarm 10653 "Error limit exceeded" in response to violation of the gantry trip limit.

Related to:

MD37100 \$MA_GANTRY_AXIS_TYPE Gantry axis definition

MD37110 \$MA_GANTRY_POS_TOL_WARNING Gantry warning limit

MD37120 \$MA_GANTRY_POS_TOL_ERROR Gantry trip limit

NC/PLC interface signal DB31, ... DBX101.5 (Gantry grouping is synchronized)

NC/PLC interface signal DB31, ... DBX101.2 (Gantry trip limit exceeded)

37135	GANTRY_ACT_POS_TOL_ERROR			A05, A10	-	
mm, degrees	Current gantry trip limit			DOUBLE	Reset	
-						
-	-	0.0	-	-	7/2	M

Description: Actual value difference between master axis and slave axis in the case of alarm 10653. Leads to alarm 10657 after Power ON.

37140	GANTRY_BREAK_UP			EXP, A01, A10	G1, Z3	
-	Invalidate gantry axis grouping			BOOLEAN	Reset	
CTEQ						
-	-	FALSE	0	-	7/2	M

Description: GANTRY_BREAK_UP = "0"

The forced coupling of the gantry axis grouping remains valid! Monitoring of violation of the gantry warning or trip limit is active!

GANTRY_BREAK_UP = "1"

This breaks up the forced coupling of the gantry grouping, thus allowing all gantry axes in this grouping to be traversed individually in JOG, AUTOMATIC, and MDI modes. Monitoring for violation of the gantry warning or trip limit is deactivated! The NC/PLC interface signal DB31, ... DBX101.5 "gantry grouping is synchronized" is set to "0".

Notice:

In cases where the gantry axes continue to be mechanically coupled, the machine may sustain damage in this operating state when the leading or synchronized axis is traversed!

The gantry axes cannot be referenced individually.

Corresponds with:

MD 37100: \$MA_GANTRY_AXIS_TYPE Gantry axis definition

2.3 NC machine data

MD 37110: \$MA_GANTRY_POS_TOL_WARNING Gantry warning limit
MD 37130: \$MA_GANTRY_POS_TOL_REF
Gantry trip limit during referencing
NC/PLC interface signal DB31, ... DBX101.5 (gantry grouping is synchronized)
NC/PLC interface signal DB31, ... DBX101.2 (gantry trip limit exceeded)

37150	GANTRY_FUNCTION_MASK			A10	-	
-	Gantry functions			UDWORD	Reset	
-						
-	-	0x00	0	0x7	7/2	M

Description:

Special gantry functions are set with this MD.
The MD is bit-coded, the following bits are assigned:
Bit 0 == 0:
Extended monitoring of the actual value difference is inactive.
An offset between master and slave axes occurring in tracking or BREAK_UP is not taken into account in the monitoring of the actual value difference.
Alarm 10657 is not output if alarm 10563 occurs before Power OFF.
Bit 0 = 1:
Extended monitoring of the actual value difference is active.
An offset between master and slave axes occurring in tracking or BREAK_UP is taken into account in the monitoring of the actual value difference.
Prerequisite: The gantry grouping must be rereferenced or resynchronized after control startup.
Alarm 10657 is output if alarm 10563 occurs before Power OFF.
Bit 1 = 0:
Zero mark search direction of the slave axis analogous to MD 34010
Bit 1 = 1:
Zero mark search direction of the slave axis same as for master axis
Bit 2 = 0 :
Alarm 10655 "Synchronization in progress" is output
Bit 2 = 1
Alarm 10655 "Synchronization in progress" is not output

37160	LEAD_FUNCTION_MASK			A10	M3	
-	Functions for master value coupling			UDWORD	NEW CONF	
CTEQ						
-	-	0x01	0	0x3	1/1	M

Description:

With this MD, special functions of master value coupling are set.
The MD is bit-coded, the following bits are assigned:
Bit 0 = 0:
Dead time compensation is not active at actual value coupling.
Bit 0 = 1:
Dead time compensation is active at actual value coupling.
During actual value coupling, a systematic position offset is created between master and following axis. It is caused by the IPO/position controller dead time between the actual values of master axis and following axis.
For SW 6.4 and higher, this position offset can be compensated by a linear extrapolation of the master value.
Possible velocity fluctuations in the master axis may have an increased impact on the following axis.

The bit must be set for the relevant master axis.

Bit 1 = 0:

The spindle/axis disable of the axis will not become effective with the master value coupling active.

The spindle/axis disable of the master axis becomes effective.

Bit 1 = 1:

The spindle/axis disable is effective for this axis even with the master value coupling active.

The bit must be set for the relevant following axis.

37200	COUPLE_POS_TOL_COARSE			A05, A10	M3, S3, 2.4, 6.2	
mm, degrees	Threshold value for 'Synchronism coarse'			DOUBLE	NEW CONF	
-						
-	-	1.0	0.0	1.0e15	7/2	M

Description:

In synchronous mode, the positional difference between the leading and following axis(axis)/spindle(s) is monitored (only DV and AV mode or cmdpos and actpos in the case of CP programming).

The NC/PLC interface signal DB31, ... DBX98.1 (synchronism coarse) is set if the current positional difference is within the tolerance band specified by the threshold value.

Furthermore, this threshold value can be used to define the criterion for block change on activation of synchronous mode or on modification of the speed ratio parameters when the coupling is active in cases where "synchronism coarse" is selected as the block change response condition (see channel-specific MD21320 \$MC_COUPLE_BLOCK_CHANGE_CTRL_1 or language instruction COUPDEF, WAITC, CPBC).

Entering a value of "0" always sets the NC/PLC interface signal DB31, ... DBX98.1 "synchronism coarse" to "1" in DV/AV mode or with cmd/actpos.

Corresponds with:

Channel-specific MD21320 \$MC_COUPLE_BLOCK_CHANGE_CTRL_1
(block change response in synchronous mode)

NC/PLC interface signal DB31, ... DBX98.1 (synchronism coarse)

37202	COUPLE_POS_TOL_COARSE_2			A05, A10	-	
mm, degrees	Second threshold value for 'synchronism monitoring coarse'			DOUBLE	NEW CONF	
-						
-	-	0.0	0.0	1.0e15	7/2	M

Description:

Generic coupling - second synchronism monitoring of the synchronism difference on the actual value side in the case of positional couplings - coarse threshold value.

Entering a value of "0" deactivates monitoring.

Entering a value other than "0" starts synchronism monitoring (2) once 'synchronism coarse' has been reached:

The NC/PLC interface signal DB31, ... DBX103.5 (synchronism 2 coarse) indicates whether the synchronism difference on the actual value side violates the threshold value.

If the threshold value is violated, this is indicated by show alarm 22026, which can be canceled.

Corresponds with:

MD37200 \$MA_COUPLE_POS_TOL_COARSE

NC/PLC interface signal DB31, ... DBX98.1 (synchronism coarse)

2.3 NC machine data

37210	COUPLE_POS_TOL_FINE			A05, A10	M3, S3, 2.4	
mm, degrees	Threshold value for 'Synchronism fine'			DOUBLE	NEW CONF	
-						
-	-	0.5	0.0	1.0e15	7/2	M

Description:

In synchronous mode, the positional difference between the leading and following axis(axes)/spindle(s) is monitored (only DV and AV mode or cmdpos and actpos in the case of CP programming).

The NC/PLC interface signal DB31, ... DBX98.0 (synchronism fine) is set if the current positional difference is within the tolerance band specified by the threshold value.

Furthermore, this threshold value can be used to define the criterion for block change on selection of synchronous mode or on modification of the speed ratio parameters when the coupling is active in cases where "synchronism fine" is selected as the block change response condition (see channel-specific MD21320

\$MC_COUPLE_BLOCK_CHANGE_CTRL_1 or language instruction COUPDEF, WAITC, CPBC).

Entering a value of "0" always sets the NC/PLC interface signal DB31, ... DBX98.0 (synchronism fine) to "1" in DV/AV mode or with cmd/actpos.

Corresponds with:

Channel-specific MD21320 \$MC_COUPLE_BLOCK_CHANGE_CTRL_1

(block change response in synchronous mode)

NC/PLC interface signal DB31, ... DBX98.0 (synchronism fine)

37212	COUPLE_POS_TOL_FINE_2			A05, A10	-	
mm, degrees	Second threshold value for 'synchronism monitoring fine'			DOUBLE	NEW CONF	
-						
-	-	0.0	0.0	1.0e15	7/2	M

Description:

Generic coupling - second synchronism monitoring of the synchronism difference on the actual value side in the case of positional couplings - fine threshold value.

Entering a value of "0" deactivates monitoring.

Entering a value other than "0" starts synchronism monitoring (2) once 'synchronism fine' has been reached:

The NC/PLC interface signal DB31, ... DBX103.4 (synchronism 2 fine) indicates whether the synchronism difference on the actual value side violates the threshold value.

If the threshold value is violated, this is indicated by show alarm 22025, which can be canceled.

Corresponds with:

MD37210 \$MA_COUPLE_POS_TOL_FINE

NC/PLC interface signal DB31, ... DBX98.0 (synchronism fine)

37220	COUPLE_VELO_TOL_COARSE			A05, A10	S3	
mm/min, rev/min	Velocity tolerance 'coarse'			DOUBLE	NEW CONF	
-						
-	-	60.0	0.0	-	7/2	M

Description:

In synchronous mode, the velocity difference between the leading and following axis(axes)/spindle(s) is monitored (only VV mode or cmdvel in the case of CP programming).

The NC/PLC interface signal DB31, ... DBX98.1 (synchronism coarse) is set if the current velocity difference is within the tolerance band specified by the threshold value.

Furthermore, this threshold value can be used to define the criterion for block change on activation of synchronous mode or on modification of the speed ratio parameters when the coupling is active in cases where "synchronism coarse" is selected as the block change response condition (see channel-specific MD21320 \$MC_COUPLE_BLOCK_CHANGE_CTRL_1 or language instruction COUPDEF, WAITC, CPBC).

Entering a value of "0" always sets the NC/PLC interface signal DB31, ... DBX98.1 (synchronism coarse) to "1" in VV mode or with cmdvel.

Corresponds with:

Channel-specific MD21320 \$MC_COUPLE_BLOCK_CHANGE_CTRL_1

(block change response in synchronous mode)

NC/PLC interface signal DB31, ... DBX98.1 (synchronism coarse)

37230	COUPLE_VELO_TOL_FINE			A05, A10	S3	
mm/min, rev/min	Velocity tolerance 'fine'			DOUBLE	NEW CONF	
-						
-	-	30.0	0.0	-	7/2	M

Description:

In synchronous mode, the velocity difference between the leading and following axis(axis)/spindle(s) is monitored (only VV mode or cmdvel in the case of CP programming).

The NC/PLC interface signal DB31, ... DBX98.0 (synchronism fine) is set if the current velocity difference is within the tolerance band specified by the threshold value.

Furthermore, this threshold value can be used to define the criterion for block change on activation of synchronous mode or on modification of the speed ratio parameters when the coupling is active in cases where "synchronism fine" is selected as the block change response condition (see channel-specific MD21320 \$MC_COUPLE_BLOCK_CHANGE_CTRL_1 or language instruction COUPDEF, WAITC, CPBC).

Entering a value of "0" always sets the NC/PLC interface signal DB31, ... DBX98.0 (synchronism fine) to "1" in VV mode or with cmdvel.

Corresponds with:

Channel-specific MD21320 \$MC_COUPLE_BLOCK_CHANGE_CTRL_1

(block change response in synchronous mode)

NC/PLC interface signal DB31, ... DBX98.0 (synchronism fine)

37240	COUP_SYNC_DELAY_TIME			A05, A10	-	
s	Delay time actual value synchronism			DOUBLE	NEW CONF	
-						
-	2	60, 30	0.0	-	7/2	M

Description:

Synchronous spindle coupling: delay time - monitors the time taken to reach actual value synchronism after reaching setpoint synchronism.

MD37240 \$MA_COUP_SYNC_DELAY_TIME[0]: time to reach 'Synchronism fine'

MD37240 \$MA_COUP_SYNC_DELAY_TIME[1]: time to reach 'Synchronism coarse'

If the value "0" is entered, the relevant monitoring is inactive

Related to:

MD 37200 \$MA_COUPLE_POS_TOL_COARSE

MD 37210 \$MA_COUPLE_POS_TOL_FINE

MD 37220 \$MA_COUPLE_VELO_TOL_COARSE

MD 37230 \$MA_COUPLE_VELO_TOL_FINE

37250	MS_ASSIGN_MASTER_SPEED_CMD			A10	TE3	
-	Master axis for speed setpoint coupling			DWORD	PowerOn	
-						
-	-	0	0	31	7/2	M

2.3 NC machine data

Description: A master/slave speed setpoint linkage is configured by indicating the machine axis number of the master axis belonging to this slave.

Related to:

MD37252 \$MA_MS_ASSIGN_MASTER_TORQUE_CTR

37252	MS_ASSIGN_MASTER_TORQUE_CTR			A10	TE3	
-	Master axis number for torque control			DWORD	PowerOn	
-						
-	-	0	0	31	7/2	M

Description: Torque distribution between master and slave axes is configured by stating the machine axis number of the master axis belonging to the slave.
Homogenous torque distribution is achieved by using the torque compensatory controller. In order to do this, the controller has to know the torque actual values of the drives involved (with PROFIdrive, the message frame used must include and transfer these values, e.g. use message frame 116)

With default setting = 0, the same master axis is used for torque control as for speed setpoint coupling MD37250 \$MA_MS_ASSIGN_MASTER_SPEED_CMD.

Related to:

MD37250 \$MA_MS_ASSIGN_MASTER_SPEED_CMD

MD37254 \$MA_MS_TORQUE_CTRL_MODE

MD37256 \$MA_MS_TORQUE_CTRL_P_GAIN

MD37258 \$MA_MS_TORQUE_CTRL_I_TIME

MD37268 \$MA_MS_TORQUE_WEIGHT_SLAVE

37253	MS_FUNCTION_MASK			A10	TE3	
-	Master/slave settings			UDWORD	NEW CONF	
-						
-	-	0x0	0	0x7FFFFFFF	7/2	M

Description: Parameterizing a master/slave coupling

Bit 0 = 0:

The scaling of MD37256 \$MA_MS_TORQUE_CTRL_P_GAIN, MD37260 \$MA_MS_MAX_CTRL_VELO is smaller than described in the documentation by the factor 1s/IPO cycle.

Bit 0 = 1:

The scaling of MD37256 \$MA_MS_TORQUE_CTRL_P_GAIN, MD37260 \$MA_MS_MAX_CTRL_VELO corresponds to the documentation.

Bit 1 = 0:

With MASLDEF, the master axis for torque compensation control is the programmed axis

Bit 1 = 1:

With MASLDEF, the master axis for torque compensation control is the axis configured in MD37252 \$MA_MS_ASSIGN_MASTER_TORQUE_CTR.

37254	MS_TORQUE_CTRL_MODE			A10	TE3	
-	Torque compensatory controller interconnection			DWORD	Immediately	
-						
-	-	0	0	3	7/2	M

Description: The output of the torque compensatory controller is connected to

0: Master and slave axis

1: Slave axis

2: Master axis

3: No axis

when the torque control is active.

Related to:

MD37252 \$MA_MS_ASSIGN_MASTER_TORQUE_CTRL

MD37250 \$MA_MS_ASSIGN_MASTER_SPEED_CMD

MD37254 \$MA_MS_TORQUE_CTRL_MODE

37255	MS_TORQUE_CTRL_ACTIVATION			A10	TE3	
-	Torque compensatory controller activation			BYTE	NEW CONF	
-						
-	-	0	0	1	7/2	M

Description: The torque compensatory controller can be switched ON and OFF by means of MD37254 \$MA_MS_TORQUE_CTRL_MODE or via the NC/PLC interface signal DB31, ... DBX24.4 (torque compensatory controller on).

In order to do this, the controller has to know the torque actual values of the drives involved (with PROFIdrive, the message frame used must include and transfer these values, e.g. use message frame 116).

In the case of the PLC, MD37254 \$MA_MS_TORQUE_CTRL_MODE is only used for configuring the interconnection of the torque compensatory controller.

0: Switch ON/OFF via MD37254 \$MA_MS_TORQUE_CTRL_MODE

1: Switch ON/OFF via the NC/PLC interface signal DB31, ... DBX24.4 (torque compensatory controller on)

37256	MS_TORQUE_CTRL_P_GAIN			A10	TE3	
%	Torque compensatory controller gain factor			DOUBLE	NEW CONF	
-						
-	-	0.0	0.0	100.0	7/2	M

Description: Gain factor of the torque compensatory controller

The gain factor is entered as a percentage ratio between the maximum load-side axis velocity of the slave axis to the normalization torque.

The maximum axis velocity is derived from MD32000 \$MA_MAX_AX_VELO, the interface normalization torque e.g. from the SINAMICS parameter P2003.

If (for third-party drives), the torque interface normalization for the control software is unknown, then the torque equalization controller (master-slave) cannot be used.

Corresponds with:

MD37254 \$MA_MS_TORQUE_CTRL_MODE

MD37258 \$MA_MS_TORQUE_CTRL_I_TIME

MD32000 \$MA_MAX_AX_VELO

37258	MS_TORQUE_CTRL_I_TIME			A10	TE3	
s	Torque compensatory controller integral action time			DOUBLE	NEW CONF	
-						
-	-	0.0	0.0	100.0	7/2	M

Description: Integral time of the torque compensatory controller

The integral time does not become active until the P gain factor is greater than 0.

Related to:

MD37254 \$MA_MS_TORQUE_CTRL_MODE

MD37256 \$MA_MS_TORQUE_CTRL_P_GAIN

MD32000 \$MA_MAX_AX_VELO

2.3 NC machine data

37260	MS_MAX_CTRL_VELO			A10	TE3	
%	Torque compensatory controller limit			DOUBLE	NEW CONF	
-						
-	-	100.0	0.0	100.0	7/2	M

Description:

Torque compensatory controller limitation

The speed setpoint value calculated by the torque compensatory controller is limited. The limit that can be entered as a percentage refers to MD32000 \$MA_MAX_AX_VELO of the slave axis.

Related to:

MD37254 \$MA_MS_TORQUE_CTRL_MODE

MD37256 \$MA_MS_TORQUE_CTRL_P_GAIN

MD37258 \$MA_MS_TORQUE_CTRL_I_TIME

MD32000 \$MA_MAX_AX_VELO

37262	MS_COUPLING_ALWAYS_ACTIVE			A10	TE3	
-	Permanent master/slave link			BYTE	NEW CONF	
-						
-	-	0	0	1	7/2	M

Description:

Activation behavior of a master/slave coupling

0: Temporary coupling

The coupling is activated/deactivated via PLC interface signals and language commands.

1: Permanent coupling

This machine data activates the permanent coupling.

PLC interface signals and language commands do not have any effect.

Related to:

MD37252 \$MA_MS_ASSIGN_MASTER_TORQUE_CTR

MD37250 \$MA_MS_ASSIGN_MASTER_SPEED_CMD

37263	MS_SPIND_COUPLING_MODE			A10	TE3	
-	Link response of a spindle			BYTE	NEW CONF	
-						
-	-	0	0	1	7/2	M

Description:

Link behavior of a speed-controlled spindle:

0: Link is closed/released in standstill only.

1: Link is closed/released already during motion.

The configuration is valid both for activation/deactivation via NC/PLC interface signal DB31, ... DBX24.7 (activate MS) and for MASLON, MASLOF, MASLOFs, MASLDEL

37264	MS_TENSION_TORQUE			A10	TE3	
%	Master-slave tension torque			DOUBLE	Immediately	
-						
-	-	0.0	-100.0	100.0	7/2	M

Description:

A constant tension torque between the master and the slave axis can be entered as a percentage of the normalization torque of the slave axis.

The value entered here is derived from the SINAMICS parameter P2003

Use of a tension torque requires an active torque compensatory controller (compare MD37255 \$MA_MS_TORQUE_CTRL_ACTIVATION).

Related to:

MD37252 \$MA_MS_ASSIGN_MASTER_TORQUE_CTR

MD37266 \$MA_MS_TENSION_TORQ_FILTER_TIME

MD37255 \$MA_MS_TORQUE_CTRL_ACTIVATION

37266	MS_TENSION_TORQ_FILTER_TIME	A10	TE3
s	Filter time constant tension torque	DOUBLE	NEW CONF
-			
-	-	0.0	0.0
-	-	100.0	7/2
-	-		M

Description: The tension torque between the master and slave axes can be activated via a PT1 filter. Any change of MD37264 \$MA_MS_TENSION_TORQUE is then travelled out with the time constant of the filter.

As default, the filter is inactive; any torque change becomes active unfiltered.

Related to:

MD37264 \$MA_MS_TENSION_TORQUE

37268	MS_TORQUE_WEIGHT_SLAVE	A10	TE3
%	Torque weighting of slave axis	DOUBLE	NEW CONF
-			
-	-	50.0	1.0
-	-	100.0	7/2
-	-		M

Description: The torque share that the slave axis contributes to the total torque can be configured via the weighting. This enables different torque shares to be implemented between the master and slave axes.

In the case of motors with the same rated torque, a 50% to 50% torque sharing is suggested.

The torque share of the master axis results implicitly from 100% - MD37268 \$MA_MS_TORQUE_WEIGHT_SLAVE.

Related to:

MD37252 \$MA_MS_ASSIGN_MASTER_TORQUE_CTR

MD37266 \$MA_MS_TENSION_TORQ_FILTER_TIME

37270	MS_VELO_TOL_COARSE	A10	TE3, Z3
%	Master/slave speed tolerance coarse	DOUBLE	NEW CONF
-			
-	-	5.0	0.0
-	-	-	7/2
-	-		M

Description: Tolerance window, coarse, for the differential speed between the master and the slave. If the speed difference is within the tolerance window, the NC/PLC interface signal DB31, ... DBX96.4 (Master-Slave compensatory controller active) is set.

The tolerance value is entered as a percentage of MD32000 \$MA_MAX_AX_VELO.

37272	MS_VELO_TOL_FINE	A10	TE3, Z3
%	Master/slave speed tolerance fine	DOUBLE	NEW CONF
-			
-	-	1.0	0.0
-	-	-	7/2
-	-		M

Description: Tolerance window, fine, for the differential speed between the master and the slave. If the speed difference is within the tolerance window, the NC/PLC interface signal DB31, ... DBX96.3 (Master/Slave coarse) is set.

The tolerance value is entered as a percentage of MD32000 \$MA_MAX_AX_VELO.

37274	MS_MOTION_DIR_REVERSE	A10	-
-	Inverting traversing direction slave axis	BYTE	NEW CONF
-			
-	-	0	0
-	-	1	7/2
-	-		M

2.3 NC machine data

Description: Inverting the traversing direction of a slave axis in the linked status.
 0: Equidirectional to the master axis
 1: Inverse to the master axis

37302	NOCO_FILTER_TIME			EXP, A01, A09	-	
s	Time constant for smoothing the nodding compensation values			DOUBLE	NEW CONF	
-						
-	-	0.002	0.0	1.0	2/2	M

Description: The time constant is used to smooth the injected values of the nodding compensation. The smoothing is not effective if the time constant is less than 0.1 of the position controller cycles.

Related to:

MD37310 \$MA_NOCO_INPUT_AX_1
 MD37320 \$MA_NOCO_INPUT_AX_2
 MD37330 \$MA_NOCO_INPUT_AX_3
 MD37318 \$MA_NOCO_COMPLIANCE_1
 MD37328 \$MA_NOCO_COMPLIANCE_2
 MD37338 \$MA_NOCO_COMPLIANCE_3

37310	NOCO_INPUT_AX_1			EXP, A01, A09	-	
-	Machine axis that causes a nodding motion			DWORD	NEW CONF	
-						
-	-	0	0	31	2/2	M

Description: Number of the machine axis that causes a nodding motion in this axis in order to activate the nodding compensation. The nodding compensation acts in combination with MD37318 \$MA_NOCO_COMPLIANCE_1.

Related to:

MD37302 \$MA_NOCO_FILTER_TIME
 MD37312 \$MA_NOCO_ADAPT_AX_1
 MD37318 \$MA_NOCO_COMPLIANCE_1

37312	NOCO_ADAPT_AX_1			EXP, A01, A09	-	
-	Machine axis whose position affects the nodding motion			DWORD	NEW CONF	
-						
-	-	0	0	31	2/2	M

Description: Number of the machine axis whose position affects the nodding motion in this axis. The position-dependent adaptation of the nodding compensation takes place in combination with MD 37316 \$MA_NOCO_ADAPT_POS_1 and MD37318 \$MA_NOCO_COMPLIANCE_1. A position-dependent adaptation is only active if a machine axis number is parameterized and there is a value greater than 1 in MD37314 \$MA_NOCO_ADAPT_NUM_1.

Related to:

MD37310 \$MA_NOCO_INPUT_AX_1
 MD37314 \$MA_NOCO_ADAPT_NUM_1
 MD37316 \$MA_NOCO_ADAPT_POS_1
 MD37318 \$MA_NOCO_COMPLIANCE_1

37314	NOCO_ADAPT_NUM_1			EXP, A01, A09	-	
-	Number of positions of the adaptation curve of the nodding compensation			DWORD	NEW CONF	
-						
-	-	1	1	3	2/2	M

Description: Number of the axis positions used for the position-dependent adaptation of the nodding compensation.

A position-dependent adaptation is only active if the number of positions is greater than 1 and a machine axis number is parameterized in MD37312 \$MA_NOCO_ADAPT_AX_1.

Related to:

MD37310 \$MA_NOCO_INPUT_AX_1

MD37312 \$MA_NOCO_ADAPT_AX_1

MD37316 \$MA_NOCO_ADAPT_POS_1

MD37318 \$MA_NOCO_COMPLIANCE_1

37316	NOCO_ADAPT_POS_1			EXP, A01, A09	-	
mm	Positions of the adaptation curve of the nodding compensation			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0, 0.0	-	-	2/2	M

Description: Positions of the machine axis from MD37312 \$MA_NOCO_ADAPT_AX_1 at which the compliance factors in MD37318 \$MA_NOCO_COMPLIANCE_1 are active.

A position-dependent adaptation is only active if the number of positions in MD37314 \$MA_NOCO_ADAPT_NUM_1 is greater than 1 and a machine axis number is parameterized in MD37312 \$MA_NOCO_ADAPT_AX_1.

Related to:

MD37310 \$MA_NOCO_INPUT_AX_1

MD37312 \$MA_NOCO_ADAPT_AX_1

MD37314 \$MA_NOCO_ADAPT_NUM_1

MD37318 \$MA_NOCO_COMPLIANCE_1

37318	NOCO_COMPLIANCE_1			EXP, A01, A09	-	
-	Compliance factor for nodding compensation			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0, 0.0	-0.000999	+0.000999	2/2	M

Description: Factor for compensating the nodding motion caused by MD37310 \$MA_NOCO_INPUT_AX_1.

Compliance factor = compliance in the position (m)/ acceleration (m/s²)

If no position-dependent adaptation is active, only the value in MD37318 \$MA_NOCO_COMPLIANCE_1[0] is active.

With active position-dependent adaptation, as many values from MD37318 \$MA_NOCO_COMPLIANCE_1 are active as are parameterized in MD37314 \$MA_NOCO_ADAPT_NUM_1.

Related to:

MD37302 \$MA_NOCO_FILTER_TIME

MD37310 \$MA_NOCO_INPUT_AX_1

MD37312 \$MA_NOCO_ADAPT_AX_1

MD37314 \$MA_NOCO_ADAPT_NUM_1

MD37316 \$MA_NOCO_ADAPT_POS_1

2.3 NC machine data

37320	NOCO_INPUT_AX_2	EXP, A01, A09	-
-	Machine axis that causes a nodding motion	DWORD	NEW CONF
-			
-	-	0	0
-	-	31	2/2
-	-	M	

Description: Number of the machine axis that causes a nodding motion in this axis in order to activate the nodding compensation. The nodding compensation acts in combination with MD37328 \$MA_NOCO_COMPLIANCE_2.

Related to:

MD37302 \$MA_NOCO_FILTER_TIME

MD37322 \$MA_NOCO_ADAPT_AX_2

MD37328 \$MA_NOCO_COMPLIANCE_2

37322	NOCO_ADAPT_AX_2	EXP, A01, A09	-
-	Machine axis whose position affects the nodding motion	DWORD	NEW CONF
-			
-	-	0	0
-	-	31	2/2
-	-	M	

Description: Number of the machine axis whose position affects the nodding motion in this axis. The position-dependent adaptation of the nodding compensation takes place in combination with MD 37326 \$MA_NOCO_ADAPT_POS_2 and MD37328 \$MA_NOCO_COMPLIANCE_2. A position-dependent adaptation is only active if a machine axis number is parameterized and there is a value greater than 1 in MD37324 \$MA_NOCO_ADAPT_NUM_2.

Related to:

MD37320 \$MA_NOCO_INPUT_AX_2

MD37324 \$MA_NOCO_ADAPT_NUM_2

MD37326 \$MA_NOCO_ADAPT_POS_2

MD37328 \$MA_NOCO_COMPLIANCE_2

37324	NOCO_ADAPT_NUM_2	EXP, A01, A09	-
-	Number of positions of the adaptation curve of the nodding compensation	DWORD	NEW CONF
-			
-	-	1	1
-	-	3	2/2
-	-	M	

Description: Number of the axis positions used for the position-dependent adaptation of the nodding compensation.

A position-dependent adaptation is only active if the number of positions is greater than 1 and a machine axis number is parameterized in MD37322 \$MA_NOCO_ADAPT_AX_2.

Related to:

MD37320 \$MA_NOCO_INPUT_AX_2

MD37322 \$MA_NOCO_ADAPT_AX_2

MD37326 \$MA_NOCO_ADAPT_POS_2

MD37328 \$MA_NOCO_COMPLIANCE_2

37326	NOCO_ADAPT_POS_2	EXP, A01, A09	-
mm	Positions of the adaptation curve of the nodding compensation	DOUBLE	NEW CONF
-			
-	3	0.0, 0.0, 0.0	-
-	-	-	2/2
-	-	M	

Description: Positions of the machine axis from MD37322 \$MA_NOCO_ADAPT_AX_2 at which the compliance factors in MD37328 \$MA_NOCO_COMPLIANCE_2 are active.

A position-dependent adaptation is only active if the number of positions in MD37324 \$MA_NOCO_ADAPT_NUM_2 is greater than 1 and a machine axis number is parameterized in MD37322 \$MA_NOCO_ADAPT_AX_2.

Related to:

MD37320 \$MA_NOCO_INPUT_AX_2

MD37322 \$MA_NOCO_ADAPT_AX_2

MD37324 \$MA_NOCO_ADAPT_NUM_2

MD37328 \$MA_NOCO_COMPLIANCE_2

37328	NOCO_COMPLIANCE_2	EXP, A01, A09	-
-	Compliance factor for nodding compensation	DOUBLE	NEW CONF
-			
-	3	0.0, 0.0, 0.0	-0.000999 +0.000999 2/2 M

Description: Factor for compensating the nodding motion caused by MD37320 \$MA_NOCO_INPUT_AX_2.
 Compliance factor = compliance in the position (m) / acceleration (m/s²)
 If no position-dependent adaptation is active, only the value in MD37328 \$MA_NOCO_COMPLIANCE_2[0] is active.
 With active position-dependent adaptation, as many values from MD37328 \$MA_NOCO_COMPLIANCE_2 are active as are parameterized in MD37324 \$MA_NOCO_ADAPT_NUM_2.
 Related to:
 MD37302 \$MA_NOCO_FILTER_TIME
 MD37320 \$MA_NOCO_INPUT_AX_2
 MD37322 \$MA_NOCO_ADAPT_AX_2
 MD37324 \$MA_NOCO_ADAPT_NUM_2
 MD37326 \$MA_NOCO_ADAPT_POS_2

37330	NOCO_INPUT_AX_3	EXP, A01, A09	-
-	Machine axis that causes a nodding motion	DWORD	NEW CONF
-			
-	-	0	0 31 2/2 M

Description: Number of the machine axis that causes a nodding motion in this axis in order to activate the nodding compensation. The nodding compensation acts in combination with MD37338 \$MA_NOCO_COMPLIANCE_3.
 Related to:
 MD37302 \$MA_NOCO_FILTER_TIME
 MD37332 \$MA_NOCO_ADAPT_AX_3
 MD37338 \$MA_NOCO_COMPLIANCE_3

37332	NOCO_ADAPT_AX_3	EXP, A01, A09	-
-	Machine axis whose position affects the nodding motion	DWORD	NEW CONF
-			
-	-	0	0 31 2/2 M

Description: Number of the machine axis whose position affects the nodding motion in this axis.
 The position-dependent adaptation of the nodding compensation takes place in combination with MD 37336 \$MA_NOCO_ADAPT_POS_3 and MD37338 \$MA_NOCO_COMPLIANCE_3.
 A position-dependent adaptation is only active if a machine axis number is parameterized and there is a value greater than 1 in MD37334 \$MA_NOCO_ADAPT_NUM_3.
 Related to:
 MD37330 \$MA_NOCO_INPUT_AX_3
 MD37334 \$MA_NOCO_ADAPT_NUM_3
 MD37336 \$MA_NOCO_ADAPT_POS_3

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MD37338 \$MA_NOCO_COMPLIANCE_3

37334	NOCO_ADAPT_NUM_3			EXP, A01, A09	-	
-	Number of positions of the adaptation curve of the nodding compensation			DWORD	NEW CONF	
-						
-	-	1	1	3	2/2	M

Description: Number of the axis positions used for the position-dependent adaptation of the nodding compensation.

A position-dependent adaptation is only active if the number of positions is greater than 1 and a machine axis number is parameterized in MD37332 \$MA_NOCO_ADAPT_AX_3.

Related to:

MD37330 \$MA_NOCO_INPUT_AX_3

MD37332 \$MA_NOCO_ADAPT_AX_3

MD37336 \$MA_NOCO_ADAPT_POS_3

MD37338 \$MA_NOCO_COMPLIANCE_3

37336	NOCO_ADAPT_POS_3			EXP, A01, A09	-	
mm	Positions of the adaptation curve of the nodding compensation			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0, 0.0	-	-	2/2	M

Description: Positions of the machine axis from MD37332 \$MA_NOCO_ADAPT_AX_3 at which the compliance factors in MD37338 \$MA_NOCO_COMPLIANCE_3 are active.

A position-dependent adaptation is only active if the number of positions in MD37334 \$MA_NOCO_ADAPT_NUM_3 is greater than 1 and a machine axis number is parameterized in MD37332 \$MA_NOCO_ADAPT_AX_3.

Related to:

MD37330 \$MA_NOCO_INPUT_AX_3

MD37332 \$MA_NOCO_ADAPT_AX_3

MD37334 \$MA_NOCO_ADAPT_NUM_3

MD37338 \$MA_NOCO_COMPLIANCE_3

37338	NOCO_COMPLIANCE_3			EXP, A01, A09	-	
-	Compliance factor of the nodding compensation			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0, 0.0	-0.000999	+0.000999	2/2	M

Description: Factor for compensating the nodding motion caused by MD37330 \$MA_NOCO_INPUT_AX_3.

Compliance factor = compliance in the position (m) / acceleration (m/s²)

If no position-dependent adaptation is active, only the value in MD37338 \$MA_NOCO_COMPLIANCE_3[0] is active.

With active position-dependent adaptation, as many values from MD37338 \$MA_NOCO_COMPLIANCE_3 are active as are parameterized in MD37334 \$MA_NOCO_ADAPT_NUM_3.

Related to:

MD37302 \$MA_NOCO_FILTER_TIME

MD37330 \$MA_NOCO_INPUT_AX_3

MD37332 \$MA_NOCO_ADAPT_AX_3

MD37334 \$MA_NOCO_ADAPT_NUM_3

MD37336 \$MA_NOCO_ADAPT_POS_3

37400	EPS_TLIFT_TANG_STEP	A10	T3
mm, degrees	Tangent angle for corner recognition	DOUBLE	Reset
CTEQ			
-	-	5.0	-
-	-	-	7/2
-	-	-	M

Description: If TLIFT has been programmed and the axis is tracked tangentially, a step of the position setpoint larger than MD37400 \$MA_EPS_TLIFT_TANG_STEP causes an intermediate block to be inserted. The intermediate block traverses the axis to the position corresponding to the start tangent in the next block.

MD irrelevant if: TLIFT not activated

Related to:

TLIFT instruction

37402	TANG_OFFSET	A10	T3
mm, degrees	Default angle for tangential correction	DOUBLE	Reset
CTEQ			
-	-	0.0	-
-	-	-	7/2
-	-	-	M

Description: Default offset (angle), which the tracked axis forms with the tangent. The angle acts in addition to the angle programmed in the TANGON block.

MD irrelevant if tangential tracking not active.

Related to:

TANGON instruction

37500	ESR_REACTION	EXP, A01, A10	M3, P2
-	Axial mode of "Extended Stop and Retract"	BYTE	NEW CONF
CTEQ			
-	-	0	0
-	-	22	7/2
-	-	-	M

Description: Selection of the response to be triggered via system variable "\$AN_ESR_TRIGGER".

0 = No response Reaktion (or only external response through synchronized action programming of rapid digital outputs).

21 = NC-controlled retraction axis

22 = NC-controlled stopping axis

37510	AX_ESR_DELAY_TIME1	EXP, A01, A10	P2
s	Delay time ESR single axis	DOUBLE	NEW CONF
CTEQ			
-	-	0.0	0.0
-	-	-	7/2
-	-	-	M

Description: If, for example, an alarm occurs, the deceleration time can be delayed by means of this MD, e.g. to allow in case of gear hobbing the retraction from the tooth gap first.

37511	AX_ESR_DELAY_TIME2	EXP, A01, A10	P2
s	ESR time for interpolatory deceleration of single axis	DOUBLE	NEW CONF
CTEQ			
-	-	0.0	0.0
-	-	-	7/2
-	-	-	M

Description: The time for interpolatory braking specified here in MD37511 \$MA_AX_ESR_DELAY_TIME2 still remains after expiry of the time MD37510 \$MA_AX_ESR_DELAY_TIME1.

Rapid braking with subsequent tracking is initiated after expiry of the time MD37511 \$MA_AX_ESR_DELAY_TIME2.

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37550	EG_VEL_WARNING			A05, A10	M3, Z3	
%	Threshold value for velocity warning threshold.			DOUBLE	NEW CONF	
-						
-	-	90.0	0	100	7/2	M

Description: Threshold value for VDI signals

If, with active EG axis link, the maximum velocities stored in MD 32000: \$MA_MAX_AX_VELO have been reached for the current velocity of the axis by the percentage set here, a warning (signal) for velocity is output.

Related to:

MD32000 \$MA_MAX_AX_VELO

37560	EG_ACC_TOL			A05, A10	M3, Z3	
%	Threshold value for 'Axis accelerating'			DOUBLE	NEW CONF	
-						
-	-	25.0	0.0	-	7/2	M

Description: Threshold value for VDI signal "Axis accelerates"

If, with active EU axis link, the maximum accelerations stored in MD 32300: \$MA_MAX_AX_ACCEL have been reached for the current acceleration of the axis by the percentage set here, a warning (signal) for acceleration is output.

Korrespondiert mit:

MD32300 \$MA_MAX_AX_ACCEL

37620	PROFIBUS_TORQUE_RED_RESOL			EXP, A01	-	
%	Resolution PROFIdrive torque reduction			DOUBLE	NEW CONF	
-						
-	-	1.0	0.005	10.0	7/2	M

Description: For PROFIdrive only:

Resolution of torque reduction on the PROFIdrive (LSB significance)

The MD is only relevant for controls with PROFIdrive drives. For these controls, it defines the resolution of the cyclic interface data "Torque reduction value" (only exists for MD13060 \$MN_DRIVE_TELEGRAM_TYPE = 101 ff. or 201 ff.), which is required for the "Travel to fixed stop" functionality.

The 1% default value corresponds to the original significance. The torque limit is transferred on the PROFIdrive with increments of 1%; the value 100 in the corresponding PROFIdrive message frame data cell corresponds to full torque reduction (i.e. without force).

By changing this MD to 0.005%, for example, the value can be entered in increments of 0.005%, i.e. the increments for the torque limit value become finer by a factor of 200.

For limitation to the rated torque, the value 0 is transmitted in this case; complete torque reduction (i.e. without force) characterizes the transmittable value 10000.

To avoid misadaptation, the setting value of the MD must be selected to match the interpretation configured on the drive side or the firmly defined interpretation of the torque reduction value. If the setting of the control on the drive (manufacturer-specific drive parameter) is known (i.e. with SIEMENS drives), the software automatically sets the MD; in other words, in this case the MD is merely used for display purposes.

37800	OEM_AXIS_INFO			A01, A11	-	
-	OEM version information			STRING	PowerOn	
-						
-	2	,	-	-	7/2	M

Description: A version information freely available to the user

(is indicated in the version screen)

37900	SAFE_CAM_TRACK_OUTPUT			A01	FBSI	
-	Output assignment cam track 1 to 4			UDWORD	PowerOn	
-						
-	4	0, 0, 0, 0	0x00000000	0x8403073F	7/2	M

Description: This data defines the outputs for the cam tracks 1 to 4.
 Structure see: MD36980 \$MA_SAFE_SVSS_STATUS_OUTPUT
 n = 0, 1, 2, 3 correspond to the assignment for cam track 1 to 4
 Signal Meaning
 = 0 Axis is not placed on a cam of the cam track
 = 1 Axis is placed on a cam of the cam track
 Note:
 The "Safe cam track" function is enabled in MD 36903 \$MA_SAFE_CAM_ENABLE.

37901	SAFE_CAM_RANGE_OUTPUT_1			A01	FBSI	
-	Output assignment cam range for cam track 1			UDWORD	PowerOn	
-						
-	4	0, 0, 0, 0	0x00000000	0x8403073F	7/2	M

Description: This data defines the outputs for the cam range of cam track 1.
 Structure see: MD36980 \$MA_SAFE_SVSS_STATUS_OUTPUT
 n = 0, 1, 2, 3 correspond to the 4 bits for the indicated range on cam track 1
 Bit 3 Bit 2 Bit 1 Bit 0
 0 0 0 0 Cam range 0 active
 0 0 0 1 Cam range 1 active
 to ...
 1 1 1 1 Cam range 15 active
 The cam range is defined via the following machine data:
 MD36938: \$MA_SAFE_CAM_TRACK_ASSIGN[n]
 Signal Meaning
 = 0...14 Axis is placed within the cam range, to which the range ID 0...14 on cam track 1 was assigned
 = 15 Axis is placed within the range to the right of the cam with the highest position of cam track 1
 Note:
 The "Safe cam track" function is enabled in MD36903 \$MA_SAFE_CAM_ENABLE.
 If not all 4 bits are assigned, it may not be possible to detect unequivocally which cam range is active.
 Related to:
 MD37900: \$MA_SAFE_CAM_TRACK_OUTPUT

37902	SAFE_CAM_RANGE_OUTPUT_2			A01	FBSI	
-	Output assignment cam range for cam track 2			UDWORD	PowerOn	
-						
-	4	0, 0, 0, 0	0x00000000	0x8403073F	7/2	M

Description: This data defines the outputs for the cam range of cam track 2.
 Structure see: MD36980 \$MA_SAFE_SVSS_STATUS_OUTPUT
 n = 0, 1, 2, 3 correspond to the 4 bits for the indicated range on cam track 2
 Bit 3 Bit 2 Bit 1 Bit 0

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```

0      0      0      0      Cam range 0 active
0      0      0      1      Cam range 1 active
to ...
1      1      1      1      Cam range 15 active
The cam range is defined via the following machine data:
MD36938: $MA_SAFE_CAM_TRACK_ASSIGN[n]
Signal      Meaning
= 0...14    Axis is placed within the cam range, to which the range ID 0...14 on cam
track 2 was assigned
= 15       Axis is placed within the range to the right of the cam with the highest
position of cam track 2
Note:
The "Safe cam track" function is enabled in MD36903 $MA_SAFE_CAM_ENABLE.
If not all 4 bits are assigned, it may not be possible to detect unequivocally which
cam range is active.
Related to:
MD37900: $MA_SAFE_CAM_TRACK_OUTPUT

```

37903	SAFE_CAM_RANGE_OUTPUT_3			A01	FBSI	
-	Output assignment cam range for cam track 3			UDWORD	PowerOn	
-						
-	4	0, 0, 0, 0	0x00000000	0x8403073F	7/2	M

Description:

This data defines the outputs for the cam range of cam track 3.

Structure see: MD36980 \$MA_SAFE_SVSS_STATUS_OUTPUT

n = 0, 1, 2, 3 correspond to the 4 bits for the indicated range on cam track 3

```

Bit 3  Bit 2  Bit 1  Bit 0
0      0      0      0      Cam range 0 active
0      0      0      1      Cam range 1 active
to ...
1      1      1      1      Cam range 15 active
The cam range is defined via the following machine data:
MD36938: $MA_SAFE_CAM_TRACK_ASSIGN[n]
Signal      Meaning
= 0...14    Axis is placed within the cam range, to which the range ID 0...14 on cam
track 3 was assigned
= 15       Axis is placed within the range to the right of the cam with the highest
position of cam track 3
Note:
The "Safe cam track" function is enabled in MD36903 $MA_SAFE_CAM_ENABLE.
If not all 4 bits are assigned, it may not be possible to detect unequivocally which
cam range is active.
Related to:
MD37900: $MA_SAFE_CAM_TRACK_OUTPUT

```

37904	SAFE_CAM_RANGE_OUTPUT_4			A01	FBSI	
-	Output assignment cam range for cam track 4			UDWORD	PowerOn	
-						
-	4	0, 0, 0, 0	0x00000000	0x8403073F	7/2	M

Description:

This data defines the outputs for the cam range of cam track 4.

Structure see: MD36980 \$MA_SAFE_SVSS_STATUS_OUTPUT

n = 0, 1, 2, 3 correspond to the 4 bits for the indicated range on cam track 4

Bit 3	Bit 2	Bit 1	Bit 0	
0	0	0	0	Cam range 0 active
0	0	0	1	Cam range 1 active
to ...				
1	1	1	1	Cam range 15 active

The cam range is defined via the following machine data:

MD36938: \$MA_SAFE_CAM_TRACK_ASSIGN[n]

Signal	Meaning

= 0...14 Axis is placed within the cam range, to which the range ID 0...14 on cam track 4 was assigned

= 15 Axis is placed within the range to the right of the cam with the highest position of cam track 4

Note:

The "Safe cam track" function is enabled in MD36903 \$MA_SAFE_CAM_ENABLE.

If not all 4 bits are assigned, it may not be possible to detect unequivocally which cam range is active.

Related to:

MD37900: \$MA_SAFE_CAM_TRACK_OUTPUT

37906	SAFE_CAM_RANGE_BIN_OUTPUT_1			A01	FBSI	
-	Output assignment cam range bit for cam track 1			UDWORD	PowerOn	
-						
-	15	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0	0x00000000	0x8403073F	7/2	M

Description:

This data defines the outputs for the cam range bits of cam track 1.

Structure see: MD36980 \$MA_SAFE_SVSS_STATUS_OUTPUT

Field index n corresponds to the parameterizable cam range numbers on cam track 1.

The cam range number is defined via the following machine data:

MD36938: \$MA_SAFE_CAM_TRACK_ASSIGN[k]

Signal	Meaning

= 0 Axis is not placed on cam with cam range number n

= 1 Axis is placed on cam with cam range number n

Example:

The signal addressed with field index 5 changes to 1 if the axis is placed on the cam to which cam range number 5 on cam track 1 was assigned during parameterization.

Note:

- The "Safe cam track" function is enabled in MD 36903 \$MA_SAFE_CAM_ENABLE.
- If cam range number n on cam track 1 is not parameterized, the signal of the field index can never change to 1. In this case, the output MD with field index n does not have to be parameterized.

37907	SAFE_CAM_RANGE_BIN_OUTPUT_2			A01	FBSI	
-	Output assignment cam range bit for cam track 2			UDWORD	PowerOn	
-						
-	15	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0	0x00000000	0x8403073F	7/2	M

Description:

This data defines the outputs for the cam range bits of cam track 2.

Structure see: MD36980 \$MA_SAFE_SVSS_STATUS_OUTPUT

Field index n corresponds to the parameterizable cam range numbers on cam track 2.

The cam range number is defined via the following machine data:

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MD36938: \$MA_SAFE_CAM_TRACK_ASSIGN[k]

Signal Meaning

= 0 Axis is not placed on cam with cam range number n

= 1 Axis is placed on cam with cam range number n

Example:

The signal addressed with field index 5 changes to 1 if the axis is placed on the cam to which cam range number 5 on cam track 2 was assigned during parameterization.

Note:

- The "Safe cam track" function is enabled in MD 36903 \$MA_SAFE_CAM_ENABLE.
- If cam range number n on cam track 2 is not parameterized, the signal of the field index can never change to 1. In this case, the output MD with field index n does not have to be parameterized.

37908	SAFE_CAM_RANGE_BIN_OUTPUT_3			A01	FBSI	
-	Output assignment cam range bit for cam track 3			UDWORD	PowerOn	
-						
-	15	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0	0x00000000	0x8403073F	7/2	M

Description:

This data defines the outputs for the cam range bits of cam track 3.

Structure see: MD36980 \$MA_SAFE_SVSS_STATUS_OUTPUT

Field index n corresponds to the parameterizable cam range numbers on cam track 3.

The cam range number is defined via the following machine data:

MD36938: \$MA_SAFE_CAM_TRACK_ASSIGN[k]

Signal Meaning

= 0 Axis is not placed on cam with cam range number n

= 1 Axis is placed on cam with cam range number n

Example:

The signal addressed with field index 5 changes to 1 if the axis is placed on the cam to which cam range number 5 on cam track 3 was assigned during parameterization.

Note:

- The "Safe cam track" function is enabled in MD 36903 \$MA_SAFE_CAM_ENABLE.
- If cam range number n on cam track 3 is not parameterized, the signal of the field index can never change to 1. In this case, the output MD with field index n does not have to be parameterized.

37909	SAFE_CAM_RANGE_BIN_OUTPUT_4			A01	FBSI	
-	Output assignment cam range bit for cam track 4			UDWORD	PowerOn	
-						
-	15	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0	0x00000000	0x8403073F	7/2	M

Description:

This data defines the outputs for the cam range bits of cam track 4.

Structure see: MD36980 \$MA_SAFE_SVSS_STATUS_OUTPUT

Field index n corresponds to the parameterizable cam range numbers on cam track 4.

The cam range number is defined via the following machine data:

MD36938: \$MA_SAFE_CAM_TRACK_ASSIGN[k]

Signal Meaning

= 0 Axis is not placed on cam with cam range number n

= 1 Axis is placed on cam with cam range number n

Example:

The signal addressed with field index 5 changes to 1 if the axis is placed on the cam to which cam range number 5 on cam track 4 was assigned during parameterization.

Note:

- The "Safe cam track" function is enabled in MD 36903 \$MA_SAFE_CAM_ENABLE.
- If cam range number n on cam track 4 is not parameterized, the signal of the field index can never change to 1. In this case, the output MD with field index n does not have to be parameterized.

37920	SAFE_STANDSTILL_VELO_LIMIT			A05, A04	FBSI	
mm/min, rev/min	Switching speed SBH / SG			DOUBLE	PowerOn	
-						
-	-	(0./ 0.)	(0./ 0.)	(1000./ 1000.)	7/2	M

Description: Speed below which an axis/spindle is regarded as being at a "standstill". There is a switch to safe operating stop or to a lower Safely Limited Speed level at the latest after the expiry of the time parameterized in MD37922 \$MA_SAFE_STANDSTILL_DELAY. This premature switch occurs only if a speed > 0.0 is parameterized in this MD.

Related to:

MD37922: \$MA_SAFE_STANDSTILL_DELAY

p9567, p9569

37922	SAFE_STANDSTILL_DELAY			A05	FBSI	
s	Delay time switchover to SBH / SG			DOUBLE	PowerOn	
-						
-	-	0.1	0	10.	7/2	M

Description: If a standstill is detected during the switch to safe operating stop or a lower Safely Limited Speed level (see MD 37920 \$MA_SAFE_STANDSTILL_VELO_LIMIT), then SOS or the selected SLS level becomes active no later than after this transition time. In this case, the transition times of stops C, D, and E as well as SLS after SOS or a higher or lower SLS level are cancelled or replaced by this delay time.

Related to:

MD37920: \$MA_SAFE_STANDSTILL_VELO_LIMIT

p9567, p9569

37950	SAFE_INFO_ENABLE			A01, A05	FBSI	
-	SIC/SCC and PROFIsafe enable			UDWORD	PowerOn	
-						
-	-	0	0	0x03	7/2	M

Description: MD to enable the evaluation of the SIC/SCC telegram between the control and drive, and to enable the transfer of the PROFIsafe telegram between the F-PLC and the drive
Bit 0: Enables the evaluation of the Safety Info Channel / Safety Control Channel (SIC/SCC)

For axes with NC Safety functionality, only the drive-integrated brake test is supported via SIC/SCC

Bit 1: Enables PROFIsafe communication between the F-PLC and drive

37952	PROFISAFE_MODULE_NR			A01	FBSI	
-	PROFIsafe module number			BYTE	PowerOn	
-						
-	-	1, 2, 3, 4, 5, 6, 7, 8...	1	31	7/2	M

Description: Number to select a logical basis address from MD13372 \$MN_SAFE_PS_DRIVE_LOGIC_ADDR.

2.3 NC machine data

37954	SAFE_INFO_MODULE_NR			A01	FBSI	
-	SIC/SCC module number			BYTE	PowerOn	
-						
-	-	1, 2, 3, 4, 5, 6, 7, 8...	1	31	7/2	M

Description: Number to select a logical basis address from MD13374 \$MN_SAFE_INFO_DRIVE_LOGIC_ADDR.

38000	MM_ENC_COMP_MAX_POINTS			A01, A09, A02	K3	
-	Number of intermediate points for interpol. compensation (SRAM)			DWORD	PowerOn	
-						
-	2	0, 0	0	5000	7/2	M

Description: The number of interpolation points required per measuring system must be defined for the leadscrew error compensation.

The required number can be calculated as follows using the defined parameters:

$$\$AA\_ENC\_COMP\_MAX - \$AA\_ENC\_COMP\_MIN$$

$$MD38000 \$MA\_MM\_ENC\_COMP\_MAX\_POINTS = \frac{\$AA\_ENC\_COMP\_MAX - \$AA\_ENC\_COMP\_MIN}{\$AA\_ENC\_COMP\_STEP} + 1$$

$$MD38000 \$MA\_MM\_ENC\_COMP\_MAX\_POINTS = \frac{\$AA\_ENC\_COMP\_MAX - \$AA\_ENC\_COMP\_MIN}{\$AA\_ENC\_COMP\_STEP} + 1$$

\$AA_ENC_COMP_MIN Initial position (system variable)

\$AA_ENC_COMP_MAX End position (system variable)

\$AA_ENC_COMP_STEP Distance between interpolation points (system variable)

When selecting the number of interpolation points and/or the distances between them, it is important to take into account the size of the resulting compensation table and the space required in the buffered NC user memory (SRAM). 8 bytes are required for each compensation value (interpolation point).

The index [n] has the following coding: [encoder no.]: 0 or 1

Special cases: Notice:

After any change in MD38000 \$MA_MM_ENC_COMP_MAX_POINTS, the buffered NC user memory is automatically re-allocated on system power-on.

All data in the buffered NC user memory are then lost (e.g. part programs, tool offsets etc.). Alarm 6020 "Machine data changed - memory reallocated" is output.

If reallocation of the NC user memory fails because the total memory capacity available is insufficient, alarm 6000 "Memory allocation made with standard machine data" is output.

In this case, the NC user memory division is allocated using the default values of the standard machine data.

References:

/FB/, S7, "Memory Configuration"

/DA/, "Diagnostics Guide"

Related to:

MD32700 \$MA_ENC_COMP_ENABLE[n] LEC active

References:

/FB/, S7, "Memory Configuration"

38010	MM_QEC_MAX_POINTS			A01, A09	K3	
-	Number of values for quadrant error compens. with neural network			DWORD	PowerOn	
-						
-	1	0	0	1040	7/2	M

Description: In quadrant error compensation with neural networks (QEC), the number of compensation values required has to be entered for each axis that is to be compensated.

The required number can be calculated as follows using the defined parameters: MD38010 \$MA_MM_QEC_MAX_POINTS _ (\$AA_QEC_COARSE_STEPS + 1) ^ \$AA_QEC_FINE_STEPS

\$AA_QEC_COARSE_STEPS Coarse quantization of the characteristic (system variable)

\$AA_QEC_FINE_STEPS Fine quantization of the characteristic (system variable)

For "direction-dependent" compensation, the number must be greater than or equal to double the value of this product.

When selecting coarse or fine quantization, the resulting size of the compensation table and its memory requirement in the buffered user memory must be taken into account. 4 bytes are required for each compensation value. If the value 0 is entered, no memory is reserved for the table; i.e. the table does not exist and the function cannot therefore be activated.

Special cases: Caution!

If MD38010 \$MA_MM_QEC_MAX_POINTS is altered, the buffered NC user memory is automatically re-allocated on system power-on. This deletes all the user data in the buffered user memory (e.g. drive and HMI machine data, code, tool offsets, part programs etc.).

Note:

For better handling, a large number should be chosen initially, because the exact number of interpolation points that are required is not known when the compensation is started for the first time. This number can be reduced to the required size as soon as the characteristics have been recorded and saved. After performing another power-on, the saved characteristics can be reloaded.

References:

/FB/, S7, "Memory Configuration"

2.4 NC setting data

41010	JOG_VAR_INCR_SIZE	-	H1
-	Size of the variable increment for JOG	DOUBLE	Immediately
-			
-	-	0.	-
-	-	-	-
-	-	7/7	U

Description: This setting data defines the number of increments when variable increment (INCvar) is selected. This increment size is traversed by the axis in JOG mode each time the traverse key is pressed or the handwheel is turned one detent position and variable increment is selected (PLC interface signal "Active machine function: INC variable" for machine or geometry axes is set to 1). The defined increment size also applies to DRF.

Note:

Please note that the increment size is active for incremental jogging and handwheel jogging. So, if a large increment value is entered and the handwheel is turned, the axis might cover a large distance (depends on setting in MD31090 \$MA_JOG_INCR_WEIGHT).

SD irrelevant to

JOG continuous

Related to

NC/PLC interface signal DB21-30 DBX41.5, DBX47.5, DBX53.5 (Geometry axis 1-3 active machine function: INC variable) or NC/PLC interface signal DB31, ... DBX65.5 (Active machine function: INC variable)

MD31090 \$MA_JOG_INCR_WEIGHT (weighting of an increment for INC/handwheel)

41050	JOG_CONT_MODE_LEVELTRIGGRD	-	H1
-	Jog mode / continuous operation with continuous JOG	BOOLEAN	Immediately
-			
-	-	TRUE	0
-	-	-	-
-	-	7/7	U

2.4 NC setting data

Description:

1: Jog mode for JOG continuous

In jog mode (default setting) the axis traverses as long as the traverse key is held down and an axis limitation has not been reached. When the key is released the axis is decelerated to zero speed and the movement is considered complete.

0: Continuous operation for JOG continuous

In continuous operation the traverse movement is started with the first rising edge of the traverse key and continues to move even after the key is released. The axis can be stopped again by pressing the traverse key again (second rising edge).

SD irrelevant for

Incremental jogging (JOG INC)

Reference point approach (JOG REF)

41100	JOG_REV_IS_ACTIVE	-	-
-	JOG mode: rotational feedrate / linear feedrate	UBYTE	Immediately
-			
-	-	0x0E	0
-	-	-	7/7
-	-	-	U

Description:

Bit 0 = 0:

The behavior depends on the following:

- in the case of an axis/spindle:

on the axial SD43300 \$SA_ASSIGN_FEED_PER_REV_SOURCE

- in the case of a geometry axis with an active frame with rotation:

on the channel-specific SD42600 \$SC_JOG_FEED_PER_REV_SOURCE

- in the case of an orientation axis:

on the channel-specific SD42600 \$SC_JOG_FEED_PER_REV_SOURCE

Bit 0 = 1:

A JOG motion with rotational feedrate shall be traversed depending on the master spindle.

The following must be considered:

- If a spindle is the master spindle itself, it will be traversed without rotational feedrate.

- If the master spindle is in stop position and if SD43300

\$SA_ASSIGN_FEED_PER_REV_SOURCE (with an axis/spindle) or SD42600

\$SC_JOG_FEED_PER_REV_SOURCE (with a geometry axis with an active frame with rotation, or with an orientation axis) = -3, traversing will be carried out without rotational feedrate.

Bit 1 = 0:

The axis/spindle, geometry axis or orientation axis will be traversed with rotational feedrate even during rapid traverse (see bit 0 for selection).

Bit 1 = 1:

The axis/spindle, geometry axis or orientation axis is always traversed without rotational feedback during rapid traverse.

Bit 2 = 0:

The axis/spindle, geometry axis or orientation axis is traversed with rotational feedrate during JOG handwheel travel, too (see bit 0 for selection).

Bit 2 = 1:

The axis/spindle, geometry axis or orientation axis is always traversed without rotational feedrate during JOG handwheel travel.

Bit 3 = 0:

The axis/spindle is traversed with rotational feedrate during DRF handwheel travel, too (see bit 0 for selection).

Bit 3 = 1:

The axis/spindle is always traversed without revolutional feedrate during DRF handwheel travel.

41110	JOG_SET_VELO	-	H1
mm/min	Axis velocity in JOG	DOUBLE	Immediately
-			
-	-	0.0	0.0
-	-	-	7/7
-	-	-	U

Description:

Value not equal to 0:

The velocity value entered applies to linear axes traversed in JOG mode if linear feedrate (G94) is active for the relevant axis (SD41100 \$SN_JOG_REV_IS_ACTIVE = 0).

The axis velocity is active for

- continuous jogging
- incremental jogging (INC1, ... INCvar)
- handwheel traversing.

The value entered is valid for all linear axes and must not exceed the maximum permissible axis velocity (MD32000 \$MA_MAX_AX_VELO).

In the case of DRF, the velocity defined by SD41110 \$SN_JOG_SET_VELO is reduced by MD32090 \$MA_HANDWH_VELO_OVERLAY_FACTOR.

Value = 0:

If 0 has been entered in the setting data, the active linear feedrate in JOG mode is MD32020 \$MA_JOG_VELO "Jog axis velocity". Each axis can be given its own JOG velocity with this MD (axial MD).

SD irrelevant for

- Linear axes if SD41100 \$SN_JOG_REV_IS_ACTIVE = 1
- Rotary axes (SD41130 \$SN_JOG_ROT_AX_SET_VELO is active here)

Application example(s)

The operator can thus define a JOG velocity for a specific application.

Related to

SD41100 \$SN_JOG_REV_IS_ACTIVE (revolutional feedrate with JOG active)

Axial MD32020 \$MA_JOG_VELO (JOG axis velocity)

Axial MD32000 \$MA_MAX_AX_VELO (maximum axis velocity)

Axial MD32090 \$MA_HANDWH_VELO_OVERLAY_FACTOR (ratio of JOG velocity to handwheel velocity (DRF))

SD41130 \$SN_JOG_ROT_AX_SET_VELO (JOG speed with rotary axes)

41120	JOG_REV_SET_VELO	-	H1
mm/rev	Revolutional feedrate of axes in JOG mode	DOUBLE	Immediately
-			
-	-	0.0	0.0
-	-	-	7/7
-	-	-	U

Description:

Value not equal to 0:

The velocity value entered applies to axes traversed in JOG mode if revolutional feedrate (G95) is active for the relevant axis (SD41100 \$SN_JOG_REV_IS_ACTIVE = 1).

The axis velocity is active for

- continuous jogging
- incremental jogging (INC1, ... INCvar)
- handwheel traversing. The value entered is valid for all axes and must not exceed the maximum permissible axis velocity (MD32000 \$MA_MAX_AX_VELO).

Value = 0:

If 0 has been entered in the setting data, the active revolutional feedrate in JOG mode is MD32050 \$MA_JOG_REV_VELO "revolutional feedrate with JOG".

Each axis can be given its own revolutional feedrate with this MD (axial MD).

2.4 NC setting data

SD irrelevant for

- For axes if SD41100 \$SN_JOG_REV_IS_ACTIVE = 0

Application example(s)

The operator can define a JOG velocity for a particular application.

Related to

Axial SD41100 \$SN_JOG_REV_IS_ACTIVE (revolutional feedrate for JOG active)

Axial MD32050 \$MA_JOG_REV_VELO (revolutional feedrate with JOG)

Axial MD32000 \$MA_MAX_AX_VELO (maximum axis velocity)

41130	JOG_ROT_AX_SET_VELO	-	H1
rev/min	Axis velocity for rotary axes in JOG mode	DOUBLE	Immediately
-			
-	-	0.0	0.0
-	-	-	7/7
-	-	-	U

Description:

Value not equal to 0:

The velocity entered applies to rotary axes in JOG mode (to continuous jogging, incremental jogging, jogging with handwheel). The value entered is common to all rotary axes, and must not exceed the maximum permissible axis velocity (MD32000 \$MA_MAX_AX_VELO).

With DRF, the velocity set with SD41130 \$SN_JOG_ROT_AX_SET_VELO must be reduced by MD32090 \$MA_HANDWH_VELO_OVERLAY_FACTOR.

Value equal to 0:

If the value 0 is entered in the setting data, the velocity applied to rotary axes in JOG mode is the axial MD32020 \$MA_JOG_VELO (jog axis velocity). In this way, it is possible to define a separate JOG velocity for each axis.

Application example(s)

The operator can define a JOG velocity for a particular application.

Related to

MD32020 \$MA_JOG_VELO (JOG axis velocity)

MD32000 \$MA_MAX_AX_VELO (maximum axis velocity)

MD32090 \$MA_HANDWH_VELO_OVERLAY_FACTOR (ratio JOG velocity to handwheel velocity (DRF))

41200	JOG_SPIND_SET_VELO	-	H1
rev/min	Speed for spindle JOG mode	DOUBLE	Immediately
-			
-	-	0.0	0.0
-	-	-	7/7
-	-	-	U

Description:

Value not equal to 0:

The speed entered applies to spindles in JOG mode if they are traversed manually by the "Plus and minus traversing keys" or the handwheel. The speed is active for

- continuous jogging
- incremental jogging (INC1, ... INCvar)
- handwheel traversing. The value entered is valid for all spindles, and must not exceed the maximum permissible speed (MD32000 \$MA_MAX_AX_VELO).

Value = 0:

If 0 has been entered in the setting data, MD32020 \$MA_JOG_VELO (JOG axis velocity) acts as the JOG velocity. Each axis can thus be given its own JOG velocity with this MD (axial MD).

The maximum speeds of the active gear stage (MD35130 \$MA_GEAR_STEP_MAX_VELO_LIMIT) are taken into account when traversing the spindle with JOG.

SD irrelevant for

Application example(s). The operator can thus define a JOG speed for the spindles for a specific application.

Related to

Axial MD32020 \$MA_JOG_VELO (JOG axis velocity)

MD35130 \$MA_GEAR_STEP_MAX_VELO_LIMIT (maximum speeds of the gear stages)

41300	CEC_TABLE_ENABLE			-	K3	
-	Compensation table enable			BOOLEAN	Immediately	
-						
-	62	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/7	U

Description:

1: The evaluation of the compensation table [t] is enabled.

The compensation table is now included in the calculation of the compensation value for the compensation axis.

The compensation axis \$AN_CEC_OUTPUT_AXIS can be taken from the table configuration.

The effective total compensation value in the compensation axis can be adapted to the current machining by the targeted activation of tables (from NC part program or PLC user program).

The function does not become active until the following conditions have been fulfilled:

- The option "Interpolatory compensation" is set
- The associated compensation tables in the NC user memory have been loaded and enabled (SD41300 \$SN_CEC_TABLE_ENABLE[t] = 1)
- The current position measuring system is referenced (NC/PLC interface signal DB31, ... DBX60.4 / 60.5 (Referenced/synchronized 1 or 2) = 1).

0: The evaluation of the sag compensation table [t] is not enabled.

Related to

MD18342 \$MN_MM_CEC_MAX_POINTS[t] Number of interpolation points with sag compensation

SD41300 \$SN_CEC_TABLE_ENABLE[t] Evaluation of the sag compensation table t is enabled

SD41310 \$SN_CEC_TABLE_WEIGHT[t] Weighting factor of the sag compensation table

NC/PLC interface signal DB31, ... DBX60.4 (Referenced/synchronized 1)

NC/PLC interface signal DB31, ... DBX60.5 (Referenced/synchronized 2)

41310	CEC_TABLE_WEIGHT			-	K3	
-	Weighting factor compensation table			DOUBLE	Immediately	
-						
-	62	1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0...	-	-	7/7	U

Description:

The compensation value stored in the table [t] is multiplied by the weighting factor.

When selecting the weighting factor it should be ensured that the total compensation value in the compensation axis does not exceed the maximal value of

(MD18342 \$MN_CEC_MAX_SUM). With [t] = index of the compensation table (see MD18342 \$MN_MM_CEC_MAX_POINTS)

If, for example, the weight of the tools used on the machine or the workpieces to be machined are too different and this affects the error curve by changing the amplitude, this can be corrected by changing the weighting factor. In the case of sag compensation, the weighting factor in the table can be changed for specific tools or workpieces from the PLC user program or the NC program by overwriting the setting data. However, different compensation tables are to be used if the course of the error curve is substantially changed by the different weights.

Related to

SD41300 \$SN_CEC_TABLE_ENABLE[t] Evaluation of the sag compensation table t is enabled

2.4 NC setting data

MD18342 \$MN_CEC_MAX_SUM

Maximum compensation value for sag compensation

41320	CEC_0			-	K3	
-	Compensation value 1			DOUBLE	Immediately	
-						
-	62	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	-	-	7/7	U

Description: The value of this SD is added to the compensation value \$AN_CEC[t,0].

Related to

\$AN_CEC[t,0] compensation value

41321	CEC_1			-	K3	
-	Compensation value 2			DOUBLE	Immediately	
-						
-	62	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	-	-	7/7	U

Description: The value of this SD is added to the compensation value \$AN_CEC[t,1].

Related to

\$AN_CEC[t,1] compensation value

41330	CEC_BAS_0			-	K3	
-	Distance to measuring point 1 in the basic axis			DOUBLE	Immediately	
-						
-	62	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	-	-	7/7	U

Description: The value of the SD is used to calculate \$SN_CEC.

Is deleted after calculating \$SN_CEC.

Related to

\$SN_CEC_0[t], \$SN_CEC_1[t] compensation values

41331	CEC_BAS_1			-	K3	
-	Distance to measuring point 2 in the basic axis			DOUBLE	Immediately	
-						
-	62	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	-	-	7/7	U

Description: The value of the SD is used to calculate \$SN_CEC.

Is deleted after calculating \$SN_CEC.

Related to

\$SN_CEC_0[t], \$SN_CEC_1[t] compensation values

41335	CEC_BAS_STORE_0			-	K3	
-	Stored distance to measuring point 1 in the basic axis			DOUBLE	Immediately	
-						
-	62	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	-	-	7/7	U

Description: Saves the value of \$SN_CEC_BAS after calculating \$SN_CEC.

Related to

\$SN_CEC_0[t], \$SN_CEC_0[t] compensation values

41336	CEC_BAS_STORE_1	-	K3
-	Stored distance to measuring point 2 in the basic axis	DOUBLE	Immediately
-			
-	62	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	- - 7/7 U

Description: Saves the value of \$SN_CEC_BAS after calculating \$SN_CEC.
 Related to
 \$SN_CEC_0[t], \$SN_CEC_1[t] compensation values

41340	CEC_COMP_0	-	K3
-	Cylinder error 1 in the compensation axis	DOUBLE	Immediately
-			
-	62	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	- - 7/7 U

Description: The value of the SD is used to calculate \$SN_CEC.
 Is deleted after calculating \$SN_CEC.
 Related to
 \$SN_CEC_0[t], \$SN_CEC_1[t] compensation values

41341	CEC_COMP_1	-	K3
-	Cylinder error 2 in the compensation axis	DOUBLE	Immediately
-			
-	62	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	- - 7/7 U

Description: The value of the SD is used to calculate \$SN_CEC.
 Is deleted after calculating \$SN_CEC.
 Related to
 \$SN_CEC_0[t], \$SN_CEC_1[t] compensation values

41350	CEC_COMP_STORE_0	-	K3
-	Stored cylinder error 1 in the compensation axis	DOUBLE	Immediately
-			
-	62	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	- - 7/7 U

Description: Saves the value of \$SN_CEC_COMP after calculating \$SN_CEC.
 Related to
 \$SN_CEC_0[t], \$SN_CEC_1[t] compensation values

41351	CEC_COMP_STORE_1	-	K3
-	Stored cylinder error 2 in the compensation axis	DOUBLE	Immediately
-			
-	62	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	- - 7/7 U

Description: Saves the value of \$SN_CEC_COMP after calculating \$SN_CEC.
 Related to
 \$SN_CEC_0[t], \$SN_CEC_1[t] compensation values

2.4 NC setting data

41355	CEC_CALC			-	K3	
-	The 0/1 edge starts the calculation of \$SN_CEC_0[t] and \$SN_CEC_1[t].			BOOLEAN	Immediately	
-						
-	62	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/7	U

Description: Starts the calculation of \$SN_CEC.
 Related to
 \$SN_CEC_BAS_0[t], \$SN_CEC_BAS_1[t] distance to measuring point in basic axis
 \$SN_CEC_COMP_0[t], \$SN_CEC_COMP_1[t] cylinder error in the compensation axis

41356	CEC_CALC_ADD			-	K3	
-	Absolute or additive calculation of \$SN_CEC_0[t] and \$SN_CEC_1[t]			BOOLEAN	Immediately	
-						
-	62	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/7	U

Description: \$SN_CEC_0[t] and \$SN_CEC_1[t] can be calculated absolutely or additively:
 FALSE: Absolute, the calculated values of \$SN_CEC_0[t] and \$SN_CEC_1[t] are included as absolute values.
 TRUE: Additive, the calculated values of \$SN_CEC_0[t] and \$SN_CEC_1[t] are added to the existing values.
 Related to
 \$SN_CEC_BAS_0[t], \$SN_CEC_BAS_1[t] distance to measuring point in the basic axis
 \$SN_CEC_COMP_0[t], \$SN_CEC_COMP_1[t] cylinder error in the compensation axis

41500	SW_CAM_MINUS_POS_TAB_1			-	N3	
mm/inch, degrees	Trigger points at falling cam 1-8			DOUBLE	Immediately	
-						
-	8	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	-	-	7/7	U

Description: The cam positions of minus cams 1 - 8 are entered in this machine data.
 The positions are entered in the machine coordinate system.
 Index [n] of the setting data addresses the cam pair:
 n = 0, 1, ... , 7 corresponds to cam pair 1, 2, ... , 8
 When the set switching points are overtraveled in the positive axis direction, the associated "minus" cam signals in the PLC interface (and any applied fast output signals) switch from 1 to 0.

41501	SW_CAM_PLUS_POS_TAB_1			-	N3	
mm/inch, degrees	Trigger points at rising cam edge 1-8			DOUBLE	Immediately	
-						
-	8	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	-	-	7/7	U

Description: The cam positions of plus cams 1 - 8 are entered in this machine data.

The positions are entered in the machine coordinate system.

Index [n] of the setting data addresses the cam pair:

n = 0, 1, ... , 7 corresponds to cam pair 1, 2, ... , 8

When the set switching points are overtraveled in the positive axis direction, the associated "plus" cam signals in the PLC interface (and any applied fast output signals) switch from 0 to 1.

41502	SW_CAM_MINUS_POS_TAB_2			-	N3	
mm/inch, degrees	Trigger points at falling cam edge 9-16			DOUBLE	Immediately	
-						
-	8	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	-	-	7/7	U

Description:

The cam positions of minus cams 9-16 are entered in this machine data.

The positions are entered in the machine coordinate system.

Index [n] of the setting data addresses the cam pair:

n = 8, 9, ... , 15 corresponds to cam pair 9, 10, ... , 16

Switching points with falling edges of cams 9 - 16.

When the set switching points are overtraveled in the positive axis direction, the associated "minus" cam signals in the PLC interface (and any applied fast output signals) switch from 1 to 0.

41503	SW_CAM_PLUS_POS_TAB_2			-	N3	
mm/inch, degrees	Trigger points at rising cam edge 9-16			DOUBLE	Immediately	
-						
-	8	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	-	-	7/7	U

Description:

The cam positions of plus cams 9-16 are entered in this machine data.

The positions are entered in the machine coordinate system.

Index [n] of the setting data addresses the cam pair:

n = 8, 9, ... , 15 corresponds to cam pair 9, 10, ... , 16

Switching points with rising edges of cams 9 - 16.

When the set switching points are overtraveled in the positive axis direction, the associated "plus" cam signals in the PLC interface (and any applied fast output signals) switch from 0 to 1.

41504	SW_CAM_MINUS_POS_TAB_3			-	N3	
mm/inch, degrees	Trigger points at falling cam edge 17-24			DOUBLE	Immediately	
-						
-	8	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	-	-	7/7	U

Description:

The cam positions of minus cams 17 - 24 are entered in this machine data.

The positions are entered in the machine coordinate system.

Index [n] of the setting data addresses the cam pair:

n = 0, 1, ... , 7 corresponds to cam pair 17, 18, ... , 24

Switching points with falling edges of cams 17 - 24.

When the set switching points are overtraveled in the positive axis direction, the associated "minus" cam signals in the PLC interface (and any applied fast output signals) switch from 1 to 0.

2.4 NC setting data

41505	SW_CAM_PLUS_POS_TAB_3			-	N3	
mm/inch, degrees	Trigger points at rising cam edge 17-24			DOUBLE	Immediately	
-						
-	8	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	-	-	7/7	U

Description:

The cam positions of plus cams 17 - 24 are entered in this machine data.

The positions are entered in the machine coordinate system.

Index [n] of the setting data addresses the cam pair:

n = 0, 1, ... , 7 corresponds to cam pair 17, 18, ... , 24

Switching points with rising edges of cams 17 - 24

When the set switching points are overtraveled in the positive axis direction, the associated "plus" cam signals in the PLC interface (and any applied fast output signals) switch from 0 to 1.

41506	SW_CAM_MINUS_POS_TAB_4			-	N3	
mm/inch, degrees	Trigger points at falling cam edge 25-32			DOUBLE	Immediately	
-						
-	8	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	-	-	7/7	U

Description:

The cam positions of minus cams 25 - 32 are entered in this machine data.

The positions are entered in the machine coordinate system.

Index [n] of the setting data addresses the cam pair:

n = 8, 9, ... , 15 corresponds to cam pair 25, 26, ... , 32

Switching points with falling edges of cams 25 - 32.

When the set switching points are overtraveled in the positive axis direction, the associated "minus" cam signals in the PLC interface (and any applied fast output signals) switch from 1 to 0.

41507	SW_CAM_PLUS_POS_TAB_4			-	N3	
mm/inch, degrees	Trigger points at rising cam edge 25-32			DOUBLE	Immediately	
-						
-	8	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	-	-	7/7	U

Description:

The cam positions of plus cams 25 - 32 are entered in this machine data.

The positions are entered in the machine coordinate system.

Index [n] of the setting data addresses the cam pair:

n = 8, 9, ... , 15 corresponds to cam pair 25, 26, ... , 32

Switching points with rising edges of cams 25 - 32.

When the set switching points are overtraveled in the positive axis direction, the associated "plus" cam signals in the PLC interface (and any applied fast output signals) switch from 0 to 1.

41520	SW_CAM_MINUS_TIME_TAB_1			-	N3	
s	Rate time for '-' trigger points of cams 1-8			DOUBLE	Immediately	
-						
-	8	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	-	-	7/7	U

Description: A lead or delay time can be assigned to each cam 1-8 in this setting data to compensate for delay times.

The switching edge of the associated cam signal is advanced or delayed by the time value entered.

Positive value: Lead time

Negative value: Delay time

Index [n] of the setting data addresses the cam pair:
 n = 0, 1, ... , 7 corresponds to cam pair 1, 2, ... , 8

This setting data is added to MD: MD10460 \$MN_SW_CAM_MINUS_LEAD_TIME[n].

Related to

MD10460 \$MN_SW_CAM_MINUS_LEAD_TIME[n] (lead or delay time on minus cams 1 - 16)

41521	SW_CAM_PLUS_TIME_TAB_1			-	N3	
s	Rate time for '+' trigger points of cams 1-8			DOUBLE	Immediately	
-						
-	8	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	-	-	7/7	U

Description: A lead or delay time can be assigned to each plus cam 1-8 in this setting data to compensate for delay times.

The switching edge of the associated cam signal is advanced or delayed by the time value entered.

Positive value: Lead time

Negative value: Delay time

Index [n] of the setting data addresses the cam pair:
 n = 0, 1, ... , 7 corresponds to cam pair 1, 2, ... , 8

This setting data is added to MD10461 \$MN_SW_CAM_PLUS_LEAD_TIME[n].

Related to

MD10461 \$MN_SW_CAM_PLUS_LEAD_TIME[n] (lead or delay time on plus cams 1 - 16)

41522	SW_CAM_MINUS_TIME_TAB_2			-	N3	
s	Rate time for '-' trigger points of cams 9-16			DOUBLE	Immediately	
-						
-	8	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	-	-	7/7	U

Description: A lead or delay time can be assigned to each minus cam 9 - 16 in this setting data to compensate for delay times.

The switching edge of the associated cam signal is advanced or delayed by the time value entered.

Positive value: Lead time

Negative value: Delay time

Index [n] of the setting data addresses the cam pair:
 n = 8, 9, ... , 15 corresponds to cam pair 9, 10, ... , 16

This setting data is added to MD10460 \$MN_SW_CAM_MINUS_LEAD_TIME[n+8].

Related to

MD10460 \$MN_SW_CAM_MINUS_LEAD_TIME[n] (lead or delay time on minus cams 1 - 16)

41523	SW_CAM_PLUS_TIME_TAB_2			-	N3	
s	Rate time for '+' trigger points of cams 9-16			DOUBLE	Immediately	
-						
-	8	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	-	-	7/7	U

2.4 NC setting data

Description: A lead or delay time can be assigned to each plus cam 9 - 16 in this setting data to compensate for delay times.

The switching edge of the associated cam signal is advanced or delayed by the time value entered.

Positive value: Lead time

Negative value: Delay time

Index [n] of the setting data addresses the cam pair:

n = 8, 9, ... , 15 corresponds to cam pair 9, 10, ... , 16

This setting data is added to MD10461 \$MN_SW_CAM_PLUS_LEAD_TIME[n+8].

Related to

MD10461 \$MN_SW_CAM_PLUS_LEAD_TIME[n] (lead or delay time on plus cams 1 - 16)

41524	SW_CAM_MINUS_TIME_TAB_3			-	N3	
s	Rate time for '-' trigger points of cams 17-24			DOUBLE	Immediately	
-						
-	8	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	-	-	7/7	U

Description: A lead or delay time can be assigned to each minus cam 17-24 in this setting data to compensate for delay times.

The switching edge of the associated cam signal is advanced or delayed by the time value entered.

Positive value: Lead time

Negative value: Delay time

Index [n] of the setting data addresses the cam pair:

n = 0, 1, ... , 7 corresponds to cam pair 17, 18, ... , 24

This setting data is added to MD10460 \$MN_SW_CAM_MINUS_LEAD_TIME[n].

Related to

MD10460 \$MN_SW_CAM_MINUS_LEAD_TIME[n] (lead or delay time on minus cams 1 - 16)

41525	SW_CAM_PLUS_TIME_TAB_3			-	N3	
s	Rate time for '+' trigger points of cams 17-24			DOUBLE	Immediately	
-						
-	8	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	-	-	7/7	U

Description: A lead or delay time can be assigned to each plus cam 17-24 in this setting data to compensate for delay times.

The switching edge of the associated cam signal is advanced or delayed by the time value entered.

Positive value: Lead time

Negative value: Delay time

Index [n] of the setting data addresses the cam pair:

n = 0, 1, ... , 7 corresponds to cam pair 17, 18, ... , 24

This setting data is added to MD10461 \$MN_SW_CAM_PLUS_LEAD_TIME[n].

Related to

MD10461 \$MN_SW_CAM_PLUS_LEAD_TIME (lead or delay time on plus cams 1 - 16)

41526	SW_CAM_MINUS_TIME_TAB_4			-	N3	
s	Rate time for '-' trigger points of cams 25-32			DOUBLE	Immediately	
-						
-	8	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	-	-	7/7	U

Description: A lead or delay time can be assigned to each minus cam 25-32 in this setting data to compensate for delay times.

The switching edge of the associated cam signal is advanced or delayed by the time value entered.

Positive value: Lead time

Negative value: Delay time

Index [n] of the setting data addresses the cam pair:

n = 8, 9, ... , 15 corresponds to cam pair 25, 26, ... , 32

This setting data is added to MD10460 \$MN_SW_CAM_MINUS_LEAD_TIME[n+8].

Related to

MD10460 \$MN_SW_CAM_MINUS_LEAD_TIME[n] (lead or delay time on minus cams 1 - 16)

41527	SW_CAM_PLUS_TIME_TAB_4			-	N3	
s	Rate time for '+' trigger points of cams 25-32			DOUBLE	Immediately	
-						
-	8	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	-	-	7/7	U

Description: A lead or delay time can be assigned to each plus cam 25 - 32 in this setting data to compensate for delay times.

The switching edge of the associated cam signal is advanced or delayed by the time value entered.

Positive value: Lead time

Negative value: Delay time

Index [n] of the setting data addresses the cam pair:

n = 8, 9, ... , 15 corresponds to cam pair 25, 26, ... , 32

This setting data is added to MD10461 \$MN_SW_CAM_PLUS_LEAD_TIME[n+8].

Related to

MD10461 \$MN_SW_CAM_PLUS_LEAD_TIME[n] (lead or delay time on plus cams 1 - 16)

41600	COMPAR_THRESHOLD_1			-	A4	
-	Threshold value of the 1st comparator			DOUBLE	Immediately	
-						
-	8	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	-	-	7/7	U

Description: COMPAR_THRESHOLD_1[b] defines the threshold values for the individual input bits [b] of comparator byte 1.

The output bit n of the 1st comparator is created by comparing the threshold value n according to the comparison type defined in bit n of COMPAR_TYPE_1.

For example:

COMPAR_ASSIGN_ANA_INPUT_1[2] = 4

COMPAR_THRESHOLD_1[2] = 5000.0

COMPAR_TYPE_1 = 5

The 3rd output bit of comparator 1 is set if the input value at AnalogIn 4 is greater than or equal to 5 volts.

Index [b]: Bits 0 - 7

Related to

MD10530 \$MN_COMPAR_ASSIGN_ANA_INPUT_1

MD10531 \$MN_COMPAR_ASSIGN_ANA_INPUT_2

MD10540 \$MN_COMPAR_TYPE_1

MD10541 \$MN_COMPAR_TYPE_2

2.4 NC setting data

41601	COMPAR_THRESHOLD_2			-	A4	
-	Threshold value of the 2nd comparator			DOUBLE	Immediately	
-						
-	8	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0	-	-	7/7	U

Description: COMPAR_THRESHOLD_1[b] defines the threshold values for the individual input bits [b] of comparator byte 1.

Output bit n of the 1st comparator is created by comparing the threshold value n according to the comparison type defined in bit n of COMPAR_TYPE_2.

Index [b]: Bits 0 - 7

Related to

MD10530 \$MN_COMPAR_ASSIGN_ANA_INPUT_1

MD10531 \$MN_COMPAR_ASSIGN_ANA_INPUT_2

MD10540 \$MN_COMPAR_TYPE_1

MD10541 \$MN_COMPAR_TYPE_2

41610	CORR_TRAFO_LIN_MAX			EXP	-	
mm	Maximum permissible offset value for offset vectors with CORRTRAFO			DOUBLE	Immediately	
-						
-	-	1.0	0.0	-	7/2	M

Description: With the CORRTRAFO function for machine measurement, offset vectors can be modified in the kinematic model of a machine.

This setting data limits the maximum permissible change in each component of such a vector to the specified maximum value.

41611	CORR_TRAFO_DIR_MAX			EXP	-	
degrees	Maximum permissible angle deviation for direction vectors with CORRTRAFO			DOUBLE	Immediately	
-						
-	-	1.0	0.0	90.0	7/2	M

Description: With the CORRTRAFO function for machine measurement, the direction vectors of rotary axes can be modified in the kinematic model of a machine.

This setting data limits the maximum permissible angle change of such a vector to the specified maximum value.

41700	AXCT_SWWIDTH			-	B3	
-	Default rotation of axis container			DWORD	NEW CONF	
CTDE						
-	16	0, 0, 0, 0, 0, 0, 0, 0...	-32	32	7/7	U

Description: The number of entries (slots) by which the entries in the axis container are advanced on execution of the rotation. The value is interpreted modulo of the actually existing entries. Negative values reverse the direction of rotation.

Related to the container rotation command, container axes.

This machine data is distributed via the NCU-link.

Contrary to the the definition for setting data, this SD is not immediately active, but first with NEWCONF.

42000	THREAD_START_ANGLE			-	K1	
degrees	Starting angle for thread			DOUBLE	Immediately	
-						
-	-	0., 0., 0., 0., 0., 0., 0., 0....	0.0	-	7/7	U

Description: In the case of multiple thread cutting, the offset of the individual threads can be programmed with the aid of this setting data.

This SD can be changed by the part program with the command SF.

Note:

MD10710 \$MN_PROG_SD_RESET_SAVE_TAB can be set so that the value written by the part program is transferred to the active file system on reset (that is the value is retained after reset.)

42010	THREAD_RAMP_DISP			-	V1	
mm	Acceleration behavior of axis when thread cutting			DOUBLE	Immediately	
-						
-	3	-1., -1., -1., -1., -1., -1., -1., -1., -1., -1., -1., -1., -1.,...	-1., -1., -1.	999999., 999999., 0.	7/7	U

Description: The SD is active for thread cutting with G33 (G34, G35).

It has three elements that define the behavior of the thread axis during runup (1st element), during deceleration/smoothing "G33(G34, G35) to G00/G01" (2nd element) and during smoothing between 2 thread blocks (3rd element).

The first two values have the same properties for thread run-in and thread run-out:

<0:

The thread axis is started/decelerated with configured acceleration. Jerk is according to the current programming of BRISK/SOFT. Behavior is compatible with MD 20650 __THREAD_START_IS_HARD = FALSE used until now.

0:

Starting/deceleration of the feed axis during thread cutting is stepped. Behavior is compatible with MD 20650 __THREAD_START_IS_HARD = TRUE used until now.

>0:

The maximum thread starting or deceleration path is specified. The specified distance can lead to acceleration overload of the axis. The SD is written from the block when DITR (displacement thread ramp) is programmed. An overlong path has no effect.

Note:

MD 10710 \$MN_PROG_SD_RESET_SAVE_TAB can be set so that the value written by the part program is transferred to the active file system on reset (this means the value is retained after reset.)

The 3rd value permits smoothing at a corner between 2 thread blocks in order to soften the transition. It is not rounded by smoothing if the dynamics of the machine permit a hard transition, for example on account of MD32310 \$MA_MAX_ACCEL_OVL_FACTOR:

-1:

The transition is made as geometrically soft as possible.

0:

The corner is left with hard retraction, the axes follow the specification of the control loops.

> 0:

Reserved for an expansion of the function.

The 3rd value defines the geometric tolerance that may be used at a corner between 2 thread blocks in order to soften the transition:

< or = 0:

2.4 NC setting data

The corner is left with hard retraction, the axes follow the specification of the control loops.

> 0:

The transition is made as geometrically soft as possible by using this tolerance.

42100	DRY_RUN_FEED			-	V1	
mm/min	Dry run feedrate			DOUBLE	Immediately	
-						
-	-	5000., 5000., 5000., 5000., 5000., 5000., 5000., 5000....	0.0	-	7/7	U

Description:

The feedrate for the active dry run is entered in this setting data. The setting data can be altered on the operator panel in the "Parameters" operating area.

The entered dry run feedrate is always interpreted as a linear feed (G94). If the dry run feedrate is activated via the PLC interface, the dry run feedrate is used as the path feed after a reset instead of the programmed feed. The programmed velocity is used for traversing if it is greater than the velocity stored here.

Application example(s)

Program testing

Related to

NC/PLC interface signal DB21-30 DBX0.6 (Activate dry run feedrate)

NC/PLC interface signal DB21-30 DBX24.6 (Dry run feedrate selected)

42101	DRY_RUN_FEED_MODE			-	V1	
-	Mode for dry run velocity			BYTE	Immediately	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	12	7/7	U

Description:

This SD can be used to set the method of operation of the dry run velocity set by SD42100 \$SC_DRY_RUN_FEED.

The following values are possible:

0:

The maximum of SD42100 \$SC_DRY_RUN_FEED and the programmed velocity become active. This is the standard setting and corresponds to the behavior up to SW 5.

1:

The minimum of SD42100 \$SC_DRY_RUN_FEED and the programmed velocity become active.

2:

SD42100 \$SC_DRY_RUN_FEED becomes active directly, irrespective of the programmed velocity.

The values 3...9 are reserved for extensions.

10:

As configuration 0, except for thread cutting (G33, G34, G35) and tapping (G331, G332, G63). These functions are executed as programmed.

11:

As configuration 1, except for thread cutting (G33, G34, G35) and tapping (G331, G332, G63). These functions are executed as programmed.

12:

As configuration 2, except for thread cutting (G33, G34, G35) and tapping (G331, G332, G63). These functions are executed as programmed.

42110	DEFAULT_FEED	-	V1, FBFA
mm/min	Path feed default value	DOUBLE	Immediately
-			
-	-	0., 0., 0., 0., 0., 0., 0., 0., 0....	0.0 - 7/7 U

Description: Default value for path feedrate, This setting data is evaluated when the part program starts taking into account the feedrate type active at this time (see MD20150 \$MC_GCODE_RESET_VALUES and MD20154 \$MC_EXTERN_GCODE_RESET_VALUES).

42120	APPROACH_FEED	-	-
mm/min	Path feedrate in approach blocks	DOUBLE	Immediately
-			
-	-	0., 0., 0., 0., 0., 0., 0., 0., 0....	0.0 - 7/7 U

Description: Default value for path feedrate in approach blocks (after repos., block search, SERUPRO etc).

The contents of this setting data are only used when it is non-zero.

It is evaluated like an F word programmed for G94.

42121	AX_ADJUST_FEED	-	-
mm/min	Path feed in adjustment movements	DOUBLE	Immediately
-			
-	-	0., 0., 0., 0., 0., 0., 0., 0., 0....	- - 7/7 U

Description: Default value for the path feed in adjustment movements of tangential axes on activation of a tangential axis coupling during or after block search.

The content of this setting data is only used if it is not equal to zero and bit7 = 0 of MD \$MN_SEARCH_RUN_MODE is set.

It is evaluated as an F-word programmed in G94.

42122	OVR_RAPID_FACTOR	-	MD12050 \$MN_OVR_FACTOR_RAPID_T RA, \$AC_OVR
%	Add. rapid traverse override can be specified through operation	DOUBLE	Immediately
-			
-	-	100., 100., 100., 100., 100., 100., 100., 100....	0.0 - 7/7 U

Description: Additional channel-specific rapid traverse override in %. The value is calculated as a function of the OPI variable enableOvrRapidFactor on the path and during jogging of geometry axes. The value multiplies the other overrides relevant to rapid traverse (rapid traverse override of the machine control panel, override default through synchronized actions \$AC_OVR).

42125	SERUPRO_SYNC_MASK	-	-
-	Synchronization in approach blocks	DWORD	Immediately
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	- - 7/7 U

Description: A synchronized approach can be set for the search type SERUPRO with the setting data SERUPRO_SYNC_MASK.

2.4 NC setting data

SERUPRO uses the function REPOS to move from the current machine position to the target block of the search. A synchronization of the channels can be forced between the reapproach block and the target block via SERUPRO_SYNC_MASK which would correspond to the use of WAIT markers.

Note:

The user cannot program WAIT markers between reapproach block and target block in a part program.

SERUPRO_SYNC_MASK activates this internal WAIT marker, and defines for which other channels this channel is to wait.

Example for channel 3: SD42125 \$SC_SERUPRO_SYNC_MASK= 0x55

A new block is now inserted in the Serupro approach between the reapproach block and the target block, the function of which corresponds to the following programming: WAITM(101, 1,3,5,7), i.e. a WAIT marker synchronizes the channels 1, 3, 5 and 7.

The WAIT markers used internally cannot be explicitly programmed by the user.

NOTICE:

Similarly to the part program, the user can make the error of not setting the marker in a channel, so that the other channels naturally wait for ever!

Note:

The bit mask can contain a channel that does not exist (channel gaps) without a deadlock occurring.

Example for channel 3: SD42125 \$SC_SERUPRO_SYNC_MASK= 0x55 and channel 5 do not exist, so WAITM(101, 1,3,7) is set.

Note: The block content corresponds to "WAITM(101, 1,3,5,7)", the user does not see this block content, he sees REPOSA!

Note:

SERUPRO_SYNC_MASK is evaluated as soon as the part program command REPOSA is interpreted.

SERUPRO_SYNC_MASK can still be changed if SERUPRO is in the state "search target found".

If REPOSA has already been executed, a change to SERUPRO_SYNC_MASK can only become active if a new REPOS is set. This occurs, for example, by:

- Starting a new ASUB.
- STOP-JOG-AUTO-START
- STOP - select a new REPOS mode RMI/RMN/RME/RMB - START

Note:

If one uses the prog. event for search and if the NCK is at alarm 10208 then a change of SERUPRO_SYNC_MASK is not active unless one sets a new REPOS.

SERUPRO_SYNC_MASK == 0 A block is NOT inserted.

Note:

If the bit for the current channel is not set in SD42125 \$SC_SERUPRO_SYNC_MASK then a block is NOT inserted.

Example:

If SD42125 \$SC_SERUPRO_SYNC_MASK= 0xE is programmed in channel 1, then a block is NOT inserted.

This assignment is reserved for a future function!

42140	DEFAULT_SCALE_FACTOR_P			-	FBFA	
-	Default scaling factor for address P			DWORD	Immediately	
-						
-	-	1, 1, 1, 1, 1, 1, 1...	-	-	7/7	U

Description:

The value in this machine data is active if no scaling factor P has been programmed in the block.

Related to:

WEIGHTING_FACTOR_FOR_SCALE

42150	DEFAULT_ROT_FACTOR_R			-	-	
-	Default rotation factor for address R			DOUBLE	Immediately	
-						
-	-	0., 0., 0., 0., 0., 0., 0., 0....	-	-	7/7	U

Description: The value in this machine data is active if no factor for rotation R is programmed in the block.

42160	EXTERN_FIXED_FEEDRATE_F1_F9			-	FBFA	
-	Fixed feedrates F1 - F9			DOUBLE	Immediately	
-						
-	10	0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., 0., ...	0.0	-	7/7	U

Description: Fixed feedrate values for programming with F1 - F9. If the machine data \$MC_FEEDRATE_F1_F9_ON = TRUE is set with the programming of F1 - F9, the feedrate values are read from SD42160 \$SC_EXTERN_FIXED_FEEDRATE_F1_F9[0] - SD42160 \$SC_EXTERN_FIXED_FEEDRATE_F1_F9[8], and activated as the machining feedrate. The rapid traverse feedrate must be entered in SD42160 \$SC_EXTERN_FIXED_FEEDRATE_F1_F9[0].

42162	EXTERN_DOUBLE_TURRET_DIST			-	FBFA	
-	Double turret head tool distance			DOUBLE	Immediately	
-						
-	-	0., 0., 0., 0., 0., 0., 0., 0....	0.0	-	7/7	U

Description: Distance between both tools of a double turret head.
The distance is activated using G68 as additive zero point offset if MD10812 \$MN_EXTERN_DOUBLE_TURRET_ON is set to TRUE.

42200	SINGLEBLOCK2_STOPRE			-	BA	
-	Activate SBL2 debug mode			BOOLEAN	Immediately	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/7	U

Description: Value = TRUE:
A preprocessing stop is made with every block if SBL2 (single block with stop after every block) is active. This suppresses the premachining of part program blocks. This variant of the SBL2 is not true-to-contour.
This means that a different contour characteristic might be generated as a result of the preprocessing stop than without single block or with SBL1.
Application: Debug mode for testing part programs.

42300	COUPLE_RATIO_1			-	-	
-	Speed ratio for synchronous spindle mode			DOUBLE	Immediately	
-						
-	2	1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0...	-1.0e8	1.0e8	7/7	U

2.4 NC setting data

Description:

This setting data defines the speed ratio for the fixed coupling configuration defined with the channel-specific MD21300 \$MC_COUPLE_AXIS_1[n].

The linear correlation between the leading and following spindles is determined by the speed ratio. The speed ratio is defined by the specification of the numerator and the denominator.

Speed ratio = numerator / denominator = SD42300 \$SC_COUPLE_RATIO[0] / SD42300 \$SC_COUPLE_RATIO[1]

The speed ratio parameters can be altered in the NC part program with the language instruction COUPDEF provided that this is not locked by the channel-specific MD21340 \$MC_COUPLE_IS_WRITE_PROT_1.

However, the parameterized values of SD42300 \$SC_COUPLE_RATIO_1 are not changed.

The calculation of the speed ratio is initiated with Power On.

42400	PUNCH_DWELLTIME			-	N4	
s	Dwell time for punching and nibbling			DOUBLE	Immediately	
-						
-	-	1.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	0.0	-	7/7	U

Description:

This data sets the dwell time between reaching the position and triggering the stroke. The set value is rounded to an integer multiple of the interpolation cycle. (This means that the value set here can only differ slightly from that which is actually executed.)

Note:

MD10710 \$MN_PROG_SD_RESET_SAVE_TAB can be set so that the value written by the part program is transferred into the active file system on reset (i.e. the value is retained even after the reset).

42402	NIBPUNCH_PRE_START_TIME			-	N4	
s	Delay time (punch/nibble) with G603			DOUBLE	Immediately	
-						
-	-	.02, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	0.0	-	7/7	U

Description:

This setting data has exactly the same effect as MD26018 \$MC_NIBBLE_PRE_START_TIME. Its primary purpose is to allow the pre-start time to be altered from the NC program so that it can be adapted to different metal sheet sizes and thicknesses. However, the setting data is active only when the machine data has been set to zero.

Related to NIBBLE_PRESTART_TIME

42404	MINTIME_BETWEEN_STROKES			-	N4	
s	Minimum time between 2 strokes in seconds			DOUBLE	Immediately	
-						
-	-	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0...	0.0	-	7/7	U

Description:

Minimum time between 2 strokes in seconds

42440	FRAME_OFFSET_INCR_PROG			-	K1, K2	
-	Work offsets in frames			BOOLEAN	Immediately	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description:

0: When incremental programming is used on an axis, only the programmed position delta is traversed after a frame change. Work offsets in FRAMES are only traversed when an absolute position is specified.

1: When incremental programming is used on an axis, changes to work offsets are traversed after a frame change (standard response up to software version 3).

Related to

SD42442 \$SC_TOOL_OFFSET_INCR_PROG

42442	TOOL_OFFSET_INCR_PROG			-	W1, K1	
-	Tool length compensations			BOOLEAN	Immediately	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description: 0: When incremental programming is used on an axis, only the programmed position delta is traversed after a frame change. Tool length offsets in FRAMES are only traversed when an absolute position is specified.

1: When incremental programming is used on an axis, changes to tool length offsets are traversed after a tool change (standard response up to SW version 3).

Related to

SD42440 \$SC_FRAME_OFFSET_INCR_PROG

42444	TARGET_BLOCK_INCR_PROG			-	BA	
-	Set down mode after search run with calculation			BOOLEAN	Immediately	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description: If the first programming of an axis after "Search run with calculation to end of block" is incremental, the incremental value is added as a function of SD42444 \$SC_TARGET_BLOCK_INCR_PROG to the value accumulated up to the search target :

SD = TRUE: Incremental value is added to accumulated position

SD = FALSE: Incremental value is added to current actual value

The setting data is evaluated on NC start for output of the action blocks.

42450	CONTPREC			-	B1, K6	
mm	Contour accuracy			DOUBLE	Immediately	
-						
-	-	0.1, 0.1, 0.1, 0.1, 0.1, 0.1, 0.1, 0.1...	0.000001	999999.	7/7	U

Description: Contour accuracy. This setting data can be used to define the accuracy to be maintained for the path of the geometry axes on curved contours. The lower the value and the lower the servogain factor of the geometry axes, the greater the reduction of path feed on curved contours.

Related to

MD20470 \$MC_CPREC_WITH_FFW

SD42460 \$SC_MINFEED

42460	MINFEED			-	B1, K6	
mm/min	Minimum path feedrate for CPRECON			DOUBLE	Immediately	
-						
-	-	1., 1., 1., 1., 1., 1., 1., 1....	1.e-6	1.e9	7/7	U

Description: Minimum path feedrate with the "Contour accuracy" function active. The feedrate is not limited to below this value unless a lower F value has been programmed or the axis dynamics do not permit it.

2.4 NC setting data

Related to

MD20470 \$MC_CPREC_WITH_FFW

SD42450 \$SC_CONTPREC

42465	SMOOTH_CONTUR_TOL	-	B1
mm	Maximum contour tolerance on smoothing	DOUBLE	Immediately
-			
-	-	0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05...	0.000001 999999. 7/7 U

Description: This setting data defines the maximum tolerance for smoothing the contour.

Related to:

MD20480 \$MC_SMOOTHING_MODE,

SD42466 \$SC_SMOOTH_ORI_TOL

42466	SMOOTH_ORI_TOL	-	B1
degrees	Maximum deviation of tool orientation during smoothing.	DOUBLE	Immediately
-			
-	-	0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05...	0.000001 90. 7/7 U

Description: This setting data defines the maximum tool orientation tolerance during smoothing.

The data determines the maximum permissible angular displacement of the tool orientation.

This data only applies if an orientation transformation is active.

Related to:

MD20480 \$MC_SMOOTHING_MODE,

SD42465 \$SC_SMOOTH_CONTUR_TOL

42470	CRIT_SPLINE_ANGLE	-	W1, PGA
degrees	Corner limit angle for compressor	DOUBLE	Immediately
-			
-	-	36.0, 36.0, 36.0, 36.0, 36.0, 36.0, 36.0, 36.0...	0.0 89.0 7/7 U

Description: The setting data defines the limit angle from which the compressor COMPCAD interprets a block transition as a corner. Practical values lie between 10 and 40 degrees. Values from 0 to 89 degrees inclusive are permitted.

The angle only serves as an approximate measure for corner detection. The compressor can also classify flatter block transitions as corners and eliminate larger angles as outliers on account of plausibility considerations.

42471	MIN_CURV_RADIUS	EXP, C09	-
mm	Minimum radius of curvature	DOUBLE	Immediately
-			
-	-	3.0, 3.0, 3.0, 3.0, 3.0, 3.0, 3.0, 3.0...	0.0 - 7/7 U

Description: The setting data defines a typical tool radius. It is only evaluated in compressor COMPCAD. The lower the value, the greater the precision, but the slower the program execution.

42472	MIN_SURF_RADIUS	EXP, C09	-
mm	Minimum curvature radius for COMPSURF [0] Minimum curvature radius for geometry axes [1] Minimum curvature radius for the orientation axes [2] Minimum curvature radius for other axes	DOUBLE	Immediately
-			
-	3	1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0,...	0.0 - 7/7 U

Description: The setting data specifies a typical tool radius. It is evaluated for the COMPSURF compressor only. A smaller value results in greater precision but also slower program execution.

42473	ACTNUM_SURF_GROUPS	EXP, C09	-
-	Currently desired COMPSURF function dimensioning in respect of axis groups.	DWORD	Immediately
-			
-	-	1, 1, 1, 1, 1, 1, 1, 1...	1 3 7/7 U

Description: The setting data dimensions the COMPSURF function in respect of axis groups for following machining. Values greater than \$MC_MM_MAXNUM_SURF_GROUPS are limited without an alarm.

Related to:

MD28072 \$MC_MM_MAXNUM_SURF_GROUPS

42475	COMPRESS_CONTUR_TOL	-	F2, PGA
mm	Maximum contour deviation with compressor	DOUBLE	Immediately
-			
-	-	0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05...	0.000001 999999. 7/7 U

Description: This setting data defines the maximum contour tolerance in the compressor.

42476	COMPRESS_ORI_TOL	-	F2, PGA
degrees	Maximum deviation of tool orientation with compressor	DOUBLE	Immediately
-			
-	-	0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05...	0.000001 90. 7/7 U

Description: This setting data defines the maximum tool orientation tolerance in the compressor. This data defines the maximum permissible angular displacement of the tool orientation. This data is active only if an orientation transformation is active.

42477	COMPRESS_ORI_ROT_TOL	-	F2, PGA
degrees	Maximum deviation of tool rotation with compressor	DOUBLE	Immediately
-			
-	-	0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05...	0.000001 90. 7/7 U

Description: This setting data defines the maximum tolerance in the compressor for turning the tool orientation. This data defines the maximum permissible angular displacement of the tool rotation.

This data is only active if an orientation transformation is active.

Turning the tool orientation is only possible with 6-axis machines.

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42478	SURF_PERF_ADJUST			EXP, C09	-	
mm	Adaptation of the CPU time utilization with COMPSURF.			DOUBLE	Immediately	
-						
-	-	0.005, 0.005, 0.005, 0.005, 0.005, 0.005, 0.005, 0.005...	0.0001	0.1	1/1	M

Description: Represents a compromise between computational utilization and accuracy. The higher the value, the lower the computational utilization, the lower the value the higher the accuracy.

A sharper surface can be achieved, especially by COMPSURF with "Smoothing off" (MIN_SURF_RADIUS = 0).

42480	STOP_CUTCOM_STOPRE			-	W1	
-	Alarm response with tool radius compensation and preproc. stop			BOOLEAN	Immediately	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description: If this setting data is TRUE, block execution is stopped by preprocessing stop and active tool radius compensation, and does not resume until after a user acknowledgment (START).

If it is FALSE, machining is not interrupted at such a program point.

42490	CUTCOM_G40_STOPRE			-	W1	
-	Retraction behavior of tool radius compensation with prep. stop			BOOLEAN	Immediately	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/7	U

Description: FALSE:

If there is a preprocessing stop (either programmed or generated internally by the control) before the deselection block (G40) when tool radius compensation is active, then firstly the starting point of the deselection block is approached from the last end point before the preprocessing stop. The deselection block itself is then executed, i.e. the deselection block is usually replaced by two traversing blocks. Tool radius compensation is no longer active in these blocks. The behavior is thus identical with that before the introduction of this setting data.

TRUE:

If there is a preprocessing stop (either programmed or generated internally by the control) before the deselection block (G40) when tool radius compensation is active, the end point of the deselection point is traversed in a straight line from the last end point before the preprocessing stop.

42494	CUTCOM_ACT_DEACT_CTRL				-	W1	
-	Approach & retraction behavior with 2-1/2D tool radius compens.				DWORD	Immediately	
-							
-	-	2222, 2222, 2222, 2222, 2222, 2222, 2222, 2222...	-	-	7/7	U	

Description: This setting data controls the approach and retraction behavior with tool radius compensation if the activation or deactivation block does not contain any traversing information. It is only evaluated with 2-1/2D TRC

(CUT2D or CUT2DF).

The decimal coding is as follows:

N N N N

					_____	Approach behavior for tools with tool point direction
						(turning tools)
					_____	Approach behavior for tools without tool point direction
						(milling tools)
					_____	Retract behavior for tools with tool point direction
						(turning tools)
					_____	Retract behavior for tools without tool point direction
						(milling tools)

If the position in question contains a 1, approach or retraction is always performed, even if G41/G42 or G40 stands alone in a block.

For example:

N100 x10 y0

N110 G41

N120 x20

If a tool radius of 10mm is assumed in the above example, position x10y10 is approached in block N110.

If the position in question contains the value 2, the approach or retraction movement is only performed if at least one geometry axis is programmed in the activation/deactivation block. To obtain the same results as the above example with this setting, the program must be altered as follows:

N100 x10 y0

N110 G41 x10

N120 x20

If axis information x10 is missing in block N110, activation of TRC is delayed by one block, i.e. the activation block would now be N120.

If the position in question contains a 3, retraction is not performed in a deactivation block (G40) if only the geometry axis perpendicular to the compensation plane is programmed. In this case, the motion perpendicular to the compensation plane is performed first. This is followed by the retraction motion in the compensation plane. In this case, the block after G40 must contain motion information in the compensation plane. The approach motions for values 2 and 3 are identical.

If the position in question contains a value other than 1, 2 or 3, i.e. in particular the value 0, an approach or retraction movement is not performed in a block that does not contain any traversing information.

About the term "Tools with tool point direction":

These are tools with tool numbers between 400 and 599 (turning and grinding tools), whose tool point direction has a value between 1 and 8. Turning and grinding tools with tool point direction 0 or 9 or other undefined values are treated like milling tools.

Note:

If the value of this setting data is changed within a program, we recommend programming a preprocessing stop (stopre) before the description to avoid the new value being used in program sections before that point. The opposite case is not serious, i.e. if the setting data is written, subsequent NC blocks will definitely access the new value.

42496	CUTCOM_CLSD_CONT			-	-	
-	Tool radius compensation behavior with closed contour			BOOLEAN	Immediately	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

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Description:

FALSE:

CASE A: If two intersections arise on correction of the inner side with an (almost) closed contour consisting of two successive circle blocks or a circle and a linear block, by default the intersection is chosen that is located on the first partial contour nearer to the beginning of the block.

A contour is considered (almost) closed if the distance between the starting point of the first block and the end point of the second block is less than 10% of the active compensation radius, but not greater than 1000 path increments (corresponds to 1mm with 3 decimal places).

CASE B: If on correction of the inner side and a block transition between a straight line and a circle with an angle of aperture of more than approx. 315 degrees, the offset curve of the straight line intersects the offset curve of the circle at two points, by default the point of intersection is chosen that is located on the first partial contour nearer to the beginning of the block.

TRUE:

CASE A: In the same situation as described above, the point of intersection is chosen that is located on the first partial contour nearer to the block end.

CASE B: In the same situation as described above, the point of intersection is chosen that is located on the first partial contour nearer to the block end, but only if the absolute value of the contour violation caused by this is less than the effective contour tolerance. For the effective contour tolerance, see the description "Contour/orientation tolerance" in FB1. The currently effective tolerance can be read with \$AC_CTOL. If a tolerance of zero is programmed in this way, a permanently assigned tolerance of 0.002mm applies.

The tolerance value is applied that is valid for activation of the tool radius correction with G41 or G42.

42500	SD_MAX_PATH_ACCEL			-	B2	
m/s²	Maximum path acceleration			DOUBLE	Immediately	
-						
-	-	10000., 10000., 10000., 10000., 10000., 10000., 10000., 10000....	1.0e-6	-	7/7	U

Description:

Setting data for additional limitation of (tangential) path acceleration

Related to ...

MD32300 \$MA_MAX_AX_ACCEL

SD42502 \$SC_IS_SD_MAX_PATH_ACCEL

42502	IS_SD_MAX_PATH_ACCEL			-	B2	
-	Evaluate SD42500 \$SC_SD_MAX_PATH_ACCEL			BOOLEAN	Immediately	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/7	U

Description:

SD42500 \$SC_SD_MAX_PATH_ACCEL is included in the limit calculations if SD42502

\$SC_IS_SD_MAX_PATH_ACCEL=TRUE

Related to ...

SD42500 \$SC_SD_MAX_PATH_ACCEL

42510	SD_MAX_PATH_JERK			-	B2	
m/s³	Maximum path-related jerk as setting data			DOUBLE	Immediately	
-						
-	-	100000., 100000., 100000., 100000., 100000., 100000., 100000., 1...	1.e-9	-	7/7	U

Description: As well as MD20600 \$MC_MAX_PATH_JERK, the maximum path-related jerk can also limit the jerk.

Related to ...

MD20600 \$MC_MAX_PATH_JERK

SD42512 \$SC_IS_SD_MAX_PATH_JERK

42512	IS_SD_MAX_PATH_JERK			-	B2	
-	Evaluate SD42510 \$SC_SD_MAX_PATH_JERK			BOOLEAN	Immediately	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/7	U

Description: SD42510 \$SC_SD_MAX_PATH_JERK is included in the limit calculations if SD42512 \$SC_IS_SD_MAX_PATH_JERK=TRUE

Related to ...

SD42510 \$SC_SD_MAX_PATH_JERK (SD for additional limitation of (tangential) path jerk)

42520	CORNER_SLOWDOWN_START			-	-	
mm	Start of feed reduction at G62.			DOUBLE	Immediately	
-						
-	-	0., 0., 0., 0., 0., 0., 0., 0....	0.0	-	7/7	U

Description: Traverse path distance from which the feed is reduced before the corner with G62.

42522	CORNER_SLOWDOWN_END			-	-	
mm	End of feed reduction at G62.			DOUBLE	Immediately	
-						
-	-	0., 0., 0., 0., 0., 0., 0., 0....	0.0	-	7/7	U

Description: Traverse path distance up to which the feed remains reduced after a corner with G62.

42524	CORNER_SLOWDOWN_OVR			-	-	
%	Feed override reduction at G62			DOUBLE	Immediately	
-						
-	-	0., 0., 0., 0., 0., 0., 0., 0....	0.0	-	7/7	U

Description: Override used to multiply the feed at the corner with G62.

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42526	CORNER_SLOWDOWN_CRIT	-	-
degrees	Corner detection at G62	DOUBLE	Immediately
-			
-	-	0., 0., 0., 0., 0., 0., 0., 0., 0....	0.0

Description:

Angle from which a corner is taken into account when reducing the feed with G62.

For example SD42526 \$SC_CORNER_SLOWDOWN_CRIT = 90 means that all corners of 90 degrees or a more acute angle are traversed slower with G62.

42528	CUTCOM_DECEL_LIMIT	-	-
-	Feed lowering on circles with tool radius compensation	DOUBLE	Immediately
-			
-	-	0., 0., 0., 0., 0., 0., 0., 0., 0....	0.

Description:

The setting data limits feed lowering of the tool center point on concave circle segments with tool radius compensation active and CFC or CFIN selected.

With CFC, the feed is defined at the contour. On concave circular arcs, feed lowering of the tool center point is created by the ratio of the contour curvature to the tool center point path curvature. The setting data is limiting this effect, reducing backing off and overheating of the tool.

For contours with varying curvatures, a mid-range curvature is used.

0: Provides the previous behavior: If the ratio between contour radius and tool center point path radius is less than or equal to 0.01 the feed is applied to the tool center point path. Less pronounced feed reductions are executed.

>0: Feed lowering is limited to the programmed factor. At 0.01, this means that the feed of the tool center point path is possibly only 1 percent of the programmed feed value.

1: On concave contours, the tool center point feed equals the programmed feed (the behavior then corresponds to CFTCP).

42600	JOG_FEED_PER_REV_SOURCE	-	V1
-	Control revolutionary feedrate in JOG	DWORD	Immediately
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-3

Description:

The revolutionary feedrate in JOG mode for geometry axes on which a frame with rotation acts.

0= No revolutionary feedrate is active.

>0= Machine axis index of the rotary axis/spindle from which the revolutionary feedrate is derived.

-1= The revolutionary feedrate is derived from the master spindle of the channel in which the axis/spindle is active.

-2= The revolutionary feedrate is derived from the axis with machine axis index == 0.

-3= The revolutionary feedrate is derived from the master spindle of the channel in which the axis/spindle is active. No revolutionary feedrate is active if the master spindle is at a standstill.

Related to

SD43300: \$SA_ASSIGN_FEED_PER_REV_SOURCE (revolutional feedrate for position axes/spindles)

42650	CART_JOG_MODE			-	H1	
-	Coordinate system for Cartesian jog traverse			DWORD	Immediately	
-						
-	-	0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0...	0	0x0404	7/7	U

Description: This SD can be used to set the reference coordinate system for Cartesian manual travel, with bits 0 to 7 provided for selecting the coordinate system for translation, bits 8 to 15 for selecting the reference system for orientation.

Cartesian manual travel will not be enabled if no bit is set or if just one bit is set for translation or for orientation. This means that one bit must always be set for translation and one for orientation. Cartesian manual travel will also not be enabled if more than one bit is set for translation or orientation.

The meaning of the individual bits is defined as follows :

Bit 0 : Translation in Basic Coordinate System
 Bit 1 : Translation in Workpiece Coordinate System
 Bit 2 : Translation in Tool Coordinate System
 Bit 3 : reserved
 Bit 4 : reserved
 Bit 5 : reserved
 Bit 6 : reserved
 Bit 7 : reserved
 Bit 8 : Orientation in Basic Coordinate System
 Bit 9 : Orientation in Workpiece Coordinate System
 Bit 10 : Orientation in Tool Coordinate System
 Bit 11 : reserved
 Bit 12 : reserved
 Bit 13 : reserved
 Bit 14 : reserved
 Bit 15 : reserved

42660	ORI_JOG_MODE			-	-	
-	Definition of virtual kinematics for JOG			DWORD	Immediately	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	5	7/7	U

Description: This SD can be used to define virtual kinematics, which become active for the manual travel of orientations.

This setting data is evaluated only by the generic 5/6-axis transformation. This data has no meaning for OEM transformations.

The following setting options are available:

0: The virtual kinematics are defined by the transformation.

1: Euler angles are traversed during jog, that is the 1st axis turns round the Z direction, the 2nd axis turns around the X direction and, if present, the 3rd axis turns around the new Z direction.

2: RPY angles are traversed during jog with the turning sequence XYZ, that is the 1st axis turns around the x direction, the 2nd axis turns around the Y direction and, if present, the 3rd axis turns around the new Z direction.

3: RPY angles are traversed during jog with the turning sequence ZYX, that is the 1st axis turns around the Z direction, the 2nd axis turns around the Y direction and, if present, the 3rd axis turns around the new X direction.

4: The turning sequence of the rotary axes is set by means of MD21120
 \$MC_ORIAX_TURN_TAB_1.

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5: The turning sequence of the rotary axes is set by means of MD21130
\$MC_ORIAX_TURN_TAB_2.

42664	OFF_ORI_LIMIT			-	-	
degrees	Maximum angles for the override of the orientation [0] Maximum angles for the orientation vector [1] Maximum angles for the rotation vector with 6-axis kinematics			DOUBLE	Immediately	
-						
-	2	90.0, 90.0, 90.0, 90.0, 90.0, 90.0, 90.0, 90.0, 90.0, 90.0, 90.0...	0.0	-	7/7	U

Description: The maximum angles for the maximum possible override of the current tool orientation can be specified with the system variables \$AC_OFF_O, \$AC_OFF_R, \$AC_OFF_LEAD, \$AC_OFF_TILT and \$AC_OFF_THETA.

\$AC_OFF_ORI_LIMIT[0]: Maximum angle for the vector of the tool orientation

\$AC_OFF_ORI_LIMIT[1]: Maximum angle for the rotation vector (only with 6-axis kinematics)

If an override of the tool orientation is specified that is larger than the maximum angles, this is shown in the system variable \$AC_OFF_ORI_LIMIT.

42670	ORIPATH_SMOOTH_DIST			-	-	
mm, degrees	Path for smoothing the orientation			DOUBLE	Immediately	
-						
-	-	0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05...	0.0	-	7/7	U

Description: Displacement by which a jump in the tool orientation is smoothed with ORIPATH path-relative orientation interpolation. There is a deviation within this displacement from the relation of the orientation to the path tangent and the surface normal vector programmed with LEAD/TILT.

If zero is entered for this path length (SD42670 \$SC_ORIPATH_SMOOTH_DIST = 0.0), an intermediate block is inserted for smoothing the orientation. This means that the path motion remains at a stop in a corner and the orientation is then turned separately.

42672	ORIPATH_SMOOTH_TOL			-	-	
degrees	Tolerance for smoothing the orientation			DOUBLE	Immediately	
-						
-	-	0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05...	0.000001	-	7/7	U

Description: Maximum angle (in degrees) for the deviation of the tool orientation with ORIPATH path-relative orientation interpolation. This angular tolerance is used for smoothing a "kink" in the orientation path.

42674	ORI_SMOOTH_DIST			-	-	
mm, degrees	Path for orientation smoothing during smoothing			DOUBLE	Immediately	
-						
-	-	0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05...	0.000001	-	7/7	U

Description: Path through which a tool orientation bend is smoothed on a block transition with G code OSD.

42676	ORI_SMOOTH_TOL			-	-	
degrees	Tolerance for orientation smoothing during smoothing			DOUBLE	Immediately	
-						
-	-	0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05...	0.000001	-	7/7	U

Description: Maximum angle (in degree) for the tool orientation deviation during orientation smoothing with G code OST with a bend in the orientation curve on block transitions.

42678	ORISON_TOL			-	-	
degrees	Tolerance for smoothing the orientation			DOUBLE	Immediately	
-						
-	-	10.00, 10.00, 10.00, 10.00, 10.00, 10.00, 10.00. 10.00...	0.0	-	7/7	U

Description: Maximum angle (in degree) for the tool orientation deviation during orientation smoothing with the G code ORISON over several blocks.

The tolerance specification with the SD42678 \$SC_ORISON_TOL is valid only if no programmed orientation tolerance (OTOL) is active.

This behavior is the default setting. With MD20478 \$MC_ORISON_MODE, however, this can be changed.

42690	JOG_CIRCLE_CENTRE			-	-	
mm	Center of the circle			DOUBLE	Immediately	
-						
-	3	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0. 0. 0. 0...	-	-	7/7	U

Description: This setting data is used to define the circle center point in the workpiece coordinate system during JOG of circles.

Only the relevant center point coordinates of the geometry axes in the active plane are evaluated, not the coordinate of the geometry axis vertical to the plane. This setting data is written via the user interface.

By default the coordinate of an axis with diameter programming is in the diameter. This can be changed with MD20360 \$MC_TOOL_PARAMETER_DEF_MASK Bit 13 = 1 by indicating a radius.

42691	JOG_CIRCLE_RADIUS			-	-	
mm	Circle radius			DOUBLE	Immediately	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-	-	7/7	U

Description: With this setting data, the circle radius in the machine, the maximum circle during inner machining or the minimum circle during outer machining are defined when jogging circles. This setting data is written via the user interface.

42692	JOG_CIRCLE_MODE			-	-	
-	JOG of circles mode			DWORD	Immediately	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0	0xf	7/7	U

Description: This setting data sets the following during JOG of circles:

Bit 0 = 0 :

Travel to + creates traversing on a circular path in counterclockwise direction;
travel to - creates traversing in clockwise direction.

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Bit 0 = 1 :

Travel to + creates traversing on a circular path in clockwise direction; travel to - creates traversing in counterclockwise direction.

Bit 1 = 0 :

The tool radius is not taken into account in checking the limitation produced by the specified circle or by the circle segment limited by the start and end angles.

Bit 1 = 1 :

The tool radius is taken into account in checking the limitation produced by the specified circle or by the circle segment limited by the start and end angles.

Bit 2 = 0 :

Internal machining is performed. The circle radius in SD42691 \$SC_JOG_CIRCLE_RADIUS is the maximum possible radius.

Bit 2 = 1 :

External machining is performed. The circle radius in SD42691 \$SC_JOG_CIRCLE_RADIUS is the minimum possible radius.

Bit 3 = 0 :

Given a full circle, the radius is enlarged starting from the circle center point in the direction of the ordinate (2nd geometry axis) of the plane.

Bit 3 = 1 :

Given a full circle, the radius is enlarged starting from the circle center point in the direction of the abscissa (1st geometry axis) of the plane.

This setting data should be written via the user interface.

42693	JOG_CIRCLE_START_ANGLE	-	-
degrees	Circle start angle	DOUBLE	Immediately
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 360 7/7 U

Description:

This setting data defines the start angle during JOG of circles.

The start angle refers to the abscissa of the current plane. Traversing is only possible within the range

between the start and the end angle. SD42692 \$SC_JOG_CIRCLE_MODE bit 0 defines the direction from the start to the end angle. If start and end angle equal zero, no limitation is active.

This setting data is written via the user interface.

42694	JOG_CIRCLE_END_ANGLE	-	-
degrees	Circle end angle	DOUBLE	Immediately
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 360 7/7 U

Description:

This setting data defines the end angle during JOG of circles.

The end angle refers to the abscissa of the current plane. Traversing is only possible within the range

between the start and the end angle. SD42692 \$SC_JOG_CIRCLE_MODE bit 0 defines the direction from the start to the end angle. If start and end angle equal zero, no limitation is active.

This setting data is written via the user interface.

42700	EXT_PROG_PATH	-	K1
-	Program path for external subroutine call EXTCALL	STRING	Immediately
-			
-	-	-	- 7/7 U

Description: The total path results from the string chaining of SD42700 \$SC_EXT_PROG_PATH + the programmed subprogram identifier.

42750	ABSBLOCK_ENABLE			-	K1	
-	Enable base block display			BOOLEAN	Immediately	
-						
-	-	TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE...	0	-	7/7	U

Description: Value 0: Disable basic blocks with absolute values (basic block display)
Value 1: Enable basic blocks with absolute values (basic block display)

42800	SPIND_ASSIGN_TAB			-	S1	
-	Spindle number converter.			BYTE	Immediately	
-						
-	21	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17,, 0...	0	20	7/7	U

Description: The spindle converter converts the programmed (= logical) spindle number to the physical (= internal, configured) spindle number.
The index of the setting data (SD) corresponds to the programmed spindle number or the programmed address extension.
The SD contains the physical spindle which actually exists.
Special cases, errors, ...

Notes:

- The zero index (SPIND_ASSIGN_TAB[0]) is only used to display the master spindle (= logical spindle number) selected in the channel, and it must not be overwritten.
- Changes to the spindle converter take effect immediately. Therefore it is not advisable to change the spindle converter for spindles used in a part program from the HMI or PLC while a part program is running.
- After "delete SRAM", the numbers of the logical and physical spindles are identical.

42900	MIRROR_TOOL_LENGTH			-	W1	
-	Sign change of tool length with mirror image machining			BOOLEAN	Immediately	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/7	U

Description: TRUE:
If a frame with mirror image machining is active, the tool components (\$TC_DP3[... , ...] to \$TC_DP5[... , ...]) and the components of the base dimensions (\$TC_DP21[... , ...] to \$TC_DP23[... , ...]) whose associated axes are mirrored, are also mirrored, i.e. their sign is inverted. The wear values are not mirrored. If the wear values are to be mirrored too, SD42910 \$SC_MIRROR_TOOL_WEAR must be set.

FALSE:
The sign for tool length components is unaffected by whether a frame with mirror image machining is active.

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42910	MIRROR_TOOL_WEAR			-	W1	
-	Sign change of tool wear with mirror image machining			BOOLEAN	Immediately	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/7	U

Description:

TRUE:

If a frame with mirror image machining is activated, the signs of the wear values of the components in question are inverted. The wear values of the components that are not assigned to mirrored axes remain unchanged.

FALSE:

The signs for wear values are unaffected by whether a frame with mirror image machining is active.

42920	WEAR_SIGN_CUTPOS			-	W1	
-	Sign of tool wear depending on tool point direction			BOOLEAN	Immediately	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/7	U

Description:

TRUE:

In the case of tools with a relevant tool point direction (turning and grinding tools), the sign for wear of the tool length components depends on the tool point direction.

The sign is inverted in the following cases (marked with an X):

Tool point direction	Length 1	Length 2
1		
2	X	
3	X	X
4		X
5		
6		
7	X	
8		X
9		

The sign for wear value of length 3 is not influenced by this setting data.

The SD42930 \$SC_WEAR_SIGN acts in addition to this setting data.

FALSE:

The sign for wear of the tool length components is unaffected by the tool point direction.

42930	WEAR_SIGN			-	W1	
-	Sign of wear			BOOLEAN	Immediately	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/7	U

Description:

TRUE:

The sign for wear of the tool length components and the tool radius are inverted, i.e. if a positive value is entered, the total dimension is decreased.

FALSE:

The sign for wear of the tool length components and the tool radius is not inverted.

42935	WEAR_TRANSFORM	-	W1, W4
-	Transformations for tool components	DWORD	Immediately
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	- - 7/7 U

Description:

This setting data is bit-coded.

It determines which of the three wear components wear

(\$TC_DP12 - \$TC_DP14),

additive offsets fine (\$TC_SCPx3 - \$TC_SCPx5),

and additive offsets coarse (\$TC_ECPx3 - \$TC_ECPx5)

are subject to adapter transformation and transformation by an orientable tool holder, if one of the two G codes TOWMCS or TOWWCS from G code group 56 is active. If initial-setting G code TOWSTD is active, this setting data will not become active.

Then, the following assignment is valid:

Bit 0 = TRUE: Do not apply transformations to \$TC_DP12 - \$TC_DP14.

Bit 1 = TRUE: Do not apply transformations to \$TC_SCPx3 - \$TC_SCPx5.

Bit 2 = TRUE: Do not apply transformations to \$TC_ECPx3 - \$TC_ECPx5.

The bits not mentioned here are (currently) not assigned.

42940	TOOL_LENGTH_CONST	-	W1
-	Change of tool length components with change of active plane	DWORD	Immediately
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	- - 7/7 U

Description:

If this setting data is not equal to 0, the assignment of tool length components (length, wear, base dimensions) to geometry axes is not changed when the machining plane (G17 - G19) is changed.

The assignment of tool length components to geometry axes can be derived from the value of the setting data according to the following tables.

The assignment of the tool orientation components is not affected by this setting data. Setting data SD42945 \$SC_TOOL_ORI_CONST_M and SD42947 \$SC_TOOL_ORI_CONST_T may have to be set accordingly.

A distinction is made between turning and grinding tools (tool types 400 to 599) and other tools (typically milling tools) in the assignment.

Representation of this information in tables assumes that geometry axes 1 to 3 are called X, Y and Z. For assignment of an offset to an axis, not the axis identifier but the axis sequence is relevant.

Assignment for turning tools and grinding tools (tool types 400 to 599):

Content Length 1 Length 2 Length 3

17 Y X Z

18* X Z Y

19 Z Y X

-17 X Y Z

-18 Z X Y

-19 Y Z X

* Any value which is not 0 and is not one of the six values listed, is treated as value 18.

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For values that are the same but with a different sign, assignment of length 3 is always the same, lengths 1 and 2 are reversed. Assignment for all tools which are neither turning nor grinding tools (tool types < 400 or > 599):

Content	Length 1	Length 2	Length 3
17*	Z		X
18	Y		Z
19	X		Y
-17	Z		Y
-18	Y		X
-19	X		Z

* Any value which is not 0 and is not one of the six values listed, is treated as value 17.

For values that are the same but with a different sign, assignment of length 1 is always the same, lengths 2 and 3 are reversed.

If the 100s digit of the settings data is 1, the sign of the second length component is inverted.

If the setting data SD42950 \$SC_TOOL_LENGTH_TYPE has the value 3, this setting data is only active with milling tools. Together with setting data SD42942

\$SC_TOOL_LENGTH_CONST_T, the length assignments can then be set separately for turning and milling tools.

42942	TOOL_LENGTH_CONST_T			-	W1	
-	Change tool length components for turning tools with change of active plane			DWORD	Immediately	
-						
-	-	0, 0, 0, 0, 0, 0, 0, 0...	-	-	7/7	U

Description:

This setting data is only evaluated if SD42950 \$SC_TOOL_LENGTH_TYPE has the value 3. Under this condition, it has the following meaning:

If this setting data is not equal to zero, the assignment of the tool length components (length, wear and base dimensions) of turning and grinding tools (tool types 400 to 599) to geometry axes is not changed when the machining plane (G17 - G19) is changed. The assignment of tool orientation components is not affected by this setting data. Setting data SD42957 \$SC_TOOL_ORI_CONST_T may have to be set correspondingly.

The assignment of tool orientation components to the geometry results from the value of the setting data according to the following table.

The representation of this information in tables assumes that geometry axes 1 to 3 are called X, Y and Z. For assignment of an offset to an axis, not the axis identifier but the axis sequence is relevant.

Content	Length 1	Length 2	Length 3
17	Y		Z
18*	X		Y
19	Z		X
-17	X		Z
-18	Z		Y
-19	Y		X

* Any value which is not 0 and is not one of the six values listed, is evaluated as value 18.

For values that are the same but with a different sign, assignment of length 3 is always the same, lengths 1 and 2 are reversed.

If the 100s digit of the settings data is 1, the sign of the second length component is inverted.

42950	TOOL_LENGTH_TYPE	-	W1
-	Assignment of tool length compensation independent of tool type	DWORD	Immediately
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	- - 7/7 U

Description: This setting data defines the assignment of the tool length components to the geometry axes irrespective of the tool type. It can assume any value between 0 and 3. Any other value is interpreted as 0.

Value

0: Standard assignment. A distinction is made between turning and grinding tools (tool types 400 to 599) and other tools (milling tools).

1: The tool length components are assigned irrespective of the actual tool type, always as for milling tools.

2: The tool length components are assigned irrespective of the actual tool type, always as for turning and grinding tools.

3: The tool length components are assigned separately, on the one hand for turning and grinding tools (tool types 400 to 599) and, on the other hand, for all other tools (milling tools).

The assignment of tool components is specified as follows:

Milling tools:

The assignment of tool length components is specified by SD42940 \$SC_TOOL_LENGTH_CONST.

Turning and grinding tools:

The assignment of tool length components is specified by SD42942 \$SC_TOOL_LENGTH_CONST_T.

The setting data also affects the wear values assigned to the length components.

If SD42940 \$SC_TOOL_LENGTH_CONST is set, the tables defined there access the table for milling and turning tools defined by SD42950 \$SC_TOOL_LENGTH_TYPE irrespective of the actual tool type if the value of the latter is 1 or 2.

42954	TOOL_ORI_CONST_M	-	W1
-	Change of the tool orientation component for milling tools on plane change	DWORD	Immediately
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	- - 7/7 U

Description: If this setting data is not equal to zero, a clockwise, orthogonal tool coordinate system is defined for milling tools (all tool types except 400 to 599), which remains unchanged when the machining plane is changed (G17 - G19). It has no relevance for turning and grinding tools.

The orientation coordinate system is determined by the orientation vector and a normal orientation vector extending perpendicularly to it. It is completed by a third vector, the binormal vector, which derives from the cross product of the normal orientation vector and the orientation vector.

The basic orientation is determined by the units and tens digits of the setting data. Apart from the value 0, only the values 17, 18 and 19 are permissible. All other values are treated as if their value were 17.

	Orientation vector	Normal orient- ation vector	Binormal vector
17*	(0, 0, 1)	(0, 1, 0)	(1, 0, 0)
18	(0, 1, 0)	(1, 0, 0)	(0, 0, 1)
19	(1, 0, 0)	(0, 0, 1)	(0, 1, 0)

* Each value not equal to 0 that is not one of the listed values is evaluated as if it were the value 17.

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If n is the content of the 100s digit of the setting data, the coordinate system is rotated around the orientation vector by the angle $n * 90$ degrees. n may have the values 0 to 3. Larger values are evaluated as if they were 0.

If the sign of the setting data is negative, the coordinate system is rotated around the axis by 180 degrees, which is defined by the original position of the normal orientation vector (that is, before any rotation due to n being unequal to 0).

Example:

If the content of the setting data is -18, then:

Orientation vector (0, -1, 0)

Normal orientation vector (1, 0, 0)

Binormal vector (0, 0, -1)

Handling of tools with an explicitly programmed tool orientation by means of cutting edge data (\$TC_DPV..):

This setting data is normally ignored for tools for which the orientation is defined in this way. This means that the programmed orientation vectors are assigned to the geometry axes in response to the active machining plane (G17 - G19).

If the setting data is also active for such tools, the 1000s digit must be equal to 1. However, the 100s digit and the sign are not evaluated. This means that the setting data only defines how the orientation components are assigned to the geometry axis directions. No additional rotations are performed.

42956	TOOL_ORI_CONST_T	-	W1
-	Change in the tool orientation component for turning tools on plane change	DWORD	Immediately
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	- - 7/7 U

Description:

If this setting data is not equal to zero, the assignment of the tool orientation components of turning and grinding tools (tool types 400 to 599) to the geometry axes is not changed if the machining plane changes (G17 - G19). It has no relevance for tools other than turning and grinding tools.

The orientation coordinate system is determined by the orientation vector and a normal orientation vector lying at right-angles to it. It is completed by a third vector, the binormal vector, which is given by the cross product of the normal orientation vector and the orientation vector.

The basic orientation is determined by the units and tens digits of the setting data. Apart from the value 0, only the values 17, 18 and 19 are permissible. All other values are treated as if their value were 18.

Content	Orientation vector	Normal orientation vector	Binormal vector
17	(0, 0, 1)	(0, 1, 0)	(1, 0, 0)
18*	(0, 1, 0)	(1, 0, 0)	(0, 0, 1)
19	(1, 0, 0)	(0, 0, 1)	(0, 1, 0)

* Each value not equal to 0, which is not one of the listed values is evaluated as if it were the value 18.

If n is the content of the 100s digit of the setting data, the coordinate system is rotated around the orientation vector by the angle $n * 90$ degrees. n may have the values 0 to 3. Larger values are evaluated as if they were 0.

If the sign of the setting data is negative, the coordinate system is rotated around the axis by 180 degrees, which is defined by the original position of the normal orientation vector (that is before any rotation on account of n being unequal to 0).

Example:

If the content of the setting data is -18, then:

Orientation vector (0, -1, 0)

Normal orientation vector (1, 0, 0)

Binormal vector (0 , 0, -1)

Handling of tools with an explicitly programmed tool orientation by using cutting edge data (\$TC_DPV..):

This setting data is normally ignored for tools for which the orientation is defined in this way. This means that the programmed orientation vectors are assigned to the geometry axes according to the active machining plane (G17 - G19).

If the setting data is also active for such tools, then the 1000s digit must be equal to 1. However, the 100s digit and the sign are not evaluated. This means that the setting data only defines how the orientation components are assigned to the geometry axis directions. No additional rotations are executed.

42960	TOOL_TEMP_COMP			-	W1	
-	Temperature compensation for tool			DOUBLE	Immediately	
-						
-	3	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0,...	-	-	7/7	U

Description: Temperature compensation value for the tool. The compensation value acts as vector according to the current rotation of the tool direction.

This setting data will only be evaluated, if temperature compensation has been activated for tools with MD20390 \$MC_TOOL_TEMP_COMP_ON.

Apart from that, the temperature compensation type must be set in bit 2 for the "Compensation in tool direction" MD32750 \$MA_TEP_COMP_TYPE.

The "Temperature compensation" is an option that has to be previously enabled.

42970	TOFF_LIMIT			-	F2	
mm	Upper limit of correction value via \$AA_TOFF			DOUBLE	Immediately	
-						
-	3	10.0, 10.0, 10.0, 10.0, 10.0, 10.0, 10.0, 10.0, 10.0, 10.0, 10.0...	0.0	-	7/7	U

Description: Upper limit of the offset value which can be defined by means of synchronized actions via the \$AA_TOFF system variable.

This limit value influences the absolutely effective amount of offset through \$AA_TOFF.

Whether the offset value is within the limit range can be checked via the \$AA_TOFF_LIMIT system variable.

42972	TOFF_LIMIT_MINUS			-	F2	
mm	Lower limit of the offset value \$AA_TOFF			DOUBLE	Immediately	
-						
-	3	0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0....	-	0.0	7/7	U

Description: Lower limit of the offset value which can be specified through synchronous actions via the system variable \$AA_TOFF.

This limit value acts on the active correction through \$AA_TOFF in the minus direction.

This limit value is only effective if \$MC_TOFF_MODE Bit6 = 1 is set.

Whether the offset value is within the limit range can be checked via the \$AA_TOFF_LIMIT system variable.

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42974	TOCARR_FINE_CORRECTION			C08	-	
-	Fine offset TCARR ON / OFF			BOOLEAN	Immediately	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/7	U

Description: TRUE:
On activating an orientable tool holder, the fine offset values are considered.

FALSE:
On activating an orientable tool holder, the fine offset are not considered.

42977	SLOT_FORM_RECOGN			-	-	
-	Slot recognition on/off			BOOLEAN	Immediately	
-						
-	-	FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE, FALSE...	0	-	7/7	U

Description: TRUE:
With active tool radius compensation, narrow slots are detected and traversed.

FALSE:
With active tool radius compensation, narrow slots are ignored

42980	TOFRAME_MODE			-	K2	
-	Frame definition at TOFRAME, TOROT and PAROT			DWORD	Immediately	
-						
-	-	1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000...	-	-	7/7	U

Description: This setting data defines the direction of the geometry axes on the machining plane (XY in the case of G17) in the case of the frame definition by means of (TOROTY, TOROTX) or for PAROT.

When a frame is calculated, the tool direction (Z in the case of G17) is uniquely defined so that the tool direction and vertical axis (Z in the case of G17) of the frame are parallel and lie perpendicular on the machining plane.

Rotation around the tool axis is free at first. This free rotation can be defined using this setting data so that the newly defined frame deviates as little as possible from a previously active frame.

In all cases in which the setting data is not zero, an active frame remains unchanged if the tool direction (Z in the case of G17) of the old and the new frame are the same.

SD42980 \$SC_TOFRAME_MODE >= 2000:

In the case of TOROT (or TOROTY and TOROTX), the rotations and translations of the frame chain are used to calculate a frame in the tool reference system frame (\$P_TOOLFRAME) berechnet.

Machine data 21110 \$MC_X_AXIS_IN_OLD_X_Z_PLANE is not evaluated.

The explanatory notes below refer to the G17 plane with the XY axes in the machining plane and the tool axis being Z.

SD42980 \$SC_TOFRAME_MODE = 2000:

Rotation around the Z axis is selected so that the angle between the new X axis and the old X-Z plane has the same absolute value as the angle between the new Y axis and the old Y-Z plane. This setting corresponds to the mean value of both settings which would result for values 2001 and 2002 of this setting data.

It is also applied if the value of the units digit is greater than 2.

SD42980 \$SC_TOFRAME_MODE = 2001:

The new X direction is selected so that it lies in the X-Z plane of the old coordinate system. The angular difference between the old and new Y axes is minimal with this setting.

SD42980 \$SC_TOFRAME_MODE = 2002:

The new Y direction is selected so that it lies in the Y-Z plane of the old coordinate system. The angular difference between the old and new X axes is minimal with this setting.

None of the other settings of SD42980 \$SC_TOFRAME_MODE (0,1,2,...1000,1001..) should be used for recommissioning.

For compatibility reasons, the following settings remain valid:

0: The orientation of the coordinate system is determined by the value of machine data 21110 \$MC_X_AXIS_IN_OLD_X_Z_PLANE.

1: The new X direction is selected so that it lies in the X-Z plane of the old coordinate system. The angular difference between the old and new Y axes is minimal with this setting.

2: The new Y direction is selected so that it lies in the Y-Z plane of the old coordinate system. The angular difference between the old and new X axes is minimal with this setting.

3: The average of the two settings resulting from 1 and 2 is selected.

Addition of 100: In the case of a plane change from G17 to G18 or G19, a tool matrix is generated, in which the new axis directions are parallel to the old directions. The axes are swapped cyclically accordingly (standard transformation on plane changes). If the hundreds digit equals zero, a matrix is supplied in the cases of G18 and G19 which is derived from the unit matrix by simply rotating through 90 degrees around the X axis (G18) or through 90 degrees around the Y axis (G19). Thus in each case one axis is antiparallel to an initial axis. This setting is required to remain compatible with old software versions.

Addition of 1000: The tool-frame is linked to any active basic frames and settable frames. The response is thus compatible with earlier software versions (before 5.3). If the thousands digit is not set, the tool frame is calculated so that any active basic frames and settable frames are taken into account.

42984	CUTDIRMOD	C08	-
-	Modification of \$P_AD[2] or \$P_AD[11]	STRING	Immediately
-			
-	-	-	-
		7/7	U

Description:

States whether the tool point direction and cutting direction are to be modified on reading the corresponding system variables \$P_AD[2] and \$P_AD[11].

Modification is made by rotating the vector of the tool point direction or cutting direction by a specific angle in the active machining plane (G17-G19). The resulting output value is always the tool point direction or cutting direction created by the rotation or to which the rotated value is closest. the angle of rotation can be defined by one of the following six options:

- 1: The string is empty. The stated data are output unchanged.
- 2: The contents of the string is "P_TOTFRAME". The resulting rotation is determined from the total frame.
- 3: The contents of the string is a valid frame name (e.g. \$P_NCBFRAME[3]). The resulting rotation is then calculated from this frame.

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4: The contents of the string has the form "Frame1 : Frame2". The resulting rotation is determined from the part frame chain that is created by chaining all frames from Frame1 to Frame2 (in each case inclusive). Frame1 and Frame2 are valid frame names such as \$P_PFRAME or \$P_CHBFRAME[5]"

5: The contents of the frame is the valid name of a rotary axis (machine axis). The resulting rotation is determined from the programmed end position of this rotary axis. Additionally, an offset can be stated (in degrees, e.g. "A+90").

6: The rotation is programmed explicitly (in degrees).

Optionally, the first character of the string can be written as sign (+ or -). A plus sign will not have any effect on the angle calculation, but a minus sign will invert the sign of the calculated angle.

42990	MAX_BLOCKS_IN_IPOBUFFER	-	K1
-	Maximum number of blocks in IPO buffer	DWORD	Immediately
-			
-	-	-1, -1, -1, -1, -1, -1, -1, -1...	7/7 U

Description: This setting data can be used to limit the maximum number of blocks in the interpolation buffer to the maximum number specified in MD28060 \$MC_MM_IPO_BUFFER_SIZE. A negative value means that no limitation of the number of blocks is active in the interpolation buffer, and the number of blocks is determined solely by MD28060 \$MC_MM_IPO_BUFFER_SIZE (default setting).

42995	CONE_ANGLE	-	-
-	Taper angle	DOUBLE	Immediately
-			
-	-	-90	90 7/7 U

Description: This setting data writes the taper angle for taper turning. This setting data is written via the operator interface.

42996	JOG_GEOAX_MODE_MASK	-	-
-	JOG of geometry axis mode	DWORD	Immediately
-			
-	-	0, 0, 0, 0, 0, 0, 0, 0...	0 0x7 7/7 U

Description: This setting data sets the following during JOG of geometry axes:

Bit 0 = 1 :
A traversing request for the 1st geometry axis is inverted, i.e. a traversing request to + triggers a traversing motion to - .

Bit 1 = 1 :
A traversing request for the 2nd geometry axis is inverted, i.e. a traversing request to + triggers a traversing motion to - .

Bit 2 = 1 :
A traversing request for the 3rd geometry axis is inverted, i.e. a traversing request to + triggers a traversing motion to - .

42998	CUTMOD_PLANE_TOL	-	-
degrees	Deviation tool tip/machining plane	DOUBLE	Immediately
-			
-	-	5.0, 5.0, 5.0, 5.0, 5.0, 5.0, 5.0, 5.0...	0.0 89.0 7/3 U

Description: This setting data specifies by how many degrees the tip of a tool can be rotated as a maximum from the machining plane when calling the CUTMOD or CUTMODK function, i.e. the maximum deviation of the angle gamma from one of the two standard positions 0 or 180 degrees.

If the value of this setting data is 0, the absolute value of the specified angle is a maximum of 89 degrees.

42999	ORISOLH_INCLINE_TOL			-	-	
degrees	Deviation, tool tip/machining plane for ORISOLH			DOUBLE	Immediately	
-						
-	-	1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0...	0.001	89.0	7/3	U

Description: This setting data specifies the maximum permissible inclination of the tool tip with respect to the machining plane (in the standard case G18) when calling the ORISOLH function for "Directly swivel tool".

43100	LEAD_TYPE			-	M3	
-	Defines what is used as master value			DWORD	Immediately	
CTEQ						
-	-	1	0	2	7/7	U

Description: Defines which value is to be used as master value:

0: Actual value

1: Setpoint

2: Simulated master value

43102	LEAD_OFFSET_IN_POS			-	M3	
-	Offset of master value if coupled to this axis			DOUBLE	Immediately	
-						
-	-	0.0	-1e15	1e15	7/7	U

Description: Offset of the master value before use on the coupling.

If this axis is a master value coupled following axis with CTABP as the curve table and X as the master value, then its position setpoint is calculated from

$$\text{LEAD\_OFFSET\_OUT\_POS} + \text{LEAD\_SCALE\_OUT\_POS} * \text{CTABP}(\text{LEAD\_OFFSET\_IN\_POS} + \text{LEAD\_SCALE\_IN\_POS} * X)$$

Related to

SD43104 \$SA_LEAD_SCALE_IN_POS

SD43106 \$SA_LEAD_OFFSET_OUT_POS

SD43108 \$SA_LEAD_SCALE_OUT_POS

43104	LEAD_SCALE_IN_POS			-	M3	
-	Scaling of master value if coupled to this axis			DOUBLE	Immediately	
-						
-	-	1.0	-1e15	1e15	7/7	U

Description: Scaling of the master value before use on the coupling.

If this axis is a master value coupled following axis with CTABP as the curve table and X as the master value, then its position setpoint is calculated from

$$\text{LEAD\_OFFSET\_OUT\_POS} + \text{LEAD\_SCALE\_OUT\_POS} * \text{CTABP}(\text{LEAD\_OFFSET\_IN\_POS} + \text{LEAD\_SCALE\_IN\_POS} * X)$$

Related to

SD43102 \$SA_LEAD_OFFSET_IN_POS

SD43106 \$SA_LEAD_OFFSET_OUT_POS

SD43108 \$SA_LEAD_SCALE_OUT_POS

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43106	LEAD_OFFSET_OUT_POS			-	M3	
mm, degrees	Offset of the functional value of the curve table			DOUBLE	Immediately	
-						
-	-	0.0	-1e15	1e15	7/7	U

Description: Offset of the master value before use on the coupling.

If this axis is a master value coupled following axis with CTABP as the curve table and X as the master value, then its position setpoint is calculated from

$$\text{LEAD\_OFFSET\_OUT\_POS} + \text{LEAD\_SCALE\_OUT\_POS} * \text{CTABP}(\text{LEAD\_OFFSET\_IN\_POS} + \text{LEAD\_SCALE\_IN\_POS} * X)$$

Related to

SD43102 \$SA_LEAD_OFFSET_IN_POS

SD43104 \$SA_LEAD_SCALE_IN_POS

SD43108 \$SA_LEAD_SCALE_OUT_POS

43108	LEAD_SCALE_OUT_POS			-	M3	
-	Scaling of functional value of the curve table			DOUBLE	Immediately	
-						
-	-	1.0	-1e15	1e15	7/7	U

Description: Scaling of the function value before use of the curve table.

If this axis is a master value coupled following axis with CTABP as the curve table and X as the master value, then its position setpoint is calculated from

$$\text{LEAD\_OFFSET\_OUT\_POS} + \text{LEAD\_SCALE\_OUT\_POS} * \text{CTABP}(\text{LEAD\_OFFSET\_IN\_POS} + \text{LEAD\_SCALE\_IN\_POS} * X)$$

Related to

SD43102 \$SA_LEAD_OFFSET_IN_POS

SD43104 \$SA_LEAD_SCALE_IN_POS

SD43106 \$SA_LEAD_OFFSET_OUT_POS

43120	DEFAULT_SCALE_FACTOR_AXIS			-	FBFA	
-	Axial default scaling factor with G51 active			DWORD	Immediately	
-						
-	-	1	-	-	7/7	U

Description: If no axial scaling factor I, J, or K is programmed in the G51 block, SD43120 \$SA_DEFAULT_SCALE_FACTOR_AXIS is active. The scaling factor is only active if MD22914 \$MC_AXES_SCALE_ENABLE is set.

Related to:

MD22914 \$MC_AXES_SCALE_ENABLE,

MD22910 \$MC_WEIGHTING_FACTOR_FOR_SCALE

43200	SPIND_S			-	S1	
rev/min	Speed for spindle start by VDI			DOUBLE	Immediately	
-						
-	-	0.0	0.0	-	7/7	U

Description: Spindle speed at spindle start by NC/PLC interface signals DB31, ... DBX30.1 (Spindle start clockwise rotation) and DB31, ... DBX30.2 (Spindle start counterclockwise rotation).

Example: SD43200 \$SA_SPIND_S[S1] = 600

Spindle 1 is started at a speed of 600 rpm upon detection of the positive edge of one of the above-mentioned VDI starting signals.

Speed programming values are entered in the SD by setting bit 4=1 in MD35035 \$MA_SPIND_FUNCTION_MASK.

The SD becomes active in JOG mode as a default speed by setting bit 5=1 in MD35035 \$MA_SPIND_FUNCTION_MASK (exception: the value is zero).

Related to:

MD35035 \$MA_SPIND_FUNCTION_MASK
MD10709 \$MN_PROG_SD_POWERON_INIT_TAB
MD10710 \$MN_PROG_SD_RESET_SAVE_TAB

43202	SPIND_CONSTCUT_S	-	S1
m/min	Const cut speed for spindle start by VDI	DOUBLE	Immediately
-			
-	-	0.0	0.0
-	-	-	7/7
-	-	-	U

Description:

Definition of the constant cutting speed for the master spindle.

The setting data is evaluated at spindle start by the NC/PLC interface signals DB31, ... DBX30.1 (Spindle start clockwise rotation) and DB31, ... DBX30.2 (Spindle start counterclockwise rotation)

Cutting speed programming values are entered in the SD by setting bit 8=1 in MD35035 \$MA_SPIND_FUNCTION_MASK.

Related to:

MD35035 \$MA_SPIND_FUNCTION_MASK
MD10709 \$MN_PROG_SD_POWERON_INIT_TAB
MD10710 \$MN_PROG_SD_RESET_SAVE_TAB

43206	SPIND_SPEED_TYPE	A06	-
-	Spindle speed type for spindle start through VDI	DWORD	Immediately
-			
-	-	94	93
-	-	973	7/7
-	-	-	U

Description:

Definition of the spindle speed type for the master spindle.

The range of values and the functionality correspond to the 15th G group "feed type".

Permissible values are the G values: 93, 94, 95, 96, 961, 97, 971 and 973.

The stated values make a functional distinction between the following variants:

==> 93, 94, 95, 97 and 971: The spindle is started at the speed in SD 43200 \$SA_SPIND_S.

==> 96 and 961: The speed of the spindle is derived from the cutting speed of SD 43202 \$SA_SPIND_CONSTCUT_S and the radius of the transverse axis.

==> 973: G973 behaves like G97, but the spindle speed limitation is not active

The default value is 94 (corresponds to G94)

The default value becomes active if the SD is written with impermissible values.

43210	SPIND_MIN_VELO_G25	-	S1
rev/min	Programmed spindle speed limitation G25	DOUBLE	Immediately
-			
-	-	0.0	0.0
-	-	-	7/7
-	-	-	U

Description:

A minimum spindle speed limit below which the spindle must not fall is entered in SPIND_MIN_VELO_G25. The NCK limits the set spindle speed to this value if it is too low.

The spindle speed may only fall below the minimum as a result of:

2.4 NC setting data

- Spindle offset 0%
- M5
- S0
- NC/PLC interface signal DB31, ... DBX4.3 (Spindle stop)
- NC/PLC interface signal DB31, ... DBX2.1 (Servo enable)
- NC/PLC interface signal DB21-30 DBX35.7 (Channel status: Reset)
- NC/PLC interface signal DB31, ... DBX2.2 (Delete distance-to-go/Spindle reset)
- NC/PLC interface signal DB31, ... DBX18.5 (Oscillation speed)
- Cancel S value

SD irrelevant to

other spindle modes used in open-loop control mode (SPOS, M19, SPOSA)

Related to:

MD10709 \$MN_PROG_SD_POWERON_INIT_TAB

MD10710 \$MN_PROG_SD_RESET_SAVE_TAB

43220	SPIND_MAX_VELO_G26			-	S1	
rev/min	Programmable upper spindle speed limitation G26			DOUBLE	Immediately	
-						
-	-	1000.0	0.0	-	7/7	U

Description:

A maximum spindle speed is entered in SD43220 \$SA_SPIND_MAX_VELO_G26, which the spindle must not exceed. The NCK limits an excessive spindle speed setpoint to this value.

SD irrelevant for

all spindle modes except open-loop control mode.

Special cases, errors, ...

The value in SD43210 \$SA_SPIND_MIN_VELO_G26 can be altered by means of:

- G26 S.... in the part program
- Operator commands via HMI

The value in SD43210 \$SA_SPIND_MIN_VELO_G26 is retained after a reset or Power Off.

Related to

SD43210 \$SA_SPIND_MIN_VELO_G25 (programmed spindle speed limit G25)

SD43230 \$SA_SPIND_MAX_VELO_LIMS (programmed spindle speed limit G96/961)

MD10709 \$MN_PROG_SD_POWERON_INIT_TAB

MD10710 \$MN_PROG_SD_RESET_SAVE_TAB

43230	SPIND_MAX_VELO_LIMS			-	S1, Z1	
rev/min	Spindle speed limitation with G96			DOUBLE	Immediately	
-						
-	-	100.0	0.0	-	7/7	U

Description:

Limits the spindle speed with G96, G961, G97 to the stated maximum value [degrees/second]. This setting data can be written from the block with LIMS.

Note:

MD 10710 \$MN_PROG_SD_RESET_SAVE_TAB can be set so that the value written by the part program is transferred into the active file system on reset (that is the value is retained after reset).

Related to

SD43210 \$SA_SPIND_MIN_VELO_G25 (programmed spindle speed limit G25)

SD43230 \$SA_SPIND_MAX_VELO_LIMS (programmed spindle speed limit with G96/961)

MD10709 \$MN_PROG_SD_POWERON_INIT_TAB

MD10710 \$MN_PROG_SD_RESET_SAVE_TAB

43235	SPIND_USER_VELO_LIMIT	A06	S1, Z1
rev/min	Maximum spindle speed	DOUBLE	Immediately
-			
-	-	1.0e+8	0.0
-	-	-	7/7
-	-	-	U

Description: The user can enter a maximum spindle speed.
The NCK limits an excessive spindle setpoint speed to this value. The SD is effective immediately.
Corresponds with:
MD35100 \$MA_SPIND_VELO_LIMIT (maximum spindle speed)
MD35110 \$MA_GEAR_STEP_MAX_VELO (maximum speed for gear stage change)

43240	M19_SPOS	, A12	S1
degrees	Spindle position for spindle positioning with M19.	DOUBLE	Immediately
-			
-	-	0.0	-10000000.0
-	-	10000000.0	7/7
-	-	-	U

Description: Spindle position in [DEGREES] for spindle positioning with M19.
The position approach mode is defined in SD43250 \$SA_M19_SPOSMODE.
Default positions must lie in the range $0 \leq \text{pos} < \text{MD30330 } \$\text{MA\_MODULO\_RANGE}$.
Path defaults (SD43250 \$SA_M19_SPOSMODE = 2) can be positive or negative and are only limited by the input format.

43250	M19_SPOSMODE	, A12	S1
-	Spindle position approach mode for spindle positioning with M19.	DWORD	Immediately
-			
-	-	0	0
-	-	5	7/7
-	-	-	U

Description: Spindle position approach mode for spindle positioning with M19.
In which signify:
0: DC (default) approach position on the shortest path.
1: AC approach position normally.
2: IC approach incrementally (as path), sign gives the traversing direction
3: DC approach position on the shortest path.
4: ACP approach position from the positive direction.
5: ACN approach position from the negative direction.

43300	ASSIGN_FEED_PER_REV_SOURCE	-	V1, P2, S1
-	Revolutional feedrate for positioning axes/spindles	DWORD	Immediately
CTEQ			
-	-	0	-3
-	-	31	7/7
-	-	-	U

Description: 0= No revolutional feedrate is active.
>0= Machine axis index of the rotary axis/spindle, from which the revolutional feedrate is derived.
-1= The revolutional feedrate is derived from the master spindle of the channel in which the axis/spindle is active
-2= The revolutional feedrate is derived from the axis with machine axis index == 0 or the axis with an index in MD10002 \$MN_AXCONF_LOGIC_MACHAX_TAB == 0.
-3= The revolutional feedrate is derived from the master spindle of the channel in which the axis/spindle is active. No revolutional feedrate is active if the master spindle is at a standstill.
Related to

2.4 NC setting data

SD42600 \$SC_JOG_FEED_PER_REV_SOURCE (revolutional feedrate for geometry axes on which a frame with rotation acts in JOG mode.)

MD10709 \$MN_PROG_SD_POWERON_INIT_TAB

MD10710 \$MN_PROG_SD_RESET_SAVE_TAB

43320	JOG_POSITION	-	-
mm, degrees	JOG position	DOUBLE	Immediately
-			
-	-	0.0	-
-	-	-	7/7
-	-	-	U

Description: Position to be approached in JOG. Depending on MD10735 \$MN_JOG_MODE_MASK bit 4 axial frames and, with an axis configured as geometry axis, the tool length offset are considered.

43340	EXTERN_REF_POSITION_G30_1	, A12	FBFA
-	Reference point position for G30.1	DOUBLE	Immediately
-			
-	-	0.0	-
-	-	-	7/7
-	-	-	U

Description: Reference point position for G30.1.
This setting data will be evaluated in CYCLE328.

43350	AA_OFF_LIMIT	-	S5, FBSY
mm, degrees	Upper limit of offset value \$AA_OFF with clearance control	DOUBLE	PowerOn
CTEQ			
-	-	100000000.0	0.0
-	-	1e15	7/7
-	-	-	U

Description: The upper limit of the offset value, which can be defined by means of synchronized actions via the variable \$AA_OFF.
This limit value acts on the absolutely effective amount of offset by means of \$AA_OFF.
It is used for clearance control in laser machining:
The offset value is limited so that the laser head cannot get caught in the plate recesses.
Whether the offset value lies within the limit range can be queried via system variable \$AA_OFF_LIMIT.

43400	WORKAREA_PLUS_ENABLE	-	A3
-	Working area limitation active in positive direction	BOOLEAN	Immediately
CTEQ			
-	-	FALSE	0
-	-	-	7/7
-	-	-	U

Description: 1: The working area limitation of the axis concerned is active in the positive direction.
0: The working area limitation of the axis concerned is switched off in the positive direction.
The setting data is parameterized via the operator panel in the operating area "Parameters" by activating/deactivating the working area limitation.
SD irrelevant for
G code: WALIMOF

43410	WORKAREA_MINUS_ENABLE	-	A3
-	Working area limitation active in the negative direction	BOOLEAN	Immediately
CTEQ			
-	-	FALSE	0
-	-	-	7/7
-	-	-	U

Description:

1: The working area limitation of the axis concerned is active in the negative direction.

0: The working area limitation of the axis concerned is switched off in the negative direction.

The setting data is parameterized via the operator panel in the operating area "Parameters" by activating/deactivating the working area limitation.

SD irrelevant for

G code: WALIMOF

43420	WORKAREA_LIMIT_PLUS	-	A3
mm, degrees	Working area limitation plus	DOUBLE	Immediately
-			
-	-	1.0e+8	-
-	-	-	7/7
-	-	-	U

Description:

The working area defined in the basic coordinate system in the positive direction of the axis concerned can be limited with axial working area limitation.

The setting data can be changed on the operator panel in the operating area "Parameters".

The positive working area limitation can be changed in the program with G26.

SD irrelevant for

G code: WALIMOF

Related to

SD43400 \$SA_WORKAREA_PLUS_ENABLE

MD10709 \$MN_PROG_SD_POWERON_INIT_TAB

MD10710 \$MN_PROG_SD_RESET_SAVE_TAB

43430	WORKAREA_LIMIT_MINUS	-	A3
mm, degrees	Working area limitation minus	DOUBLE	Immediately
-			
-	-	-1.0e+8	-
-	-	-	7/7
-	-	-	U

Description:

The working area defined in the basic coordinate system in the negative direction of the axis concerned can be limited with axial working area limitation.

The setting data can be changed on the operator panel in the operating area "Parameters".

The negative working area limitation can be changed in the program with G25.

SD irrelevant for

G code: WALIMOF

Related to

SD43410 \$SA_WORKAREA_MINUS_ENABLE

MD10709 \$MN_PROG_SD_POWERON_INIT_TAB

MD10710 \$MN_PROG_SD_RESET_SAVE_TAB

43500	FIXED_STOP_SWITCH	-	F1
-	Selection of travel to fixed stop	BYTE	Immediately
-			
-	-	0	0
-	-	1	7/7
-	-	-	U

Description:

The "Travel to fixed stop" function can be selected and deselected with this setting data.

SD=0 Deselect "Travel to fixed stop"

SD=1 Select "Travel to fixed stop"

The setting data can only be overwritten by the part program with the command FXS[x]=1/0 when software version 2.x is installed.

2.4 NC setting data

The status of the setting data is indicated on the operator panel in the "Parameters" area.

43510	FIXED_STOP_TORQUE			-	F1	
%	Fixed stop clamping torque			DOUBLE	Immediately	
-						
-	-	5.0	0.0	800.0	7/7	U

Description:

The clamping torque is entered in this setting data as a % of the maximum motor torque (corresponds to % of max. current value with FDD).

The setting data is active only if the fixed stop has been reached.

The fixed stop is considered reached when,

- with MD37060 \$MA_FIXED_STOP_ACKN_MASK, bit 1 = 0 (no acknowledgment required), the interface signal DB31, ... DBX62.5 (Fixed stop reached) is set by the NC
- with MD37060 \$MA_FIXED_STOP_ACKN_MASK, bit 1 = 1 (acknowledgment required), the interface signal DB31, ... DBX62.5 (Fixed stop reached) is set by the NC and acknowledged by interface signal DB31, ... DBX1.1 (Acknowledge fixed stop reached)

The status of the setting data is indicated on the operator panel in the "Parameters" area.

The FXST[x] command effects a block-synchronous change to this setting data. It can also be changed by the user or via the PLC. Otherwise the value is transferred from MD37010 \$MA_FIXED_STOP_TORQUE_DEF to the setting data when "Travel to fixed stop" is active.

Related to

MD37010 \$MA_FIXED_STOP_TORQUE_DEF (default setting for clamping torque)

43520	FIXED_STOP_WINDOW			-	F1	
mm, degrees	Fixed stop monitoring window			DOUBLE	Immediately	
-						
-	-	1.0	0.0	-	7/7	U

Description:

The fixed stop monitoring window is entered in this setting data.

The setting data is active only if the fixed stop has been reached.

The fixed stop is considered reached when,

- with MD37060 \$MA_FIXED_STOP_ACKN_MASK, bit 1 = 0 (no acknowledgment required) interface signal DB31, ... DBX62.5 (Fixed stop reached) is set by the NC
- with MD37060 \$MA_FIXED_STOP_ACKN_MASK, bit 1 = 1 (acknowledgment required) interface signal DB31, ... DBX62.5 (Fixed stop reached) is set by the NC and acknowledged by interface signal DB31, ... DBX1.1 (Acknowledge fixed stop reached)

If the position at which the fixed stop was detected leaves the tolerance band by more than the amount specified in SD43520 \$SA_FIXED_STOP_WINDOW, then alarm 20093 "Fixed stop monitoring has responded" is output and the "FXS" function is deselected.

The status of the setting data is indicated on the operator panel in the "Parameters" area.

The FXSW[x] command effects a block-synchronous change to this setting data. It can also be changed by the user or via the PLC.

The value is otherwise transferred from MD37020 \$MA_FIXED_STOP_WINDOW_DEF to the setting data when "Travel to fixed stop" is active.

Related to

MD37020 \$MA_FIXED_STOP_WINDOW_DEF (default setting for fixed stop monitoring window)

43600	IPOBRAKE_BLOCK_EXCHANGE			A06, A10	K1	
%	Block change criterion 'braking ramp'			DOUBLE	Immediately	
-						
-	-	0.0	0	100.0	7/7	U

Description: Specifies the application time at single axis interpolation for the block change criterion braking ramp: At 100%, the block change criterion is fulfilled at the time of application of the braking ramp. At 0%, the block change criterion is identical with IPOENDA.

Note:

MD10710 \$MN_PROG_SD_RESET_SAVE_TAB can be set so that the value written by the part program is transferred into the active file system on reset (i.e. the value is retained even after reset).

43610	ADISPOSA_VALUE	A06, A10	P2
mm, degrees	Tolerance window 'braking ramp'	DOUBLE	Immediately
-			
-	-	0.0	0.0
-	-	-	7/7
-	-	-	U

Description: In case of single-axis interpolation, this value defines the size of the tolerance window which the axis must have reached in order to enable a block change in case of the block-change criterion 'braking ramp with tolerance window valid' and when reaching the corresponding % value of the braking ramp (SD43600 \$SA_IPOBRAKE_BLOCK_EXCHANGE).

Note:

By means of the MD 10710 \$MN_PROG_SD_RESET_SAVE_TAB, the user can specify that the value written by the part program is transferred into the active file system in case of a reset (i.e. the value is retained even after the reset).

43700	OSCILL_REVERSE_POS1	-	P5
mm, degrees	Oscillation reversal point 1	DOUBLE	Immediately
-			
-	-	0.0	-
-	-	-	7/7
-	-	-	U

Description: Position of the oscillating axis at reversal point 1.

Note:

MD10710 \$MN_PROG_SD_RESET_SAVE_TAB can be set so that the value written by the part program is transferred to the active file system on reset (that is the value is retained after RESET.)

Application example(s)

NC language: OSP1[Axis]=Position

Related to

```
SD43710 $SA_OSCILL_REVERSE_POS2
MD10709 $MN_PROG_SD_POWERON_INIT_TAB
MD10710 $MN_PROG_SD_RESET_SAVE_TAB
```

43710	OSCILL_REVERSE_POS2	-	P5
mm, degrees	Oscillation reversal point 2	DOUBLE	Immediately
-			
-	-	0.0	-
-	-	-	7/7
-	-	-	U

Description: Position of the oscillating axis at reversal point 2.

Note:

MD 10710 \$MN_PROG_SD_RESET_SAVE_TAB can be set so that the value written by the part program is transferred to the active file system on reset (that is the value is retained after reset.)

Application example(s)

NC language: OSP2[Axis]=Position

Related to

```
SD43700 $SA_OSCILL_REVERSE_POS1
```

2.4 NC setting data

MD10709 \$MN_PROG_SD_POWERON_INIT_TAB

MD10710 \$MN_PROG_SD_RESET_SAVE_TAB

43720	OSCILL_DWELL_TIME1	-	P5
s	Hold time at oscillation reversal point 1	DOUBLE	Immediately
-			
-	-	0.0	-
-	-	-	7/7
-	-	-	U

Description: Hold time of the oscillating axis at reversal point 1.

Note:

MD 10710 \$MN_PROG_SD_RESET_SAVE_TAB can be set so that the value written by the part program is transferred to the active file system on reset (that is the value is retained after reset.)

Application example(s)

NC language: OST1[Axis]=Position

Related to

SD43730 \$SA_OSCILL_DWELL_TIME2

MD10709 \$MN_PROG_SD_POWERON_INIT_TAB

MD10710 \$MN_PROG_SD_RESET_SAVE_TAB

43730	OSCILL_DWELL_TIME2	-	P5
s	Hold time at oscillation reversal point 2	DOUBLE	Immediately
-			
-	-	0.0	-
-	-	-	7/7
-	-	-	U

Description: Hold time of the oscillating axis at reversal point 2.

Note:

MD 10710 \$MN_PROG_SD_RESET_SAVE_TAB can be set so that the value written by the part program is transferred to the active file system on reset (that is the value is retained after reset.)

Application example(s)

NC language: OST2[Axis]=Position

Related to

SD43720 \$SA_OSCILL_DWELL_TIME1

MD10709 \$MN_PROG_SD_POWERON_INIT_TAB

MD10710 \$MN_PROG_SD_RESET_SAVE_TAB

43740	OSCILL_VELO	-	P5
mm/min, rev/min	Feedrate of reciprocating axis	DOUBLE	Immediately
-			
-	-	0.0	0.0
-	-	-	7/7
-	-	-	U

Description: Feed rate of the oscillating axis

Note:

MD 10710 \$MN_PROG_SD_RESET_SAVE_TAB can be set so that the value written by the part program is transferred to the active file system on reset (that is the value is retained after reset.)

Application example(s)

NC language: FA[Axis]=F value

Related to

MD10709 \$MN_PROG_SD_POWERON_INIT_TAB

MD10710 \$MN_PROG_SD_RESET_SAVE_TAB

43750	OSCILL_NUM_SPARK_CYCLES	-	P5
-	Number of spark-out strokes	DWORD	Immediately
-			
-	-	0	0
-	-	-	7/7
-	-	-	U

Description: Number of sparking-out strokes performed after ending the oscillating movement
Application example(s)
NC language: OSNSC[Axis]=Stroke number
Note:
MD 10710 \$MN_PROG_SD_RESET_SAVE_TAB can be set so that the value written by the part program is transferred to the active file system on reset (that is the value is retained after reset.)
Related to
MD10709 \$MN_PROG_SD_POWERON_INIT_TAB
MD10710 \$MN_PROG_SD_RESET_SAVE_TAB

43760	OSCILL_END_POS	-	P5
mm, degrees	End position of the reciprocating axis	DOUBLE	Immediately
-			
-	-	0.0	-
-	-	-	7/7
-	-	-	U

Description: Position the oscillating axis travels to after ending the sparking-out strokes.
Note:
MD 10710 \$MN_PROG_SD_RESET_SAVE_TAB can be set so that the value written by the part program is transferred to the active file system on reset (that is the value is retained after reset.)
Application example(s)
NC language: OSE[Axis]=Position
Related to
MD10709 \$MN_PROG_SD_POWERON_INIT_TAB
MD10710 \$MN_PROG_SD_RESET_SAVE_TAB

43770	OSCILL_CTRL_MASK	-	P5
-	Oscillation sequence control mask	UDWORD	Immediately
-			
-	-	0	0
-	-	0x7FFFFFFF	7/7
-	-	-	U

Description: Bit mask:
Bit no. | Meaning in OSCILL_CTRL_MASK

0 (LSB)-1 | 0: Stop at the next reversal point if the
| oscillating movement is switched off
|
| 1: Stop at reversal point 1 if the
| oscillating movement is switched off
| 2: Stop at reversal point 2 if the
| oscillating movement is switched off
| 3: Do not approach a reversal point when the oscillating movement is
switched off
if no sparking-out strokes are programmed
2 | 1: Approach end position after sparking out

2.4 NC setting data

3	1: If the oscillating movement is canceled by delete distance-to-go, then the sparking-out strokes are to be executed afterwards and the end position approached if necessary
4	1: If the oscillating movement is canceled by delete distance-to-go, then the corresponding reversal point is approached on switch off
5	1: Changed feedrate does not become active until the next reversal point
6	1: Path override is active if the feed rate is 0, otherwise speed override is active
7	1: In the case of rotary axes DC (shortest path)
8	1: Execute sparking-out stroke as single stroke not as double stroke
9	1: On starting, first approach the starting position, see SD43790 \$SA_OSCILL_START_POS

Application example(s)

NC language: OSCTRL[Axis]=(setting options, reset options)

Related to

MD10709 \$MN_PROG_SD_POWERON_INIT_TAB

MD10710 \$MN_PROG_SD_RESET_SAVE_TAB

43780	OSCILL_IS_ACTIVE	-	P5
-	Activate oscillation movement	BOOLEAN	Immediately
-			
-	-	FALSE	0
-	-	-	7/7
-	-	-	U

Description: Switching the oscillating movement on and off

Note:

MD 10710 \$MN_PROG_SD_RESET_SAVE_TAB can be set so that the value written by the part program is transferred to the active file system on reset (that is the value is retained after reset.)

Application example(s)

NC language: OS[Axis]=1, OS[Axis]=0

Related to

MD10709 \$MN_PROG_SD_POWERON_INIT_TAB

MD10710 \$MN_PROG_SD_RESET_SAVE_TAB

43790	OSCILL_START_POS	-	-
mm, degrees	Start position of reciprocating axis	DOUBLE	Immediately
-			
-	-	0.0	-
-	-	-	7/7
-	-	-	U

Description: Position approached by the oscillating axis at the start of oscillation if this is set in SD43770 \$SA_OSCILL_CTRL_MASK.

Note:

MD 10710 \$MN_PROG_SD_RESET_SAVE_TAB can be set so that the value written by the part program is transferred to the active file system on reset (that is the value is retained after reset.)

43900	TEMP_COMP_ABS_VALUE	-	K3
-	Position-independent temperature compensation value	DOUBLE	Immediately
-			
-	-	0.0	- - 7/7 U

Description: The position-independent temperature compensation value is defined by SD43900 \$SA_TEMP_COMP_ABS_VALUE.

-

The machine axis traverses this additional compensation value as soon as the position-independent temperature compensation has been activated (MD32750 \$MA_TEMP_COMP_TYPE = 1 oder 3).

SD irrelevant for

MD32750 \$MA_TEMP_COMP_TYPE = 0 or 2

Related to

MD32750 \$MA_TEMP_COMP_TYPE Temperature compensation type

MD32760 \$MA_COMP_ADD_VELO_FACTOR Velocity overshoot caused by compensation

43910	TEMP_COMP_SLOPE	-	K3
-	Lead angle for position-dependent temperature compensation	DOUBLE	Immediately
-			
-	-	0.0	- - 7/7 U

Description: In the case of position-dependent temperature compensation, the error curve characteristic of the temperature-dependent actual-value deviation can often be approximated by a straight line. This straight line is defined by a reference point P_0 and a slope $\tan-\beta$.

SD43910 \$SA_TEMP_COMP_SLOPE defines the slope $\tan-\beta$. This slope can be changed by the PLC user program as a function of the current temperature.

The axis traverses additionally the compensation value calculated for the relevant actual position as soon as the position-dependent temperature compensation becomes active (MD32750 \$MA_TEMP_COMP_TYPE = 2 or 3).

MD32760 \$MA_COMP_ADD_VELO_FACTOR limits the maximum angle of slope $\tan-\beta_{\max}$ of the error curve. This maximum angle of slope cannot be exceeded.

SD irrelevant for

MD32750 \$MA_TEMP_COMP_TYPE = 0 or 1

Special cases, errors, ...

When SD43910 \$SA_TEMP_COMP_SLOPE is greater than $\tan-\beta_{\max}$, the slope $\tan-\beta_{\max}$ is used to calculate the position-dependent temperature compensation value internally. No alarm is output.

Related to

MD32750 \$MA_TEMP_COMP_TYPE Temperature compensation type

SD43920 \$SA_TEMP_COMP_REF_POSITION Reference position for position-dependent temperature compensation

MD32760 \$MA_COMP_ADD_VELO_FACTOR Velocity overshoot caused by compensation

43920	TEMP_COMP_REF_POSITION	-	K3
-	Ref. position of position-dependent temperature compensation	DOUBLE	Immediately
-			
-	-	0.0	- - 7/7 U

2.5 Machine and setting data cycles

Description:

In the case of position-dependent temperature compensation, the error curve characteristic of the temperature-dependent actual-value deviation can often be approximated by a straight line. This straight line is defined by a reference point P_0 and a slope $\tan\beta$.

SD43920 \$SA_TEMP_COMP_REF_POSITION defines the position of the reference point P_0. This reference position can be changed by the PLC user program as a function of the current temperature.

The axis traverses additionally the compensation value calculated for the relevant actual position as soon as the position-dependent temperature compensation becomes active (MD32750 \$MA_TEMP_COMP_TYPE = 2 or 3).

SD irrelevant for

MD32750 \$MA_TEMP_COMP_TYPE = 0 or 1

Related to

MD32750 \$MA_TEMP_COMP_TYPE Temperature compensation type

SD43910 \$SA_TEMP_COMP_SLOPE Angle of slope for position-dependent temperature compensation

2.5 Machine and setting data cycles

51000	DISP_RES_MM	-	-
-	Display resolution in mm	BYTE	PowerOn
-			
-	-	3	0
		6	7/3
			M

Description: Display resolution in mm

51001	DISP_RES_MM_FEED_PER_REV	-	-
-	Display resolution in mm feedrate/rev	BYTE	Immediately
-			
-	-	3	0
		6	7/3
			M

Description: Display resolution in mm feedrate/rev

51002	DISP_RES_MM_FEED_PER_TIME	-	-
-	Display resolution in mm feedrate/min	BYTE	Immediately
-			
-	-	3	0
		6	7/3
			M

Description: Display resolution in mm feedrate/min

51003	DISP_RES_MM_FEED_PER_TOOTH	-	-
-	Display resolution in mm feedrate/tooth	BYTE	Immediately
-			
-	-	3	0
		6	7/3
			M

Description: Display resolution in mm feedrate/tooth

51004	DISP_RES_MM_CONST_CUT_RATE	-	-
-	Display resolution constant cutting speed m/min	BYTE	Immediately
-			
-	-	3	0
		6	7/3
			M

Description: Display resolution constant cutting speed m/min

51010	DISP_RES_INCH	-	-
-	Display resolution in inch	BYTE	PowerOn
-			
-	-	4	0
-	-	6	7/3
-	-	M	

Description: Display resolution in inch

51011	DISP_RES_INCH_FEED_P_REV	-	-
-	Display resolution in inch feedrate/rev	BYTE	Immediately
-			
-	-	4	0
-	-	6	7/3
-	-	M	

Description: Display resolution in inch feedrate/rev

51012	DISP_RES_INCH_FEED_P_TIME	-	-
-	Display resolution in inch feedrate/min	BYTE	Immediately
-			
-	-	4	0
-	-	6	7/3
-	-	M	

Description: Display resolution in inch feedrate/min

51013	DISP_RES_INCH_FEED_P_TOOTH	-	-
-	Display resolution in inch feedrate/tooth	BYTE	Immediately
-			
-	-	4	0
-	-	6	7/3
-	-	M	

Description: Display resolution in inch feedrate/tooth

51014	DISP_RES_INCH_CUT_RATE	-	-
-	Display resolution constant cutting speed ft/min	BYTE	Immediately
-			
-	-	4	0
-	-	6	7/3
-	-	M	

Description: Display resolution constant cutting speed ft/min

51019	DISP_RES_ROT_WO	-	-
-	Display resolution of rotation in work offsets	BYTE	Immediately
-			
-	-	0	0
-	-	6	7/3
-	-	M	

Description: Display resolution of rotation in work offsets

If the value of the data is 0, MD51020 \$MNS_DISP_RES_ANGLE is used.

51020	DISP_RES_ANGLE	-	-
-	Display resolution of angle	BYTE	Immediately
-			
-	-	3	0
-	-	6	7/3
-	-	M	

Description: Display resolution of angle

51021	DISP_RES_SPINDLE	-	-
-	Display resolution of spindles	BYTE	Immediately
-			
-	-	0	0
-	-	6	7/3
-	-	M	

Description: Decimal places in speed entry field

2.5 Machine and setting data cycles

51022	DISP_RES_ROT_AX_FEED	-	-
-	Display resolution of rotary axis feedrate	BYTE	Immediately
-			
-	-	0	0
-		6	7/3
-			M

Description: Display resolution of rotary axis feedrate

51023	ACT_VALUE_SPIND_MODE	-	-
-	Only display spindles in actual values window when in axis mode	BYTE	PowerOn
-			
-	-	1	0
-		1	3/4
-			M

Description: This affects the display of the spindles in the axis actual values window. If the value is set to 1, only those spindles in axis mode are displayed, those in spindle mode are shown as gaps. If the value is set to 0, all spindles are displayed.

51024	BLOCK_SEARCH_MODE_MASK_JS	-	-
-	Bit mask for available search modes (ShopMill, ShopTurn single-channel)	BYTE	PowerOn
-			
-	-	1	-
-		-	4/3
-			M

Description: Bit mask for available search modes (ShopMill, ShopTurn single-channel)

Bit 0: Block search with calculation without approach
 Bit 1: Block search with calculation with approach
 Bit 2: reserved
 Bit 3: Skip EXTCALL programs
 Bit 4: reserved
 Bit 5: Block search with test run

51025	FRAMES_ACT_IMMEDIATELY	-	-
-	Activate active offset immediately	BYTE	PowerOn
-			
-	-	1	0
-		1	4/3
-			M

Description: Active data (frames) are activated immediately after change

51026	AXES_SHOW_GEO_FIRST	-	-
-	Actual value display with leading geometry axes	BYTE	PowerOn
-			
-	-	1	0
-		1	4/3
-			M

Description: When the machine data value is 1, the geometry axes of the channel are displayed first.

51027	ONLY_MKS_DIST_TO_GO	-	-
-	Distance-to-go display in the Work window	BYTE	PowerOn
-			
-	-	0	0
-		1	4/3
-			M

Description: Distance-to-go display in the Work window

51028	BLOCK_SEARCH_MODE_MASK	-	-
-	Bit mask for available block search modes	BYTE	PowerOn
-			
-	-	51	-
-	-	-	-
-	-	4/3	M

Description: Bit mask for available search modes

Bit 0: Block search with calculation without approach

Bit 1: Block search with calculation with approach

Bit 3: Skip EXTCALL programs

Bit 4: Block search without calculation

Bit 5: Block search with test run

51029	MAX_SKP_LEVEL	-	-
-	Maximum number of skip levels in the NC program	BYTE	PowerOn
-			
-	-	1	1
-	-	10	4/3
-	-	M	

Description: The machine data defines how many skip levels are made available for operation.

51030	SPIND_MAX_POWER	-	-
%	Maximum value of spindle power rating display	DWORD	PowerOn
-			
-	-	100	0
-	-	255	4/3
-	-	M	

Description: Maximum value of the permissible spindle power as a percentage; the display bar in the machine image "spindle diagnosis" is shown green in the range between 0 and the value set in SPIND_MAX_POWER.

In the case of a SINAMICS drive, the drive parameter r0033 "Torque utilization smoothed" is shown in the load bar.

51031	SPIND_POWER_RANGE	-	-
%	Display range of spindle power rating display	DWORD	PowerOn
-			
-	-	100	0
-	-	255	4/3
-	-	M	

Description: Scale end value for spindle power rating in percent; value must be equal to or greater than SPIND_MAX_POWER.

The display bar in the machine image is shown in red in the range between the values of SPIND_MAX_POWER and SPIND_POWER_RANGE.

51034	TEACH_MODE	-	-
-	Teach mode to be activated	DWORD	PowerOn
-			
-	-	1	-
-	-	-	4/3
-	-	M	

Description: Teach mode to be activated

Bit 0: default teach-in

Taught-in block is transferred to the program using the Accept softkey.

Bit 1: transfer of teach block can be blocked by the PLC.

SINUMERIK 840D sl:

DB19.DBX13.0 = 0 block is transferred.

DB19.DBX13.0 = 1 block is not transferred.

SINUMERIK 828D:

DB1700.DBX1000.0 = 0 block is transferred.

2.5 Machine and setting data cycles

DB1700.DBX1000.0 = 1 block is not transferred.

Bit 2: block selection only explicitly

Bits 16-31 are reserved for the OEM.

51035	WRITE_FRAMES_FINE_LIMIT			-	-	
-	Input limit for all WO fine			DOUBLE	PowerOn	
-						
-	-	0.999	-	-	4/3	M

Description: Input limit for all work offsets fine

51036	ENABLE_COORDINATE_REL			-	-	
-	Enable REL coordinate system			BYTE	PowerOn	
-						
-	-	0	0	1	7/3	M

Description: Display REL coordinate system
 0 = No relative coordinate system selectable
 1 = REL coordinate system can be selected as an alternative to the Work (WCS)/SZS coordinate system

51037	ENABLE_COORDINATE_ACS			-	-	
-	Enable settable coordinate system			BYTE	PowerOn	
-						
-	-	0	0	1	7/3	M

Description: Activate settable coordinate system
 0 = WCS coordinate system is displayed
 1 = SZS coordinate system is displayed
 (SZS is WCS reduced by the offset components defined in MD24030)

51038	SET_ACT_VALUE			-	-	
-	Set actual value selection			BYTE	PowerOn	
-						
-	-	1	0	1	7/3	M

Description: Set actual value selection
 0 = Set actual value is not offered.
 1 = if a user frame (settable work offset e.g. G54) is active, it will be used. In G500 Set actual values is not offered (system frame is no longer used).

51039	PROGRAM_CONTROL_MODE_MASK			-	-	
-	Options for machine - program influence			DWORD	PowerOn	
-						
-	-	1	-	-	7/3	M

Description: Options for machine - program influence:
 Bit 0: program test function available

51040	SWITCH_TO_MACHINE_MASK			-	-	
-	Automatic operating area switchover to machine			BYTE	PowerOn	
-						
-	-	0	-	-	7/3	M

Description: Automatic area switchover dependent upon machine

Bit 0: No automatic switch to Machine operating area when the program is selected in the Program Manager.

Bit 1: No automatic switch to Machine operating area when the operating mode is changed over via the machine control panel (MCP).

Bit 2: No automatic switch to Machine operating area when the program is selected in the Programs operating area.

Bit 3: No automatic start of block search when the program is selected / executed in the Programs operating area.

51041	ENABLE_PROGLIST_USER	-	-
-	Activation of PLC program list, USER area	BYTE	Immediately
-			
-	-	0	0
-	-	1	7/3
-	-	M	

Description: Activates the PLC program list of the USER area. The programs entered there can be selected by the PLC for processing.

51042	ENABLE_PROGLIST_INDIVIDUAL	-	-
-	Activation of PLC program list, INDIVIDUAL area	BYTE	Immediately
-			
-	-	0	0
-	-	1	7/3
-	-	M	

Description: Activates the PLC program list of the INDIVIDUAL area. The programs entered here can be selected by the PLC for processing.

51043	ENABLE_PROGLIST_MANUFACT	-	-
-	Activation of PLC program list, MANUFACTURER area	BYTE	Immediately
-			
-	-	0	0
-	-	1	7/3
-	-	M	

Description: Activates the PLC program list of the MANUFACTURER area. The programs entered here can be selected by the PLC for processing.

51044	ACCESS_SHOW_SBL2	-	-
-	Display protection level SBL2	BYTE	PowerOn
-			
-	-	7	0
-	-	7	4/3
-	-	M	

Description: Display protection level SBL2

51045	ACCESS_TEACH_IN	-	-
-	Protection level TEACH IN	BYTE	PowerOn
-			
-	-	4	0
-	-	7	4/3
-	-	M	

Description: Protection level TEACH IN

51046	ACCESS_CLEAR_RPA	-	-
-	Protection level delete R variables	BYTE	PowerOn
-			
-	-	4	0
-	-	7	4/3
-	-	M	

Description: Protection level delete R variables

2.5 Machine and setting data cycles

51047	ACCESS_READ_GUD_LUD	-	-
-	Read user variable protection level	BYTE	PowerOn
-			
-	-	7	0
-	-	7	4/3
-	-	-	M

Description: Read user variable protection level

51048	ACCESS_WRITE_GUD_LUD	-	-
-	Write protection level of user variables	BYTE	PowerOn
-			
-	-	7	0
-	-	7	4/3
-	-	-	M

Description: Write protection level of user variables

51049	ACCESS_WRITE_PRG_COND	-	-
-	Write program control protection level	BYTE	PowerOn
-			
-	-	7	0
-	-	7	4/3
-	-	-	M

Description: Write program control protection level

51050	ACCESS_WRITE_PROGRAM	-	-
-	Write part program protection level	BYTE	PowerOn
-			
-	-	4	0
-	-	7	4/3
-	-	-	M

Description: Write part program protection level

51051	ACCESS_WRITE_RPA	-	-
-	Protection level write R variables	BYTE	PowerOn
-			
-	-	7	0
-	-	7	4/3
-	-	-	M

Description: Protection level write R variables

51052	ACCESS_WRITE_SEA	-	-
-	Protection level write setting data	BYTE	PowerOn
-			
-	-	7	0
-	-	7	4/3
-	-	-	M

Description: Protection level write setting data

51053	ACCESS_WRITE_BASEFRAME	-	-
-	Write basic work offset protection level	BYTE	PowerOn
-			
-	-	7	0
-	-	7	4/3
-	-	-	M

Description: Write basic work offset (basic frame) protection level

51054	ACCESS_WRITE_CYCFRAME	-	-
-	Write cycle frame protection level	BYTE	PowerOn
-			
-	-	7	0
-	-	7	4/3
-	-	-	M

Description: Write cycle frame protection level

51055	ACCESS_WRITE_EXTFRAME	-	-
-	Write external WO protection level	BYTE	PowerOn
-			
-	-	7	0
-	-	7	4/3
-	-	M	

Description: Write external work offset protection level

51056	ACCESS_WRITE_PARTFRAME	-	-
-	Write table reference protection level	BYTE	PowerOn
-			
-	-	7	0
-	-	7	4/3
-	-	M	

Description: Write table reference protection level

51057	ACCESS_WRITE_SETFRAME	-	-
-	Write basic reference protection level	BYTE	PowerOn
-			
-	-	7	0
-	-	7	4/3
-	-	M	

Description: Write basic reference protection level

51058	ACCESS_WRITE_TOOLFRAME	-	-
-	Write basic tool reference protection level	BYTE	PowerOn
-			
-	-	7	0
-	-	7	4/3
-	-	M	

Description: Write basic tool reference protection level

51059	ACCESS_WRITE_TRAFRAME	-	-
-	Write transformation frame protec. level	BYTE	PowerOn
-			
-	-	7	0
-	-	7	4/3
-	-	M	

Description: Write transformation frame protec. level

51060	ACCESS_WRITE_USERFRAME	-	-
-	Write settable work offset protection level	BYTE	PowerOn
-			
-	-	4	0
-	-	7	4/3
-	-	M	

Description: Write settable work offset (G54 ... G599) protection level

51061	ACCESS_WRITE_WPFRAME	-	-
-	Write workpiece reference protection level	BYTE	PowerOn
-			
-	-	7	0
-	-	7	4/3
-	-	M	

Description: Write workpiece reference protection level

51062	ACCESS_WRITE_FINE	-	-
-	Write protection level for fine offset of all work offsets	BYTE	PowerOn
-			
-	-	6	0
-	-	7	4/3
-	-	M	

Description: Write protection level for fine offset of all work offsets

2.5 Machine and setting data cycles

51063	ACCESS_SET_ACT_VALUE	-	-
-	Set actual value protection level	BYTE	PowerOn
-			
-	-	4	0
-	-	7	4/3
-	-	M	

Description: Set actual value protection level

51064	ACCESS_WRITE_PROGLIST	-	-
-	Write protection level of program list in USER area	BYTE	Immediately
-			
-	-	4	0
-	-	7	4/3
-	-	M	

Description: Minimum protection level required to change the program list in the USER area (program manager)

51065	NUM_DISPLAYED_CHANNELS	-	-
-	Number of channels displayed simultaneously	BYTE	PowerOn
-			
-	-	1	1
-	-	4	4/3
-	-	M	

Description: Setting of the number of channels to be displayed simultaneously in the machine operating area and in the multi-channel editor.

51066	ORDER_DISPLAYED_CHANNELS	-	-
-	Channel numbers of the channels displayed	STRING	PowerOn
-			
-	-	1;	-
-	-	4/3	M

Description: Contains the numbers of the channels to be displayed under machine in the multi-channel view, in the desired order and separated by commas, semicolons or spaces.

51067	ENABLE_HANDWHEEL_WINDOW	-	-
-	Show handwheel window	BYTE	PowerOn
-			
-	-	1	0
-	-	1	4/2
-	-	M	

Description: If the machine data is set to 0, the window for handwheel assignment is hidden

51068	SPIND_DRIVELOAD_FROM_PLC1	-	-
-	Machine axis index of spindle 1 utilization display from PLC	BYTE	PowerOn
-			
-	-	0	0
-	-	31	4/2
-	-	M	

Description: Machine axis index of a spindle (analog), which obtains the data for the utilization display in the T,F,S window from the PLC.

SINUMERIK 840D sl: DB19.DBB6

SINUMERIK 828D : DB1900.DBB5006

51069	SPIND_DRIVELOAD_FROM_PLC2	-	-
-	Machine axis index of spindle 2 utilization display from PLC	BYTE	PowerOn
-			
-	-	0	0
-	-	31	4/2
-	-	M	

Description: Machine axis index of a spindle (analog), which refers to the data for the utilization display in the T,F,S window from the PLC (DB19.DBB7).

51070	ACCESS_CAL_TOOL_PROBE	-	-
-	Protection level for calibration of the tool probe (ShopTurn)	BYTE	PowerOn
-			
-	-	4	0
-	-	7	4/3
-	-	M	

Description: Protection level for calibration of the tool probe (ShopTurn)

51071	ACCESS_ACTIVATE_CTRL_E	-	-
-	Protection level of Ctrl-Energy	BYTE	PowerOn
-			
-	-	1	0
-	-	7	4/3
-	-	M	

Description: Protection level for activating, disabling and enabling energy-saving profiles.

51072	ACCESS_EDIT_CTRL_E	-	-
-	Protection level of Ctrl-Energy for changing profiles	BYTE	PowerOn
-			
-	-	2	0
-	-	7	4/3
-	-	M	

Description: Protection level of Ctrl-Energy: Definition of energy-saving profiles

51073	ACCESS_SET_SOFTKEY_ACCESS	-	-
-	Protection level of "Adapt softkeys"	BYTE	PowerOn
-			
-	-	3	0
-	-	7	4/3
-	-	M	

Description: Protection level for the softkey "Adapt softkeys", which is used to change the access levels of other softkeys.

51074	ACCESS_WRITE_WPC_COUNTER	-	-
-	Write protection level of workpiece counter	BYTE	PowerOn
-			
-	-	7	0
-	-	7	4/3
-	-	M	

Description: Write protection level of workpiece counter in the Times/Counters mask in the machine area

51160	ACCESS_WRITE_CA_MACH_JOG	-	-
-	Write protection level collision monitoring machine jog	BYTE	PowerOn
-			
-	-	6	0
-	-	7	7/1
-	-	M	

Description: This machine data defines the protection level from which the machine/machine collision monitoring can be activated or deactivated under jog.

51161	ACCESS_WRITE_CA_MACH_AUTO	-	-
-	Write protection level, collision monitoring machine automatic	BYTE	PowerOn
-			
-	-	3	0
-	-	7	7/1
-	-	M	

Description: This machine data defines the protection level from which the machine/machine collision monitoring can be activated or deactivated under automatic.

2.5 Machine and setting data cycles

51162	ACCESS_WRITE_CA_TOOL	-	-
-	Write protection level collision monitoring tool	BYTE	PowerOn
-			
-	-	1	0
-	-	7	7/4
-	-	M	

Description: This machine data defines the protection level from which the collision monitoring for tools can be activated or deactivated.

51198	ACCESS_READ_TM_ALL_PARAM	-	-
-	Protection level tool management details - read all parameters	BYTE	PowerOn
-			
-	-	1	0
-	-	7	7/4
-	-	M	

Description: Protection level tool management details - read all parameters

51199	ACCESS_WRITE_TM_GRIND	-	-
-	Protection level of tool management for writing grinding data	BYTE	PowerOn
-			
-	-	4	0
-	-	7	7/4
-	-	M	

Description: Protection level of tool management for writing grinding data

51200	ACCESS_WRITE_TM_GEO	-	-
-	Write tool offset geometry data protection level	BYTE	PowerOn
-			
-	-	5	0
-	-	7	7/4
-	-	M	

Description: Write tool offset geometry data protection level

51201	ACCESS_WRITE_TM_WEAR	-	-
-	Write tool offset wear data protection level	BYTE	PowerOn
-			
-	-	6	0
-	-	7	7/4
-	-	M	

Description: Write tool offset wear data protection level

51202	ACCESS_WRITE_TM_WEAR_DELTA	-	-
-	Protection level for tool offset restricted writing of wear data	BYTE	PowerOn
-			
-	-	7	0
-	-	7	7/4
-	-	M	

Description: Protection level for restricted writing of tool wear values
S. MD51213: TM_WRITE_WEAR_DELTA_LIMIT

51203	ACCESS_WRITE_TM_SC	-	-
-	Write tool offset sum offset protection level	BYTE	PowerOn
-			
-	-	7	0
-	-	7	7/4
-	-	M	

Description: Write tool offset sum offset protection level

51204	ACCESS_WRITE_TM_EC	-	-
-	Write tool offset use offsets protection level	BYTE	PowerOn
-			
-	-	7	0
-	-	7	7/4
-	-	M	

Description: Write tool offset use offsets protection level

51205	ACCESS_WRITE_TM_SUPVIS	-	-
-	Write tool offset monitoring data protection level	BYTE	PowerOn
-			
-	-	7	0
-	-	7	7/4
-	-		M

Description: Write tool offset monitoring data protection level
One authorization applies to all limit values: quantity, service life, wear and the monitoring type.

51206	ACCESS_WRITE_TM_ASSDNO	-	-
-	Write tool offset unique D number protection level	BYTE	PowerOn
-			
-	-	7	0
-	-	7	7/4
-	-		M

Description: Write tool offset unique D number protection level

51207	ACCESS_WRITE_TM_WGROUP	-	-
-	Write tool offset wear groups protection level	BYTE	PowerOn
-			
-	-	7	0
-	-	7	7/4
-	-		M

Description: Write tool offset wear groups (magazine location / magazine) protection level

51208	ACCESS_WRITE_TM_ADAPT	-	-
-	Write tool offset adapter data protection level	BYTE	PowerOn
-			
-	-	7	0
-	-	7	7/4
-	-		M

Description: Write tool offset tool adapter geometry data protection level

51209	ACCESS_WRITE_TM_NAME	-	-
-	Write tool offset tool name protection level	BYTE	PowerOn
-			
-	-	4	0
-	-	7	7/4
-	-		M

Description: Write tool offset tool name and duplo data protection level

51210	ACCESS_WRITE_TM_TYPE	-	-
-	Write tool offset tool type protection level	BYTE	PowerOn
-			
-	-	4	0
-	-	7	7/4
-	-		M

Description: Write tool offset tool type protection level

51211	ACCESS_READ_TM	-	-
-	Read tool offset data protection level	BYTE	PowerOn
-			
-	-	7	0
-	-	7	7/4
-	-		M

Description: Read tool offset data protection level

2.5 Machine and setting data cycles

51212	TM_WRITE_WEAR_ABS_LIMIT	-	-
mm	Maximum tool wear value	DOUBLE	PowerOn
-			
-	-	0.999	0
		10	7/4
			M

Description: Using TM_WRITE_WEAR_ABS_LIMIT, the max. possible value of a tool wear is limited absolutely, independently of the current protection level (keyswitch position), i.e. also independently of ACCESS_WRITE_TM_WEAR. Absolute and incremental wear limitation can be combined, i.e. the wear can be changed incrementally up to the absolute limit. See MD51213.

The value 0 disables the limitation of the wear input.

51213	TM_WRITE_WEAR_DELTA_LIMIT	-	-
mm	Maximum difference value restricted tool wear input	DOUBLE	PowerOn
-			
-	-	0	0
		10	7/4
			M

Description: When entering tool offsets, the value of the change from the previous value to the new value cannot exceed the value set here.

With TM_WRITE_WEAR_DELTA_LIMIT, the change to a tool wear can be limited incrementally, if the current protection level is the same as or higher than the one set in ACCESS_WRITE_TM_WEAR_DELTA. With the current protection level being the same or higher than ACCESS_WRITE_TM_WEAR, an incremental limitation is no longer performed. Absolute and

incremental wear limitation can be combined, i.e. the wear can be changed up to the absolute limit. See MD51212

The value 0 disables limitation of the wear input.

51214	TM_WRITE_LIMIT_MASK	-	-
-	Validity of the restricted tool wear input	BYTE	PowerOn
-			
-	-	7	0
		7	7/4
			M

Description: Validity of the restricted tool wear input
 Bit 0: use for cutting edge data, wear
 Bit 1: use for SC data, sum offsets
 Bit 2: use for EC data, use offsets
 Bit 0+1+2: use for all data, wear, SC, EC

51215	ACCESS_WRITE_TM_ALL_PARAM	-	-
-	Protection level TM details - write all parameters	BYTE	PowerOn
-			
-	-	1	0
		7	7/4
			M

Description: Protection level TM details - write all parameters

51216	ACCESS_TM_TOOL_CREATE	-	-
-	Protection level TM create tool	BYTE	PowerOn
-			
-	-	4	0
		7	7/4
			M

Description: Protection level TM create tool

51217	ACCESS_TM_TOOL_DELETE	-	-
-	Protection level TM delete tool	BYTE	PowerOn
-			
-	-	4	0
-	-	7	7/4
-	-	M	

Description: Protection level TM delete tool

51218	ACCESS_TM_TOOL_LOAD	-	-
-	Protection level TM load tool	BYTE	PowerOn
-			
-	-	4	0
-	-	7	7/4
-	-	M	

Description: Protection level TM load tool

51219	ACCESS_TM_TOOL_UNLOAD	-	-
-	Protection level TM unload tool	BYTE	PowerOn
-			
-	-	4	0
-	-	7	7/4
-	-	M	

Description: Protection level TM unload tool

51220	ACCESS_TM_TOOL_MOVE	-	-
-	Protection level TM relocate tool	BYTE	PowerOn
-			
-	-	4	0
-	-	7	7/4
-	-	M	

Description: Protection level TM relocate tool

51221	ACCESS_TM_TOOL_REACTIVATE	-	-
-	Protection level TM reactivate tool	BYTE	PowerOn
-			
-	-	4	0
-	-	7	7/4
-	-	M	

Description: Protection level TM reactivate tool

51222	ACCESS_TM_TOOL_MEASURE	-	-
-	Protection level TM measure tool	BYTE	PowerOn
-			
-	-	4	0
-	-	7	7/4
-	-	M	

Description: Protection level TM measure tool
Direct jump from tool list to measuring screen

51223	ACCESS_TM_TOOLEEDGE_CREATE	-	-
-	Protection level TM create tool cutting edge	BYTE	PowerOn
-			
-	-	4	0
-	-	7	7/4
-	-	M	

Description: Protection level TM create tool cutting edge

51224	ACCESS_TM_TOOLEEDGE_DELETE	-	-
-	Protection level TM delete tool cutting edge	BYTE	PowerOn
-			
-	-	4	0
-	-	7	7/4
-	-	M	

Description: Protection level TM delete tool cutting edge

2.5 Machine and setting data cycles

51225	ACCESS_TM_MAGAZINE_POS	-	-
-	Protection level TM position magazine	BYTE	PowerOn
-			
-	-	4	0
-	-	7	7/4
-	-	-	M

Description: Protection level TM position magazine

51226	FUNCTION_MASK_SIM	-	-
-	Function mask for simulation	DWORD	PowerOn
-			
-	-	0	-
-	-	-	7/3
-	-	-	M

Description: Function mask for simulation

- Bit 0: No automatic start when simulation is selected
- Bit 1: Deactivate simulation
- Bit 4: Ignore frame components in X and Y (compatibility)
- Bit 5: Turning tool can be rotated in the tool spindle
- Bit 6: Enable handwheel as simulation override (values from DB19.DBW400)
- Bit 7: Interpret handwheel values from DB19.DBW400 as absolute values
- Bit 10: Hide zero point symbol

51228	FUNCTION_MASK_TECH	-	-
-	Function mask for all technologies	DWORD	PowerOn
-			
-	-	0	-
-	-	-	7/3
-	-	-	M

Description: Function mask for all technologies

- Bit 0: G code programming without multi-channel data
- If bit 0 = 1, no multi-channel data will be offered for job lists which only contain G code programs.
- Bit 1: Enable print function of Editor
- Bit 2: With external program selection (e.g. via PLC), set start disable (program check).

51230	ENABLE_LADDER_DB_ADDRESSES	-	-
-	DB address activation in the PLC ladder viewer	BOOLEAN	Immediately
-			
-	-	1	0
-	-	1	7/2
-	-	-	M

Description: DB address activation in the PLC ladder viewer

51231	ENABLE_LADDER_EDITOR	-	-
-	Activation of PLC ladder add-on tool for INT100/101	BOOLEAN	Immediately
-			
-	-	1	0
-	-	1	7/2
-	-	-	M

Description: Activation of PLC ladder add-on tool for INT100/101

51232	ENABLE_LADDER_EDITOR_ADV	-	-
-	Activation of PLC ladder editor for the complete PLC project	BOOLEAN	Immediately
-			
-	-	1	0
-	-	1	7/1
-	-	-	M

Description: Activation of PLC ladder editor for the complete PLC project

51233	ENABLE_GSM_MODEM	-	-
-	GSM modem activation for Easy Message	BOOLEAN	PowerOn
-			
-	-	0	0
-	-	1	7/2
-	-	I	

Description: GSM modem activation for Easy Message

51235	ACCESS_RESET_SERV_PLANNER	-	-
-	Protection level for acknowledgment of maintenance tasks	BYTE	Immediately
-			
-	-	3	0
-	-	7	4/2
-	-	M	

Description: Protection level for acknowledgment of maintenance tasks

51300	MAXNUM_WAITM_USER	-	-
-	Number of wait marks available to the end user	BYTE	PowerOn
-			
-	-	100	0
-	-	100	7/4
-	-	M	

Description: Number of wait marks available to the end user

51600	MEA_CAL_WP_NUM	-	-
-	Number of calibration data fields for workpiece probes	BYTE	Immediately
-			
-	-	40	0
-	-	40	7/2
-	-	I	

Description: The workpiece probe calibration data refer to the workpiece coordinate system (Work)!
In the data fields, the workpiece probe calibration data of the technologies Milling and Turning are stored!

51601	MEA_CAL_EDGE_NUM	-	-
-	Number of geometry data fields of gauging block, workpiece probe	BYTE	Immediately
-			
-	-	3	0
-	-	3	7/2
-	-	I	

Description: The gauging block is exclusively used to calibrate the workpiece probe of the Turning technology!

51602	MEA_CAL_TP_NUM	-	-
-	Number of calibration data fields for tool probes	BYTE	Immediately
-			
-	-	6	0
-	-	6	7/2
-	-	I	

Description: The value of this parameter corresponds to the number of tool probe calibration data records set up for the machine coordinate system (Machine).

51603	MEA_CAL_TPW_NUM	-	-
-	Number of calibration data fields for tool probes	BYTE	Immediately
-			
-	-	6	0
-	-	6	7/2
-	-	I	

Description: The value of this parameter corresponds to the number of tool probe calibration data records set up for the workpiece coordinate system (Work).

2.5 Machine and setting data cycles

51618	MEA_CM_ROT_AX_POS_TOL	-	-
degrees	Tolerance of rotary axis positions - measuring with orientable toolholder	DOUBLE	Immediately
-			
-	-	0.5	-1
		1	7/3
			I

Description:

Parameter for measuring with orientable tool carrier

Entries in parameter \$MN_MEA_CM_ROT_AX_POS_TOL are effective only if \$MNS_MEA_FUNCTION_MASK bit2 or bit16 is set by MD51740.

The real angle position of the rotary axes can deviate from the programmed one (exact stop fine window).

This deviation depends on the position control features of the axis. The maximum deviation expected on the concrete axis

must be entered in this parameter. When the tolerance is exceeded, alarm 61442 "Toolholder not in parallel with the geometry axes" is displayed.

51740	MEA_FUNCTION_MASK	-	-
-	Function mask for measuring cycles, workpiece and tool measuring	DWORD	Immediately
-			
-	-	67	-
		-	7/3
			M

Description:

Function mask for measuring cycles

Bit 0: Workpiece measurement, calibration status monitoring

0: Calibration monitoring not active

1: Calibration monitoring active

Between calibration and measurement, the following states are monitored:

- Working plane (G17, 18, 19)

- Probe type (3D probe, type 710, mono probe, type 712, L probe, type 713, star probe, type 714)

- Length reference of the probe (center of the probe ball, probe ball circumference)

- The following alarms 61341, 61419, 61420 can be output.

Note: - these monitoring functions are always active when "measuring in JOG".

- See also SD54740 \$SNS_MEA_FUNCTION_MASK, bit 4.

Bit 1: Workpiece measurement, milling technology, length reference of the workpiece probe

0: Tool length in the infeed axis, relative to the center of the probe ball (TCP)

1: Tool length in the infeed axis, relative to the circumference of the probe ball

Bit 2: Workpiece measurement, taking into account the orientation of tool carriers (kinematic type "T", swivel head) for the tool offset

0: The tool components are corrected according to the orientation of the tool carrier

when measuring. This is valid for the orientations 0°, 90°, 180°, and 270°.

1: The tool components are corrected according to the orientation of the tool carrier

in the initial setting.

Bit 4: Workpiece measurement, milling technology, probe is permanently mounted on the machine

0: When measuring, the workpiece probe is located in a tool spindle.

1: The workpiece probe is permanently mounted on the machine.

Not all measurement variants are available. If an inadmissible measurement variant is selected, alarm 61373 is output.

Bit 5: Workpiece measurement, correction in WO coarse if no fine offset is set up

0: Only the measurement difference is entered in the coarse offset of the WO (compatibility).

1: The absolute offset corrected by the measurement different is entered in the coarse offset of the WO.

Bit 6: Effect of the feedrate override in measuring blocks (MEAS) of measuring cycles

0: Measuring blocks (MEAS) are traversed in the measuring cycles with the current feedrate override (compatibility).

1: Measuring blocks (MEAS) are traversed in the measuring cycles with 100% feedrate override if the feedrate override is set >0.

Bit 15: Workpiece measurement, traverse measuring block with path behavior G60, exact stop at the end of the block

0: The measuring block is traversed in continuous-path mode G64.

1: The measuring block is traversed with path behavior G60, exact stop at the end of the block.

Bit 16: Tool measurement, turning technology, taking into account the orientation of the tool carrier (kinematic type "T", swivel head)

0: The tool component is corrected according to the orientation of the tool carrier

when measuring.

1: The tool component is corrected according to the orientation of the tool carrier

in the initial setting.

51742	MEA_ACCESS_EXEC			-	-	
-	Meas. cycles: Limitation of protection levels when writing system variables			DWORD	Immediately	
-						
-	10	1, 1, 1, 1, 1, 1, 1, 1...	1	7	7/1	M

Description: Limitation of the protection levels when writing system variables during the execution of measuring cycles.

MD51742 limits one range of the current protection level between the setting of the protection level

in MD11160 \$NM_ACCESS_EXEC_CST and the setting in MD51742 when executing the measuring cycles.

The field elements [0] to [9] are used as follows:

[0] Measure all kinematics

[1] to [9] reserved

For the meaning of the numerical values (protection level) see MD11160

51750	J_MEA_M_DIST			-	-	
mm	Measuring path for measuring with ShopMill, in automatic mode			DOUBLE	Immediately	
-						
-	-	5	-10000	10000	7/5	I

Description: This parameter defines the measuring path in front of and behind the measuring setpoint.

It is only used by old ShopMill measuring cycles (powerline).

2.5 Machine and setting data cycles

51751	J_MEA_M_DIST_MANUELL	-	-
mm	Measuring path, for "Measure in JOG"	DOUBLE	Immediately
-			
-	-	10	-10000
		10000	7/5
			I

Description: This parameter defines the measuring path in front of and behind the measuring setpoint.

51752	J_MEA_M_DIST_TOOL_LENGTH	-	-
mm	Measuring path for tool length measuring, for "Measure in JOG"	DOUBLE	Immediately
-			
-	-	2	-10000
		10000	7/5
			I

Description: This parameter defines the measuring path in front of and behind the measuring setpoint.

51753	J_MEA_M_DIST_TOOL_RADIUS	-	-
mm	Measuring path for tool radius measuring, for "Measure in JOG"	DOUBLE	Immediately
-			
-	-	1	-10000
		10000	7/5
			I

Description: This parameter defines the measuring path in front of and behind the measuring setpoint.

51757	J_MEA_COLL_MONIT_FEED	-	-
mm/min	Feedrate in the plane w. active collision detection, for "Measure in JOG"	DOUBLE	Immediately
-			
-	-	1000	0
		100000	7/5
			I

Description: Feedrate in the working plane w. active collision detection

51758	J_MEA_COLL_MONIT_POS_FEED	-	-
mm/min	Infeed rate with active collision detection, for "Measure in JOG"	DOUBLE	Immediately
-			
-	-	1000	0
		100000	7/5
			I

Description: Feedrate of the infeed axis with active collision detection, for "Measure in JOG".

51770	J_MEA_CAL_RING_DIAM	-	-
mm	Calibration ring diameter, for "Measure in JOG"	DOUBLE	Immediately
-			
-	40	-1, -1, -1, -1, -1, -1, -1, -1	-1
		-1...	10000
			7/5
			I

Description: Calibration ring diameter, for probe sphere calibration in the plane, for "Measure in JOG"

51772	J_MEA_CAL_HEIGHT_FEEDAX	-	-
mm	Calibration height in the infeed axis, for probe length calibration	DOUBLE	Immediately
-			
-	40	-99999, -99999, -99999, -99999, -99999, -99999, -99999, -99999...	-100000
			100000
			7/5
			I

Description: Calibration height in the infeed axis for probe length calibration, for "Measure in JOG"
The calibration height must be entered with reference to the the workpiece coordinate system (Work)!

51780	J_MEA_T_PROBE_DIAM_RAD	-	-
mm	Diameter of the tool probe for radius measurement	DOUBLE	Immediately
-			
-	6	0, 0, 0, 0, 0, 0	0

Description: Effective grinding wheel diameter of the tool probe for radius measurement on milling tools

51781	MEA_T_PROBE_THICKNESS	-	-
mm	Tool probe thickness	DOUBLE	Immediately
-			
-	6	0, 0, 0, 0, 0, 0	0

Description: Tool probe thickness for automatic approach of turning tools to the probes at milling/turning machines

51784	J_MEA_T_PROBE_APPR_AX_DIR	-	-
-	Approach direction in the plane on the tool probe, for "Measure in JOG"	DWORD	Immediately
-			
-	6	-1, -1, -1, -1, -1, -1	-2

Description: Approach direction in the plane on the tool probe, for "Measure in JOG"
= -2 negative direction 2nd measuring axis
= -1 negative direction 1st measuring axis
= 0 or 1 positive direction 1st measuring axis
= 2 positive direction 2nd measuring axis

51786	J_MEA_T_PROBE_MEASURE_DIST	-	-
mm	Measur. path for tool measurem. w. stationary spindle, for "Measure in JOG"	DOUBLE	Immediately
-			
-	-	10	-10000

Description: Measuring path for tool probe calibration and tool measuring with stationary spindle, in front of and behind the expected switching position.

51840	GRIND_FUNCTION_MASK	-	-
-	Function mask for grinding cycles	DWORD	Immediately
-			
-	-	0	-

Description: Function mask for grinding cycles
Bit 0: Reference point for recording dresser/grinding wheel is a work offset
0: Deselect work offset as reference point
1: Select work offset as reference point
Bit 1: Reserved

2.5 Machine and setting data cycles

52000	DISP_COORDINATE_SYSTEM	-	-
-	Coordinate system position	BYTE	PowerOn
-			
-	-	0	0
		47	7/3
			M

Description: With this MD, you adapt the operator panel's coordinate system to the machine's coordinate system. Depending on the selected position, all help screens, the sequence graphic, the simulation, and the input fields with the circular direction specified will change automatically in the user interface.

The machine data is evaluated in the cycles.

Also note MD52210 \$MCS_FUNCTION_MASK_DISP, bit 1.

52001	DISP_COORDINATE_SYSTEM_2	-	-
-	Coordinate system for turning on milling machines	BYTE	PowerOn
-			
-	-	0	0
		47	7/3
			M

Description: With this MD you specify the coordinate system for turning operations on milling machines.

See also MD52000 \$MCS_DISP_COORDINATE_SYSTEM.

52004	PROG_COORDINATE_SYS_CHAN	-	-
-	Coordinate system during programming as described in the specified channel	BYTE	PowerOn
-			
-	-	0	0
		10	7/3
			M

Description: You can set this MD so that the coordinate system is displayed during programming as it is described in the specified channel.

0: Display as described in own channel

n: Display as described in channel n

52005	DISP_PLANE_MILL	-	-
-	Plane selection Milling	BYTE	Immediately
-			
-	-	0	0
		19	7/3
			M

Description: Plane selection Milling

0: plane selection on the operator panel

17: always G17

18: always G18

19: always G19

52006	DISP_PLANE_TURN	-	-
-	Plane selection Turning	BYTE	Immediately
-			
-	-	18	0
		19	ReadOnly
			M

Description: Plane selection Turning

0: plane selection on the operator panel

17: always G17

18: always G18

19: always G19

52010	DISP_NUM_AXIS_BIG_FONT	-	-
-	Number of actual values with large font	BYTE	PowerOn
-			
-	-	3	0
-		31	7/3
-			M

Description: Number of actual values with large font

52011	ADJUST_NUM_AXIS_BIG_FONT	-	-
-	Adapt number of actual values with large font dynamically to no. of geometry axes	BYTE	PowerOn
-			
-	-	0	0
-		2	7/3
-			M

Description: Adapt the number of actual values with large font if the number of geometry axes changes, e.g. due to transformations like TRANSMIT or TRACYL.
 0 = Only MD52010 "DISP_NUM_AXIS_BIG_FONT" is valid. The number is assigned as a fixed value.
 1 = Only the geometry axes are displayed in large font. MD 52010 "DISP_NUM_AXIS_BIG_FONT" is ignored.
 2 = The number of geometry axes plus the content of MD 52010 "DISP_NUM_AXIS_BIG_FONT" are displayed in large font.

52020	ORIXES_EULER_ANGLE_NAME	-	-
-	Axis identifiers of the orientation axes: Euler angle or geometry axis name	BYTE	Immediately
-			
-	-	0	0
-		1	4/3
-			M

Description: This MD specifies whether the axis identifiers of the orientation axes are Euler angle names or channel geometry axis names.
 Possible values are:
 = 0 Orientation axis name from the channel block geometry axis name with the index 3 to 5
 = 1 Orientation axis name is the name of the Euler angle from the general machine data

52032	STAT_DISPLAY_BASE	-	-
-	Number basis for display of articulated joint STAT	BYTE	PowerOn
-			
-	-	0	0
-		16	4/3
-			M

Description: Numerical basis for displaying the articulated joint STAT
 If the value of the data is greater than 0, MD51032 \$MNS_STAT_DISPLAY_BASE is ignored for this channel.
 00: MD51032 is active
 02: Representation as binary value
 10: Representation as decimal value
 16: Representation as hexadecimal value
 The machine data activates not only the STAT display channel-specifically on the main screen, but also the display during "TEACH IN".

52033	TU_DISPLAY_BASE	-	-
-	Number basis for display of rotary axis position TU	BYTE	PowerOn
-			
-	-	0	0
-		16	4/3
-			M

2.5 Machine and setting data cycles

Description: Numerical basis for displaying the rotary axis position TU
 If the value of the data is greater than 0, MD51033 \$MNS_TU_DISPLAY_BASE is ignored for this channel.
 00: MD51033 is active
 02: Representation as binary value
 10: Representation as decimal value
 16: Representation as hexadecimal value
 The machine data activates not only the TU display channel-specifically on the main screen, but also the display during "TEACH IN".

52200	TECHNOLOGY			-	-	
-	Technology			BYTE	PowerOn	
-						
-	-	0	0	4	7/1	M

Description: Technology
 0: no specific configuration
 1: turning
 2: milling
 3: cylindrical grinding
 4: surface grinding
 Also note MD52201 \$MCS_TECHNOLOGY_EXTENSION

52201	TECHNOLOGY_EXTENSION			-	-	
-	Extended technology			BYTE	PowerOn	
-						
-	-	0	0	4	7/1	M

Description: Advanced technology
 0: no specific configuration
 1: turning
 2: milling
 Also note MD52200 \$MCS_TECHNOLOGY.
 Example:
 Turning machine with milling technology
 MD 52200 \$MCS_TECHNOLOGY = 1
 MD 52201 \$MCS_TECHNOLOGY_EXTENSION = 2

52206	AXIS_USAGE			-	-	
-	Meaning of the axes in the channel			BYTE	PowerOn	
-						
-	20	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0	-	-	7/3	M

Description: Meaning of the axes in the channel
 0 = no special meaning)
 1 = tool spindle (rotating tool)
 2 = auxiliary spindle (rotating tool)
 3 = main spindle (turning)
 4 = separate C axis of the main spindle (turning)
 5 = counterspindle (turning)
 6 = separate C axis of the counterspindle (turning)

- 7 = linear axis of the counterspindle (turning)
 8 = tailstock (turning)
 9 = steady rest (turning)
 10 = B axis in the head (turning and cylindrical grinding)
 11 = reserved
 12 = B axis in the counterspindle (turning)
 13 = transverse travel X of the counterspindle (turning)

52207	AXIS_USAGE_ATTRIB			-	-	
-	Axis attributes			DWORD	PowerOn	
-						
-	20	0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0	-	-	7/3	M

Description:

Attributes of the axes

Bit 0: rotates around 1st geometry axis (for rotary axes)

Bit 1: rotates around 2nd geometry axis (for rotary axes)

Bit 2: rotates around 3rd geometry axis (for rotary axes)

Bit 3: Positive direction of rotation is counter-clockwise (for rotary axes)

The rotary axes are always viewed in the negative geometry axis direction.

For turning machines, a spindle is always viewed from the interior.

Bit 4: Displayed direction of rotation for M3 is counter-clockwise (for spindles)

The viewing direction can be selected. Either viewed outward from the inside or from the outside toward the spindle.

However, the same selection must be made for all spindles.

Bit 5: Direction of rotation M3 corresponds to minus rotary axis (for spindles)

This bit must be set in the same way as a PLC bit.

For 840Ds1: PLC bit DBnn.DBX17.6, nn = 31 + machine axis index

For 828D : PLC bit DB38xx.DBX2001.6, xx is machine axis index

Bit 6: Display rotary axis as offset target for measuring

Bit 7: Offer rotary axis in position pattern

The orientation of the axis is defined using bits 0 - 2.

If one of the bits 10 - 12 is set, these bits specify the orientation of the axis for position patterns.

Bit 8: Offer rotary axis for blank clamp (on milling machines)

The orientation of the axis is defined using bits 0 - 2.

Bit 9: Spindle is not SPOS capable

Bit 10: Rotary axis rotates around 1st geometry axis (only for position pattern)

Bit 11: Rotary axis rotates around 2nd geometry axis (only for position pattern)

Bit 12: Rotary axis rotates around 3rd geometry axis (only for position pattern)

Bit 13: Position of the axis for blank selection from active WO (for rotary axes)

This enables a rotary axis set up with simulation/simultaneous recording to be automatically shown in the correct position.

Bit 14: Enable spindle in axis mode for teach-in

Note:

For bits 0 - 2 and 10 - 12, only the 1st set bit is active in each case.

Note on position pattern with rotary axes:

If one of the bits 10 - 12 is set, these bits take precedence over bits 0 - 2.

2.5 Machine and setting data cycles

52210	FUNCTION_MASK_DISP	-	-
-	Function mask for display	DWORD	PowerOn
-			
-	-	3	-
-	-	-	-
-	-	7/3	M

Description:

Function mask for display

Bit 0: Dimension system for programs always in the basic system

Bit 1: Face view when turning in the school coordinate system

Bit 2: Hide softkey "T,S,M" in the jog area

Bit 3: Generate automatic end-of-program in MDI (using the "Delete blocks" softkey)

Bit 4: Display follow-on tool in the T,F,S window

Bit 5: Hide "Act. values Machine" softkey

Bit 6: Hide tool radius/diameter in the T,F,S window

Bit 7: Hide tool lengths in the T,F,S window

Bit 8: Hide tool icon in the T,F,S window

Bit 9: Display "Simple input" selection

Bit 10: Do not offer channel in the job lists

Bit 11: For Work activate the display of the logical spindles

Bit 12: Hide mould making view for G code

Bit 13: Hide channel axes which are currently located in another channel

0: Display channel axes which are currently located in another channel in grey

1: Hide channel axes which are currently located in another channel

Bit 14: Display overlay of the DRF under the machine

Bit 15: Display overlay of the tool (\$AA_TOFF) under the machine

52211	FUNCTION_MASK_DISP_ZOA	-	-
-	Function mask for displaying overview of work offsets	DWORD	PowerOn
-			
-	-	2097141	-
-	-	-	-
-	-	7/3	M

Description:

Function mask for displaying overview of work offsets

Bit 0: Show Machine position

Bit 1: Reserved

Bit 2: Display DRF offset

Bit 3: Display \$AA_OFF position offset

Bit 4: Display \$P_PARTFRAME

Bit 5: Display \$P_SETFRAME

Bit 6: Display \$P_EXTSFRAME

Bit 7: Display \$P_ISO1FRAME

Bit 8: Display \$P_ISO2FRAME

Bit 9: Display \$P_ISO3FRAME

Bit 10: Display \$P_ACTBFRAME

Bit 11: Display \$P_IFFRAME

Bit 12: Display \$P_TOOLFRAME

Bit 13: Display \$P_WPFRAME

Bit 14: Display \$P_TRAFRAME

Bit 15: Display \$P_PFRAME

Bit 16: Display \$P_ISO4FRAME

Bit 17: Display \$P_CYCFRAME

Bit 18: Display sum of work offsets

Bit 19: Display offset of active tool
 Bit 20: Display Work position
 Bit 21: Display BCS position
 Bit 22: Display \$P_GFRAME
 Bit 23: Display TOFF
 Bit 24: Display overlay \$AA_TOFF

52212	FUNCTION_MASK_TECH	-	-
-	Function mask across technologies	DWORD	Immediately
-			
-	-	0	-

Description:

Function mask for all technologies

Bit 0: Enable swivel plane/align tool with tool carrier

0: Swivel plane/align tool with tool carrier not enabled

1: Swivel plane/align tool with tool carrier enabled

Bit 1: No optimized travel along software limit switches (ShopMill/ShopTurn)

0: Optimized travel along software limit switches

1: No optimized travel along software limit switches

With optimized travel along the software limit switches, in the swiveled state (with table kinematics) any traversing motions which would go

beyond the software limit switches are truncated. This avoids the alarm 10720 "Axis software limit switches".

Bit 2: Special approach logic for step drill (ShopTurn)

0: Special approach logic for step drill disabled

1: Special approach logic for step drill active

When navigating around the retraction planes, the longest cutting edge (with the same cutting edge position as the active cutting edge) in the same machining direction is always taken into account.

Bit 3: Call block search cycle for ShopMill/ShopTurn

0: In the block search cycle PROG_EVENT.SPF, the cycles E_S_ASUP and F_S_ASUP are not called

1: In the block search cycle PROG_EVENT.SPF, the cycles E_S_ASUP (milling technology) and F_S_ASUP (turning technology) are called. After the block search,

the cycles E_S_ASUP and F_S_ASUP ensure the output of tool and machine commands.

The corresponding cycle is also called with a block search of a G code program.

The bit must be set when ShopMill/ShopTurn is used!

Bit 4: Approach logic via cycle (ShopTurn)

0: Approach logic via NC function

1: Approach logic via ShopTurn cycle

The approach logic via the ShopTurn cycle is only required for diagnostic purposes.

Bit 5: Call SERUPRO block search function

0: In the block search cycle PROG_EVENT.SPF, the cycle CYCLE207 is not called.

1: In the block search cycle PROG_EVENT.SPF, the cycle for SERUPRO (CYCLE207) is called (for block search with SERUPRO program test).

After the block search with program test (SERUPRO), cycle CYCLE207 ensures the output of the collected machine commands.

Bit 6: Work offset ZV cannot be entered as an absolute value (ShopTurn)

0: Parameter ZV, active work offset can be entered as an increment and as an absolute

1: Parameter ZV, active work offset can only be entered as an increment (ShopTurn)

Bit 7: Detect expiry of tool lives in the program (ShopMill/ShopTurn)

2.5 Machine and setting data cycles

0: The tool life is only taken into account when the tool is loaded
 1: The tool life is taken into account when changing the machining steps (even if there is no tool change).

Bit 8: Manual machine function active (ShopMill/ShopTurn)
 0: Manual machine function is not activated
 1: Manual machine function is active

Bit 9: Selection/deselection of work offset via softkey
 0: The WO selection/deselection softkey is not available in the work offset table of the settable WOs.
 1: The WO selection/deselection softkey is available in the work offset table of the settable WOs.

Bit 10: Enable swivel plane/align tool with kinematic transformation
 0: Swivel plane/align tool with kinematic transformation not enabled
 1: Swivel plane/align tool with kinematic transformation enabled

Bit 11: Disable position check for drilling and milling tools (ShopTurn)
 0: Cutting edge position check is active for drilling and milling tools
 1: No cutting edge position check for drilling and milling tools
 The cutting edge position check can be disabled for drilling and milling tools if this is necessary on account of the machine design.

Bit 12: Reserved

Bit 13: Approach tool change point Y in the MCS (ShopTurn)
 0 : The tool change point in the Work is only approached to 0 in the Y direction if MD52241 \$MCS_TOOL_CHANGE_POS_Y = 0.
 1: Tool change point in the MCS is always approached in the Y direction (see MD52241 \$MCS_TOOL_CHANGE_POS_Y).

Bit 14: With approach logic only check tool position with cutting edge (ShopTurn)
 0: The approach logic always checks the tool position.
 1: The approach logic only checks the tool position if a cutting edge is active.

Bit 15: Do not set \$MC_TOOL_CARRIER_RESET_VALUE after block search
 0: The current tool carrier is written in the machine data \$MC_TOOL_CARRIER_RESET_VALUE in the block search cycle PROG_EVENT.SPF
 1: The current tool carrier is not written in the machine data \$MC_TOOL_CARRIER_RESET_VALUE in the block search cycle PROG_EVENT.SPF

Bit 16: Do not automatically execute swivel plane after block search
 0: The section for standard cycles: swivel plane is executed in the block search cycle PROG_EVENT.SPF
 1: The section for standard cycles: swivel plane is not executed in the block search cycle PROG_EVENT.SPF

Bit 17: Do not automatically execute align turning tool after block search
 0: The section for align turning tool is executed in the block search cycle PROG_EVENT.SPF
 1: The section for align turning tool is not executed in the block search cycle PROG_EVENT.SPF

52214	FUNCTION_MASK_MILL	-	-
-	Function mask for milling	DWORD	Immediately
-			
-	-	0	-

Description:

Function mask for milling

Bit 0: Enable cylinder surface transformation (ShopMill)

0: Softkey not enabled for cylinder surface transformation

1: Cylinder surface transformation enabled

Bit 1: Offer fixed table for blank clamping (on milling machines)

0: Fixed table not offered for blank clamping

1: Offer fixed table for blank clamping

(This bit must only be set if a milling machine has a rotary axis and a fixed table for blank clamping.)

Bit 2: Special handling of side mill/saw for polyhedron

0: No special handling of side mill/saw for polyhedron

1: Special handling of side mill/saw for polyhedron

With this tool type, the first infeed is selected so that the upper edge of the tool exactly touches reference point Z0.

At the end of machining, it is completely drawn out laterally from the blank spigot. This can create an internal polyhedron on a shaft.

Bit 3: Enable inside/rear machining (ShopTurn)

0: Inside/rear machining not enabled

1: Enable inside/rear machining in ShopTurn screenforms (applies in ShopTurn screenforms which define the machining planes)

Bit 4: Enable spindle clamping (C axis) (ShopTurn)

0: The parameter "Clamp/release spindle" is not shown in drilling or milling screenforms. ShopTurn clamps the spindle automatically if this is advantageous for machining.

1: The parameter "Clamp/release spindle" is shown in drilling and milling screenforms. The operator decides on the machining for which the spindle is clamped.

If you have implemented the function "Clamp/release spindle" by using the machine manufacturer cycle CUST_TECHCYC.SPF, you can activate the parameter "Clamp/release spindle"

in drilling and milling screenforms with this machine data.

Bit 5: Enable spindle control of tool spindle via user interface

0: Enable spindle control via the NC/PLC interface

1: Enable spindle control via user interface

Bit 6: Enable spindle control of turning spindle via user interface

0: Enable spindle control via the NC/PLC interface

1: Enable spindle control via user interface

Bit 7: Offer fixed table for blank clamping (on drilling machines)

0: Fixed table not offered for blank clamping

1: Offer fixed table for blank clamping

(This bit must only be set if a drilling machine has a rotary axis and a fixed table for blank clamping.)

52216	FUNCTION_MASK_DRILL	-	-
-	Function mask for drilling	DWORD	Immediately
-			
-	-	0	-

Description:

Function mask for drilling

Bit 0: CYCLE84 Show input fields, Technology

0: Hide input fields

1: Show input fields

Bit 1: CYCLE840 Show input fields, Technology

0: Hide input fields

1: Show input fields

Bit 2: Thread tapping also without encoder (ShopMill/ShopTurn)

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0: Thread tapping only possible with encoder

1: Thread tapping also possible without encoder

The setting depends on whether the machine has an encoder for the tool spindle.

Bit 3: Constant cutting speed in relation to the diameter of the centering (ShopMill/ShopTurn)

0: Constant cutting speed in relation to the diameter of the tool

1: Constant cutting speed in relation to the diameter of the centering

52218	FUNCTION_MASK_TURN	-	-
-	Function mask for turning	DWORD	Immediately
-			
-	-	0	-

Description:

Function mask for turning

Bit 0: Enable zoom under manual for tool measurement

0: No zoom under manual for tool measurement

1: Enable zoom under manual for tool measurement

Bit 1: Enable parts gripper for cut-off

0: No parts gripper for cut-off

1: Enable parts gripper for cut-off

Bit 2: Enable tailstock

0: Tailstock not enabled

1: The tailstock can be selected in the program.

Bit 3: Enable spindle control of main spindle via user interface

0: Enable spindle control via the NC/PLC interface

1: Enable spindle control via the use interface

Bit 4: Enable spindle control of counterspindle via user interface

0: Enable spindle control via the NC/PLC interface

1: Enable spindle control via the use interface

Bit 5: Enable spindle control of tool spindle via user interface

0: Enable spindle control via the NC/PLC interface

1: Enable spindle control via the use interface

Bit 6: Enable balance cutting for dual-channel stock removal

0: No enable of the balance cutting function for dual-channel stock removal

1: Enable of balance cutting for dual-channel stock removal

In balance cutting, stock is removed from both sides of the workpiece simultaneously. This enables work to be performed with a higher feedrate.

Bit 7: Retraction during stock removal along the contour with G1

0: Retraction during stock removal along the contour with rapid traverse (G0)

1: Retraction during stock removal along the contour with feedrate (G1)

Bit 8: Enter spindle chuck data in the program

0: The spindle chuck data are taken from the corresponding input screen in the parameter area.

1: Enter spindle chuck data in the program

Bit 9: Additional entry of tailstock data in the program

0: The tailstock data are taken from the spindle chuck data in the parameter area.

1: Additional entry of tailstock data in the program

This bit is only effective if bit 8 is also set.

Bit 10: Enable convex thread

0: Convex thread not enabled with longitudinal thread cutting

1: Convex thread enabled with longitudinal thread cutting
 Bit 11: Reserved
 Bit 12: Deactivate thread synchronization
 0: Thread synchronization is possible
 1: Deactivate the thread synchronization function
 The operator screenform to set the synchronization point is not displayed, and in the thread cycles the thread first cut is not calculated with the synchronization point.
 Bit 13: Stock removal along the contour with CYCLE95 (828D programGUIDE without Advanced Technology)
 0: The screenform for CYCLE952 is opened with the softkey contour turning/stock removal.
 1: The screenform for CYCLE95 is opened with the softkey contour turning/stock removal.
 Secondary conditions:
 - 828D
 - programGUIDE
 - Without Advanced Technology option

52229	ENABLE_QUICK_M_CODES			-	-	
-	Enable fast M functions			BYTE	Immediately	
-						
-	-	0	-	-	7/3	M

Description: Enable fast M functions
 Bit 0: Coolant OFF
 Bit 1: Coolant 1 ON
 Bit 2: Coolant 2 ON
 Bit 3: Coolant 1 and 2 ON

52230	M_CODE_ALL_COOLANTS_OFF			-	-	
-	M code for all coolants OFF			DWORD	Immediately	
-						
-	-	9	0	32767	7/3	M

Description: M code for all coolants OFF

52231	M_CODE_COOLANT_1_ON			-	-	
-	M code for coolant 1 ON			DWORD	Immediately	
-						
-	-	8	0	32767	7/3	M

Description: M code for coolant 1 ON

52232	M_CODE_COOLANT_2_ON			-	-	
-	M code for coolant 2 ON			DWORD	Immediately	
-						
-	-	7	0	32767	7/3	M

Description: M code for coolant 2 ON

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52233	M_CODE_COOLANT_1_AND_2_ON	-	-			
-	M code for both coolants ON	DWORD	Immediately			
-						
-	-	-1	-1	32767	7/3	M

Description: M code for coolant 1 + 2 ON

52240	NAME_TOOL_CHANGE_PROG	-	-			
-	Tool change program for G code steps	STRING	Immediately			
-						
-	-	-	-	-	7/3	M

Description: Tool change program for G code steps.

When inserting a tool using the "Select tool" softkey, the T command is transferred into the program.

If the MD contains a text, this is automatically inserted as an autonomous block after the T command.

For example, the tool change command "M6" can be entered here or a machine-manufacturer specific tool change program.

52241	TOOL_CHANGE_POS_Y	-	-			
mm	Tool change position Y in the Machine (ShopTurn)	DOUBLE	Immediately			
-						
-	-	0	-	-	7/3	M

Description: Tool change position Y in Machine (ShopTurn)

In ShopTurn, the tool change point in X and Z can be specified in the Machine or Work.

When the tool change point is approached, the Y axis is simultaneously traversed to the value in the Machine specified in this MD.

52242	TURN_TOOL_FIXING	-	-			
-	Tool adapter for turning tools	BYTE	PowerOn			
-						
-	-	0	0	2	7/3	M

Description: Tool adapter for turning tools:

0 = turning tool in the tool spindle

1 = turning tool fixed at the tool spindle box

2 = turning tool in the tool spindle or fixed at the tool spindle box

52244	SUB_SPINDLE_PARK_POS_Y	-	-			
mm	Parking position of the Y axis with counterspindle in the Machine	DOUBLE	Immediately			
-						
-	-	0	-	-	7/3	U

Description: Parking position of the Y axis with counterspindle in the Machine

52248	REV_2_BORDER_TOOL_LENGTH	-	-			
mm	Limit value tool length X for 2nd turret	DOUBLE	Immediately			
-						
-	-	0	-	-	7/3	M

Description: Limit value of tool length X for the 2nd turret:

Limit value = 0: only one turret available

Tool length X < limit value: tool belongs to 1st turret/multifix

Tool length X >= limit value: tool belongs to 2nd turret/multifix

52250	M_CODE_CHUCK_OPEN	-	-
-	M code for Open chuck with non-rotating spindle	STRING	Immediately
-			
-	2	-	-

Description: M code for Open chuck with non-rotating spindle.

Example: "M34" or "M1=34"

Elements:

[0]: Main spindle

[1]: Counterspindle

52251	M_CODE_CHUCK_OPEN_ROT	-	-
-	M code for Open chuck with rotating spindle	STRING	Immediately
-			
-	2	-	-

Description: M code for Open chuck with rotating spindle.

Example: "M34" or "M1=34"

Elements:

[0]: Main spindle

[1]: Counterspindle

52252	M_CODE_CHUCK_CLOSE	-	-
-	M code for Close chuck	STRING	Immediately
-			
-	2	-	-

Description: M code for Close chuck

Example: "M34" or "M1=34"

Elements:

[0]: Main spindle

[1]: Counterspindle

52253	M_CODE_TAILSTOCK_FORWARD	-	-
-	M code for quill forward	STRING	Immediately
-			
-	2	-	-

Description: M code for quill forward.

E.g.: "M55" or "M1=55"

Elements:

[0]: Quill opposite main spindle

[1]: Quill opposite counterspindle

52254	M_CODE_TAILSTOCK_BACKWARD	-	-
-	M code for quill backward	STRING	Immediately
-			
-	2	-	-

Description: M code for quill backward.

E.g.: "M54" or "M1=54"

Elements:

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[0]: Quill opposite main spindle
 [1]: Quill opposite counterspindle

52260	MACHINE_JOG_INTERRUPT_PRIO	-	-
-	Priority for start ASUB under machine JOG	BYTE	Immediately
-			
-	-	1	1
		8	7/3
			S

Description: Priority for start ASUB under machine JOG

52270	TM_FUNCTION_MASK	-	-
-	Function mask for tool management	DWORD	PowerOn
-			
-	-	0	-
		-	7/3
			M

Description: Function mask for tool management

Bit 0: Create tool on magazine location not allowed. Tools can only be created outside the magazine.

Bit 1: Load/unload disabled if machine is not in reset. Tools can only be loaded/unloaded if the appropriate channel is in reset state.

Bit 2: Load/unload disabled on emergency stop. Tools can only be loaded/unloaded if emergency stop is not active.

Bit 3: Load/unload or relocate tool to/from buffer is disabled. Tools cannot be loaded/ unloaded or relocated in the buffer (spindle/gripper).

Bit 4: Loading is executed directly into the spindle. Tools are loaded exclusively directly into the spindle.

Bit 5: Use grinding configuration file for creating the tool lists. Only grinding tools are offered.

Bit 6: Relocating a tool to/from the buffer (spindle/gripper) is permitted despite a block (see bit3).

Bit 7: Create tool using the tool number. Specify the tool's T number when creating the tool.

Bit 8: Hide Relocate tool. The function 'Relocate tool' is hidden on the user interface.

Bit 9: Hide Position magazine. The function 'Position magazine' is hidden on the user interface.

Bit 10: Reactivate tool using Position magazine. Prior to reactivation, the tool is positioned on the loading position.

Bit 11: Reactivate tool in all monitoring modes. When reactivating a tool, all monitoring modes enabled in the NC are reactivated for this tool, even the monitoring modes, which have not been set for the relevant tool, but are available in the background only.

Bit 12: Hide Reactivate tool. The function 'Reactivate tool' is hidden on the user interface.

52271	TM_MAG_PLACE_DISTANCE	-	-
mm	Distance betw. indiv. magazine locations	DOUBLE	PowerOn
-			
-	-	70	0
		10000	7/3
			M

Description: Distance between individual magazine locations.

Is used for graphical display of magazine and tools in tool management.

52272	TM_TOOL_LOAD_DEFAULT_MAG	-	-
-	Default magazine for tool loading	BYTE	PowerOn
-			
-	-	0	0
		30	7/3
			M

Description: Default magazine for tool loading
0 = no default magazine

52273	TM_TOOL_MOVE_DEFAULT_MAG	-	-
-	Default magazine for tool relocation	BYTE	PowerOn
-			
-	-	0	0
		30	7/3
			M

Description: Default magazine for tool relocation
0 = no default magazine

52274	TM_TOOL_LOAD_STATION	-	-
-	Number of load station	BYTE	PowerOn
-			
-	-	0	0
		16	7/3
			M

Description: Number of the loading station
0 = All configured stations are taken into account

52281	TOOL_MCODE_FUNC_ON	-	-
-	M code for tool-specific function ON	DWORD	Immediately
-			
-	4	-1, -1, -1, -1	-1
		32767	7/3
			M

Description: M code for tool-specific function ON
Value -1 means that the M function is not output. If both M commands of a function equal -1, the corresponding field will not be displayed in the user interface

52282	TOOL_MCODE_FUNC_OFF	-	-
-	M code for tool-specific function OFF	DWORD	Immediately
-			
-	4	-1, -1, -1, -1	-1
		32767	7/3
			M

Description: M code for tool-specific function OFF
Value -1 means that the M function is not output. If both M commands of a function equal -1, the corresponding field will not be displayed in the user interface

52290	SIM_DISPLAY_CONFIG	-	-
-	Location of status display of the channel in the simulation (OP019 only)	BYTE	Immediately
-			
-	-	0x0F	-
			7/3
			M

Description: Location of status display of the channel in the simulation
Only one of the 4 corners can be selected:
Bit 0 = Top left corner
Bit 1 = Top right corner
Bit 2 = Bottom left corner
Bit 3 = Bottom right corner

2.5 Machine and setting data cycles

This MD is active only on the OP019.

52740	MEA_FUNCTION_MASK			-	-	
-	Function mask for measuring cycles, workpiece and tool measuring			DWORD	Immediately	
-						
-	-	65536	-	-	7/3	M

Description:

Function mask for measuring cycles

Bit 0: Workpiece measurement, probe input

0: Workpiece probe connected to probe input 1

1: Workpiece probe connected to probe input 2

Bit 1: Workpiece measurement, turning technology, use of a third geometry axis (Y axis) in turning technology by the turning measurement cycles.

0: No use or support of the Y axis.

1: Default values for the turning measuring cycles refer to the Y axis.

This means that the Y axis can be used as a measuring or bypassing axis by the turning measuring cycles.

The tool length or work offset is always corrected in the components of the second geometry axis (X axis) during measurement in the Y axis.

Note: The default values for the Y axis are related to the diameter.

Bit 2: Correction angle is calculated with/without orientation transformation

0: Correction angle (_MEA_CORR_ANGLE[1]) is calculated only with an active orientation transformation(TCARR, CYCLE800 or TRAORI)

1: Correction angle (_MEA_CORR_ANGLE[1]) is calculated even without an active orientation transformation

and SD42940 \$SC_TOOL_LENGTH_CONST 1000s digit = 1 (calculation of tool orientation) is set

Bit 16: Tool measurement, probe input

0: Tool probe connected to probe input 1

1: Tool probe connected to probe input 2

Bit 17: Tool measurement turning, recoding of the cutting edge positions

0: No recoding

1: Internal recoding, cutting edge positions mirrored on the X axis

Tool revolver rotated through 180°, Z axis not mirrored

52750	J_MEA_FIXPOINT			-	-	
mm	Z value for measuring fixed point			DOUBLE	Immediately	
-						
-	-	0	-	-	7/3	I

Description:

Z value for measuring against fixed point

52751	J_MEA_MAGN_GLAS_POS			-	-	
mm	Zoom-in position for tool measurement			DOUBLE	Immediately	
-						
-	2	0	-	-	7/3	M

Description:

Zoom-in position for tool measurement

[0] = Position in the 1st axis

[1] = Position in the 2nd axis

52780	J_MEA_T_PROBE_APPR_MODE	-	-
-	Approach mode tool measurement in JOG	BYTE	Immediately
-			
-	-	0	0
-	-	2	7/3
-	-	M	

Description: Approach mode tool measurement in JOG
 =0: technology-dependent approach to the tool probe
 Turning technology: manual approach
 Milling technology : automatic approach
 =1: technology independent approach to the tool probe
 Manual approach to the tool probe
 =2: technology-independent approach to the tool probe
 Automatic approach to the tool probe

52800	ISO_M_ENABLE_POLAR_COORD	-	-
-	Polar coordinates	BYTE	Immediately
-			
-	-	0	0
-	-	1	7/3
-	-	M	

Description: Polar coordinates
 0: OFF
 1: ON

52802	ISO_ENABLE_INTERRUPTS	-	-
-	Interrupt process	BYTE	Immediately
-			
-	-	0	0
-	-	1	7/3
-	-	M	

Description: Interrupt process
 0: OFF
 1: ON

52804	ISO_ENABLE_DRYRUN	-	-
-	Machining skipped at DRYRUN	BYTE	Immediately
-			
-	-	0	0
-	-	1	7/3
-	-	M	

Description: Machining skipped during tapping G74/G84 at DRYRUN
 0: OFF
 1: ON

52806	ISO_SCALING_SYSTEM	-	-
-	Basic system	BYTE	Immediately
-			
-	-	0	0
-	-	2	7/7
-	-	M	

Description: Basic system:
 0: not defined
 1: METRIC
 2: INCH

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52808	ISO_SIMULTAN_AXES_START	-	-
-	Simultaneous approach to the boring position on all programmed axes	BYTE	Immediately
-			
-	-	0	0
		1	7/3
			M

Description: Simultaneous approach to the boring position on all programmed axes

0: OFF

1: ON

52810	ISO_T_DEEPHOLE_DRILL_MODE	-	-
-	Deep hole drilling with chipbreaking/stock removal	BYTE	Immediately
-			
-	-	0	0
		1	7/3
			M

Description: Select the type of deep hole drilling

0: deep hole drilling with chipbreaking

1: deep hole drilling with stock removal

52818	ISO_M_FUNCTION_MASK	-	-
-	Function mask for ISO milling mode	DWORD	Immediately
-			
-	-	0	-
		-	7/3
			M

Description: Function mask for ISO milling mode

52819	ISO_T_FUNCTION_MASK	-	-
-	Function mask for ISO turning mode	DWORD	Immediately
-			
-	-	0	-
		-	7/3
			M

Description: Function mask for ISO turning mode

52840	GRIND_FUNCTION_MASK	-	-
-	Function mask for grinding	DWORD	Immediately
-			
-	-	0	-
		-	7/3
			M

Description: Function mask for grinding

Bit 7: Retraction while profiling with G1

0: Retraction while profiling with rapid traverse (G0)

1: Retraction while profiling with feedrate (G1)

52842	GRIND_DIAMETER_LENGTH	-	-
-	Number of diameter length	BYTE	PowerOn
-			
-	-	1	1
		2	7/3
			M

Description: Grinding technology: Number of the tool length for the grinding wheel diameter:

1: Length 1 is grinding wheel diameter

2: Length 2 is grinding wheel diameter

52843	GRIND_WIDTH_LENGTH	-	-
-	Number of grinding wheel width	BYTE	PowerOn
-			
-	-	2	1
-	-	2	7/3
-	-	2	M

Description: Grinding technology: Number of the tool length for the grinding wheel width:
1: Length 1 is grinding wheel width
2: Length 2 is grinding wheel width

53030	AXIS_MAX_POWER	-	-
%	Maximum value of axis power rating display	DWORD	PowerOn
-			
-	-	100	0
-	-	255	4/3
-	-	255	M

Description: Maximum value of permissible axis power rating in percent.
The display bar is shown green in the range between 0 and the value of AXIS_MAX_POWER.

53031	AXIS_POWER_RANGE	-	-
%	Display range of axis power rating display	DWORD	PowerOn
-			
-	-	100	0
-	-	255	4/3
-	-	255	M

Description: Scale end value for the axis power display as a percentage. The value must be greater than or equal to AXIS_MAX_POWER.
The bar display is shown red in the area between the values of AXIS_MAX_POWER and AXIS_POWER_RANGE.

53220	AXIS_MCS_POSITION	-	-
mm	Position of axis in the Machine	DOUBLE	Immediately
-			
-	3	0	-
-	-	-	7/3
-	-	-	M

Description: Position of axis in the Machine:
The 3 field elements specify the position in X, Y, Z.
For linear axes, the value corresponds to the zero point of the axis in the Machine.
For rotary axes, the position of the rotary axis is defined in the Machine.

53230	SIM_START_POSITION	-	-
mm, degrees	Axis position at start of simulation	DOUBLE	Immediately
-			
-	-	0	-
-	-	-	7/3
-	-	-	M

Description: Axis position at start of simulation
Simulation is only possible if a value not equal to 0 has been set for at least one geometry axis.

53240	SPINDLE_PARAMETER	-	-
mm	Spindle chuck data	DOUBLE	Immediately
-			
-	3	0	-
-	-	-	7/7
-	-	-	U

Description: Spindle chuck data:
[0]: Chuck dimension
[1]: Stop dimension

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[2]: Jaw dimension

53241	SPINDLE_CHUCK_TYPE			-	-	
-	Spindle jaw type			BYTE	Immediately	
-						
-	-	0	-	-	7/7	U

Description: Spindle jaw type:
0 = Clamping from outside
1 = Clamping from inside

53242	TAILSTOCK_PARAMETER			-	-	
mm	Tailstock data			DOUBLE	Immediately	
-						
-	2	0	-	-	7/7	M

Description: Tailstock data:
[0]: Tailstock diameter
[1]: Tailstock length

53250	CLAMPING_TOLERANCE				-	-	
mm, degrees	Permissible tolerance when an axis jams				DOUBLE	Immediately	
-							
-	-	0.1	0	10	7/3	M	

Description: Permissible tolerance when an axis jams.
When jamming, an axis can be pushed somewhat out of its position.
With this machine data you define up to which tolerance level the axis does not have to be repositioned.

54215	TM_FUNCTION_MASK_SET			-	-	
-	Function mask for tool management			DWORD	PowerOn	
-						
-	-	0	-	-	7/4	M

Description: Function mask for tool management

Bit 0: Diameter display for rotating tools. It is not the radius value but the diameter that is displayed for rotating tools.

Bit 1: Default direction of rotation for all turning tools is M4. Direction of rotation M4 is assigned by default when turning tools are created.

Bit 2: Create tool without suggesting name.

Bit 3: Input disable for tool name and tool type in the case of loaded tools. Once tools have been loaded, the tool name and the tool type can no longer be changed.

Bit 4: Input disable for loaded tools if the channel is not in reset.

Bit 5: Accrue tool wear entries additively. Tool wear data entries are added to the existing wear value.

Bit 6: Entry of tool ID in numerical format. The tool ID may only be entered using numbers.

Bit 7: Hide tool monitoring parameters. The tool monitoring parameters are hidden on the user interface.

Bit 8: Diameter display for transverse axis geometry. The geometry value for the transverse axis is displayed as a diameter value.

Bit 9: Diameter display for transverse axis wear. The wear value for the transverse axis is displayed as a diameter value.

Bit 10: Enable loading/relocation of tool in buffer locations. The magazine number can be entered in the load dialog box. The magazine number 9998 is then used to access the buffer location.

Bit 11: Creation of new tools in gripper locations is disabled.

Bit 12: Measuring tools are not unloaded when the "Unload all" function is executed.

Bit 13: The wear value is not deleted on entry of a tool geometry value.

Bit 14: Load or relocate tool. The search for an empty location is made without assignment with the last used magazine.

0: The search for an empty location always starts with the last used magazine.

1: The search for an empty location follows the set search strategy.

54480	AST_MMC_HANDLER_NAME			-	-	
-	Assignment of an HMI Operate instance for AST commands			STRING	Immediately	
-						
-	-	-	-	-	1/1	M

Description: Name of the assigned HMI Operate (master)
One Operate must be defined as the master.

54481	AST_MMC_DEFAULT_IS_PCU			-	-	
-	Selection of HMI Operate internally (NCU) / externally (PCU) for AST			BOOLEAN	Immediately	
-						
-	-	0	0	1	1/1	M

Description: Selection of HMI Operate internally (NCU) / externally (PCU) for AST
Selection of the Operate type

54600	MEA_WP_BALL_DIAM			-	-	
mm	Effective diameter of the probe sphere for the workpiece probe			DOUBLE	Immediately	
-						
-	40	0, 0, 0, 0, 0, 0, 0, 0...	0	10000	7/7	U

Description: Effective sphere diameter of the probe sphere for the workpiece probe.
The value of this parameter is created by the operation "Calibrate workpiece probe"!

54601	MEA_WP_TRIG_MINUS_DIR_AX1			-	-	
mm	Trigger point of the 1st measuring axis in negative direction			DOUBLE	Immediately	
-						
-	40	0, 0, 0, 0, 0, 0, 0, 0...	-100000	100000	7/7	U

Description: Trigger point of the 1st measuring axis (abscissa) in negative traversing direction (X at G17) of the workpiece probe.
The term "negative traversing direction" refers to the currently active workpiece zero point reference!
The value of this parameter is created by the operation "Calibrate workpiece probe"!

54602	MEA_WP_TRIG_PLUS_DIR_AX1			-	-	
mm	Trigger point of the 1st measuring axis in positive direction			DOUBLE	Immediately	
-						
-	40	0, 0, 0, 0, 0, 0, 0, 0...	-100000	100000	7/7	U

Description: Trigger point of the 1st measuring axis (abscissa) in positive traversing direction (X at G17) of the workpiece probe.
The term "positive traversing direction" refers to the currently active workpiece zero point reference!

2.5 Machine and setting data cycles

The value of this parameter is created by the operation "Calibrate workpiece probe"!

54603	MEA_WP_TRIG_MINUS_DIR_AX2	-	-
mm	Trigger point of the 2nd measuring axis in negative direction	DOUBLE	Immediately
-			
-	40	0, 0, 0, 0, 0, 0, 0, 0...	-100000 100000 7/7 U

Description: Trigger point of the 2nd measuring axis (ordinate) in negative traversing direction (Y at G17) of the workpiece probe.
The term "negative traversing direction" refers to the currently active workpiece zero point reference!
The value of this parameter is created by the operation "Calibrate workpiece probe"!

54604	MEA_WP_TRIG_PLUS_DIR_AX2	-	-
mm	Trigger point of the 2nd measuring axis in positive direction	DOUBLE	Immediately
-			
-	40	0, 0, 0, 0, 0, 0, 0, 0...	-100000 100000 7/7 U

Description: Trigger point of the 2nd measuring axis (ordinate) in positive traversing direction (Y at G17) of the workpiece probe.
The term "positive traversing direction" refers to the currently active workpiece zero point reference!
The value of this parameter is created by the operation "Calibrate workpiece probe"!

54605	MEA_WP_TRIG_MINUS_DIR_AX3	-	-
mm	Trigger point of the 3rd measuring axis in negative direction	DOUBLE	Immediately
-			
-	40	0, 0, 0, 0, 0, 0, 0, 0...	-100000 100000 7/7 U

Description: Trigger point of the 3rd measuring axis (applicate) in negative traversing direction (Z at G17) of the workpiece probe.
The term "negative traversing direction" refers to the currently active workpiece zero point reference!
The value of this parameter is created by the operation "Calibrate workpiece probe"!

54606	MEA_WP_TRIG_PLUS_DIR_AX3	-	-
mm	Trigger point of the 3rd measuring axis in positive direction	DOUBLE	Immediately
-			
-	40	0, 0, 0, 0, 0, 0, 0, 0...	-100000 100000 7/7 U

Description: Trigger point of the 3rd measuring axis (applicate) in positive traversing direction (Z at G17) of the workpiece probe.
The term "positive traversing direction" refers to the currently active workpiece zero point reference!
The value of this parameter is created by the operation "Calibrate workpiece probe"!

54607	MEA_WP_POS_DEV_AX1	-	-
mm	Position deviation of the probe sphere in the 1st measuring axis	DOUBLE	Immediately
-			
-	40	0, 0, 0, 0, 0, 0, 0, 0...	-100000 100000 7/7 U

Description: The position deviation in the 1st measuring axis represents a geometrical offset of the center point of the probe sphere related to the electrical center point of the probe in this axis!
The value of this parameter is created by the operation "Calibrate workpiece probe"!

54608	MEA_WP_POS_DEV_AX2	-	-
mm	Position deviation of the probe sphere in the 2nd measuring axis	DOUBLE	Immediately
-			
-	40	0, 0, 0, 0, 0, 0, 0, 0...	-100000 100000 7/7 U

Description: The position deviation in the 2nd measuring axis represents a geometrical offset of the center point of the probe sphere related to the electrical center point of the probe in this axis!
The value of this parameter is created by the operation "Calibrate workpiece probe"!

54609	MEA_WP_STATUS_RT	-	-
-	Calibration status axis positions	DOUBLE	Immediately
-			
-	40	0, 0, 0, 0, 0, 0, 0, 0...	- - 7/7 U

Description: Calibration status of the axis positions reserved for internal use!
The value of this parameter is created by the operation "Calibrate workpiece probe"!

54610	MEA_WP_STATUS_GEN	-	-
-	Calibration status in general	DOUBLE	Immediately
-			
-	40	0, 0, 0, 0, 0, 0, 0, 0...	- - 7/7 U

Description: Calibration status in general reserved for internal use!
The value of this parameter is created by the operation "Calibrate workpiece probe"!

54611	MEA_WP_FEED	-	-
mm/min	Measuring feed for calibration	DOUBLE	Immediately
-			
-	40	0, 0, 0, 0, 0, 0, 0, 0...	0 5000 7/7 U

Description: Measure workpiece measuring feed for calibration
This measuring feed is used for all subsequent workpiece measuring programs in conjunction with the probe field.

54615	MEA_CAL_EDGE_BASE_AX1	-	-
mm	Calibration groove base of the 1st measuring axis	DOUBLE	Immediately
-			
-	3	0, 0, 0	-100000 100000 7/7 U

Description: Calibration groove base of the 1st measuring axis (abscissa, Z at G18)
This parameter is a geometrical component of the calibration groove and must be supplied by the user!

54617	MEA_CAL_EDGE_PLUS_DIR_AX1	-	-
mm	Calibration groove edge in positive direction of the 1st measuring axis	DOUBLE	Immediately
-			
-	3	0, 0, 0	-100000 100000 7/7 U

Description: Calibration groove edge in positive direction of the 1st measuring axis (abscissa, Z at G18)
This parameter is a geometrical component of the calibration groove and must be supplied by the user!

2.5 Machine and setting data cycles

54618	MEA_CAL_EDGE_MINUS_DIR_AX1			-	-	
mm	Calibration groove edge in negative direction of the 1st measuring axis			DOUBLE	Immediately	
-						
-	3	0, 0, 0	-100000	100000	7/7	U

Description: Calibration groove edge in negative direction of the 1st measuring axis (abscissa, Z at G18)
This parameter is a geometrical component of the calibration groove and must be supplied by the user!

54619	MEA_CAL_EDGE_BASE_AX2			-	-	
mm	Calibration groove base of the 2nd measuring axis			DOUBLE	Immediately	
-						
-	3	0, 0, 0	-100000	100000	7/7	U

Description: Calibration groove base of the 2nd measuring axis (ordinate, X at G18)
This parameter is a geometrical component of the calibration groove and must be supplied by the user!

54620	MEA_CAL_EDGE_UPPER_AX2			-	-	
mm	Calibration groove upper edge of the 2nd measuring axis			DOUBLE	Immediately	
-						
-	3	0, 0, 0	-100000	100000	7/7	U

Description: Calibration groove upper edge of the 2nd measuring axis (ordinate, X at G18)
This parameter is a geometrical component of the calibration groove and must be supplied by the user!

54621	MEA_CAL_EDGE_PLUS_DIR_AX2			-	-	
mm	Calibration groove edge in positive direction of the 2nd measuring axis			DOUBLE	Immediately	
-						
-	3	0, 0, 0	-100000	100000	7/7	U

Description: Calibration groove edge in positive direction of the 2nd measuring axis (ordinate, X at G18)
This parameter is a geometrical component of the calibration groove and must be supplied by the user!

54622	MEA_CAL_EDGE_MINUS_DIR_AX2			-	-	
mm	Calibration groove edge in negative direction of the 2nd measuring axis			DOUBLE	Immediately	
-						
-	3	0, 0, 0	-100000	100000	7/7	U

Description: Calibration groove edge in negative direction of the 2nd measuring axis (ordinate, X at G18)
This parameter is a geometrical component of the calibration groove and must be supplied by the user!

54625	MEA_TP_TRIG_MINUS_DIR_AX1			-	-	
mm	Trigger point of the 1st measuring axis in negative direction			DOUBLE	Immediately	
-						
-	6	0, 0, 0, 0, 0, 0	-100000	100000	7/7	U

Description: Trigger point of the 1st measuring axis in negative direction (abscissa, X at G17, Z at G18)
 The trigger point refers to the machine coordinate system (Machine).
 Prior to calibration the approximate trigger point must be entered in the machine coordinate system!
 The exact value of this parameter is created by the operation "Calibrate workpiece probe"!

54626	MEA_TP_TRIG_PLUS_DIR_AX1			-	-	
mm	Trigger point of the 1st measuring axis in positive direction			DOUBLE	Immediately	
-						
-	6	0. 0. 0. 0. 0. 0	-100000	100000	7/7	U

Description: Trigger point of the 1st measuring axis in positive direction (abscissa, X at G17, Z at G18)
 The trigger point refers to the machine coordinate system (Machine).
 Prior to calibration the approximate trigger point must be entered in the machine coordinate system!
 The exact value of this parameter is created by the operation "Calibrate workpiece probe"!

54627	MEA_TP_TRIG_MINUS_DIR_AX2			-	-	
mm	Trigger point of the 2nd measuring axis in negative direction			DOUBLE	Immediately	
-						
-	6	0, 0, 0, 0, 0, 0	-100000	100000	7/7	U

Description: Trigger point of the 2nd measuring axis in negative direction (ordinate, Y at G17, X at G18)
 The trigger point refers to the machine coordinate system (Machine).
 Prior to calibration the approximate trigger point must be entered in the machine coordinate system!
 The exact value of this parameter is created by the operation "Calibrate workpiece probe"!

54628	MEA_TP_TRIG_PLUS_DIR_AX2			-	-	
mm	Trigger point of the 2nd measuring axis in positive direction			DOUBLE	Immediately	
-						
-	6	0, 0, 0, 0, 0, 0	-100000	100000	7/7	U

Description: Trigger point of the 2nd measuring axis in positive direction (ordinate, Y at G17, X at G18)
 The trigger point refers to the machine coordinate system (Machine).
 Prior to calibration the approximate trigger point must be entered in the machine coordinate system!
 The exact value of this parameter is created by the operation "Calibrate workpiece probe"!

54629	MEA_TP_TRIG_MINUS_DIR_AX3			-	-	
mm	Trigger point of the 3rd measuring axis in negative direction			DOUBLE	Immediately	
-						
-	6	0, 0, 0, 0, 0, 0	-100000	100000	7/7	U

Description: Trigger point of the 3rd measuring axis in negative direction (applicate, Z at G17, Y at G18)
 The trigger point refers to the machine coordinate system (Machine).

2.5 Machine and setting data cycles

Prior to calibration the approximate trigger point must be entered in the machine coordinate system!

The exact value of this parameter is created by the operation "Calibrate workpiece probe"!

54630	MEA_TP_TRIG_PLUS_DIR_AX3			-	-	
mm	Trigger point of the 3rd measuring axis in positive direction			DOUBLE	Immediately	
-						
-	6	0, 0, 0, 0, 0, 0	-100000	100000	7/7	U

Description: Trigger point of the 3rd measuring axis in positive direction (ordinate, Y at G17, X at G18)

The trigger point refers to the machine coordinate system (Machine).

Prior to calibration, the approximate trigger point must be entered in the machine coordinate system!

The exact value of this parameter is created by the operation "Calibrate tool probe"!

54631	MEA_TP_EDGE_DISK_SIZE			-	-	
mm	Tool probe edge length/wheel diameter			DOUBLE	Immediately	
-						
-	6	0, 0, 0, 0, 0, 0	0	1000	7/7	U

Description: Effective edge length or grinding wheel diameter of the tool probe.

This data is important for the "Milling" technology when measuring the length of milling tools.

54632	MEA_TP_AX_DIR_AUTO_CAL			-	-	
-	Automatic tool probe calibration, enable axes/directions			DWORD	Immediately	
-						
-	6	133, 133, 133, 133, 133, 133	-	-	7/7	U

Description: Enabling axes and traversing directions for the "Automatic calibration" of milling tool probes in the machine coordinate system (Machine).

The default setting refers in X and Y to the plus and minus directions respectively, in Z only to the minus direction.

The parameter is divided into six components, the functions of which are assigned to calibration data records 1 to 6.

Meaning of the parameter components

Decimal position:

Units 1st geometry axis (X)

Tens: 2nd geometry axis (Y)

Hundreds: 3rd geometry axis (Z)

Value:

=0: axis not enabled

=1: only minus direction possible

=2: only plus direction possible

=3: both directions possible

54633	MEA_TP_TYPE			-	-	
-	Tool probe type cube / wheel / probe head			DOUBLE	Immediately	
-						
-	6	0, 0, 0, 0, 0, 0	0	999	7/7	U

Description: Tool probe type

0: Compatibility (measuring cycles: cube, turning surface shows probe head, milling surface shows wheel)

101: Wheel in XY, working plane G17

201: Wheel in ZX, working plane G18

301: Wheel in YZ, working plane G19

2: Probe head

3: Cube

54634	MEA_TP_CAL_MEASURE_DEPTH	-	-
mm	Distance between the upper tool probe edge and the lower milling tool edge	DOUBLE	Immediately
-			
-	6	2, 2, 2, 2, 2, 2	-1000 1000 7/7 U

Description: Distance between the upper tool probe edge and the lower milling tool edge.
For tool probe calibration this distance defines the calibration depth and for milling tool measuring the measuring depth!
This parameter does not apply to turning tool measuring!

54635	MEA_TP_STATUS_GEN	-	-
-	Calibration status in general	DOUBLE	Immediately
-			
-	6	0, 0, 0, 0, 0, 0	- - 7/7 U

Description: Calibration status general, reserved for internal use
The value of this parameter is assigned when the "Calibrate tool probe" procedure is executed.

54636	MEA_TP_FEED	-	-
mm/min	Measuring feed for tool probe calibration in the Machine	DOUBLE	Immediately
-			
-	6	0, 0, 0, 0, 0, 0	0 5000 7/7 U

Description: Measuring feed for tool probe calibration in Machine
This measuring feed is used for all subsequent tool measuring programs in conjunction with the probe field.

54640	MEA_TPW_TRIG_MINUS_DIR_AX1	-	-
mm	Trigger point of the 1st measuring axis in negative direction	DOUBLE	Immediately
-			
-	6	0, 0, 0, 0, 0, 0	-100000 100000 7/7 U

Description: Trigger point of the 1st measuring axis in negative direction (abscissa, X at G17, Z at G18)
The trigger point refers to the workpiece coordinate system (Work).
Prior to calibration the approximate trigger point must be entered in the workpiece coordinate system!
The exact value of this parameter is created by the operation "Calibrate tool probe"!

54641	MEA_TPW_TRIG_PLUS_DIR_AX1	-	-
mm	Trigger point of the 1st measuring axis in positive direction	DOUBLE	Immediately
-			
-	6	0, 0, 0, 0, 0, 0	-100000 100000 7/7 U

2.5 Machine and setting data cycles

Description: Trigger point of the 1st measuring axis in positive direction (abscissa, X at G17, Z at G18)
 The trigger point refers to the workpiece coordinate system (Work).
 Prior to calibration the approximate trigger point must be entered in the workpiece coordinate system!
 The exact value of this parameter is created by the operation "Calibrate tool probe"!

54642	MEA_TPW_TRIG_MINUS_DIR_AX2					-	-
mm	Trigger point of the 2nd measuring axis in negative direction					DOUBLE	Immediately
-							
-	6	0, 0, 0, 0, 0, 0	-100000	100000	7/7	U	

Description: Trigger point of the 2nd measuring axis in negative direction (ordinate, Y at G17, X at G18)
 The trigger point refers to the workpiece coordinate system (Work).
 Prior to calibration the approximate trigger point must be entered in the workpiece coordinate system!
 The exact value of this parameter is created by the operation "Calibrate tool probe"!

54643	MEA_TPW_TRIG_PLUS_DIR_AX2					-	-
mm	Trigger point of the 2nd measuring axis in positive direction					DOUBLE	Immediately
-							
-	6	0, 0, 0, 0, 0, 0	-100000	100000	7/7	U	

Description: Trigger point of the 2nd measuring axis in positive direction (ordinate, Y at G17, X at G18)
 The trigger point refers to the workpiece coordinate system (Work).
 Prior to calibration the approximate trigger point must be entered in the workpiece coordinate system!
 The exact value of this parameter is created by the operation "Calibrate tool probe"!

54644	MEA_TPW_TRIG_MINUS_DIR_AX3					-	-
mm	Trigger point of the 3rd measuring axis in negative direction					DOUBLE	Immediately
-							
-	6	0, 0, 0, 0, 0, 0	-100000	100000	7/7	U	

Description: Trigger point of the 3rd measuring axis in negative direction (applicate, Z at G17, Y at G18)
 The trigger point refers to the workpiece coordinate system (Work).
 Prior to calibration the approximate trigger point must be entered in the workpiece coordinate system!
 The exact value of this parameter is created by the operation "Calibrate tool probe"!

54645	MEA_TPW_TRIG_PLUS_DIR_AX3					-	-
mm	Trigger point of the 3rd measuring axis in positive direction					DOUBLE	Immediately
-							
-	6	0, 0, 0, 0, 0, 0	-100000	100000	7/7	U	

Description: Trigger point of the 3rd measuring axis in positive direction (applicate, Z at G17, Y at G18)
 The trigger point refers to the workpiece coordinate system (Work).
 Prior to calibration the approximate trigger point must be entered in the workpiece coordinate system!
 The exact value of this parameter is created by the operation "Calibrate tool probe"!

54646	MEA_TPW_EDGE_DISK_SIZE			-	-	
mm	Tool probe edge length/wheel diameter			DOUBLE	Immediately	
-						
-	6	0, 0, 0, 0, 0, 0	0	1000	7/7	U

Description: Effective edge length or grinding wheel diameter of the tool probe.
Milling tools are normally measured with wheel-shaped probes while turning tools are measured with square probes.

54647	MEA_TPW_AX_DIR_AUTO_CAL			-	-	
-	Automatic tool probe calibration, enable axes/directions			DWORD	Immediately	
-						
-	6	133, 133, 133, 133, 133, 133	-	-	7/7	U

Description: Enabling axes and traversing directions for "Automatic calibration" in the workpiece coordinate system (Work) of milling tool probes.
The default setting refers in X and Y to the plus and minus direction respectively, in Z only to the minus direction.
The parameter is divided into six components, the functions of which are assigned to calibration data records 1 to 6.
Meaning of the parameter components
Decimal position:
Units 1st geometry axis (X)
Tens: 2nd geometry axis (Y)
Hundreds: 3rd geometry axis (Z)
Value:
=0: axis not enabled
=1: only minus direction possible
=2: only plus direction possible
=3: both directions possible

54648	MEA_TPW_TYPE			-	-	
-	Tool probe type cube / wheel / probe head			DOUBLE	Immediately	
-						
-	6	0, 0, 0, 0, 0, 0	-	-	7/7	U

Description: Tool probe type
0: Compatibility (measuring cycles: cube, turning interface shows probe head, milling interface shows disc)
101: Disk in XY, working plane G17
201: Disk in ZX, working plane G18
301: Disk in YZ, working plane G19
2: Probe head
3: Cube

54649	MEA_TPW_CAL_MEASURE_DEPTH			-	-	
mm	Distance between the upper tool probe edge and the lower milling tool edge			DOUBLE	Immediately	
-						
-	6	2, 2, 2, 2, 2, 2	0	999	7/7	U

Description: Distance between the upper tool probe edge and the lower milling tool edge.

2.5 Machine and setting data cycles

For tool probe calibration this distance defines the calibration depth and
for milling tool measuring the measuring depth!
This parameter does not apply to turning tool measuring!

54650	MEA_TPW_STATUS_GEN	-	-
-	Calibration status in general	DOUBLE	Immediately
-			
-	6	0, 0, 0, 0, 0, 0	-

Description: Calibration status general, reserved for internal use
The value of this parameter is assigned when the "Calibrate tool probe" procedure is executed.

54651	MEA_TPW_FEED	-	-
mm/min	Measuring feed for tool probe calibration in the Work	DOUBLE	Immediately
-			
-	6	0, 0, 0, 0, 0, 0	0

Description: Measuring feed for tool probe calibration in Work
This measuring feed is used for all subsequent tool measuring programs in conjunction with the probe field.

54652	MEA_INPUT_TOOL_PROBE_SUB	-	-
-	Tool probe available/active on the counterspindle	BYTE	Immediately
-			
-	6	0, 0, 0, 0, 0, 0	0

Description: CNC measurement input for tool probe with reference to the counterspindle
\$SNS_MEA_INPUT_TOOL_PROBE_SUB[[n]
=0: Toolsetter no.= n+1, with reference to the main spindle,
CNC measurement input corresponds to the value of \$MCS_MEA_FUNCTION_MASK, bit16
(Input values 1 to 9 have the same functional effect as input 0!)
=10: Toolsetter no.= n+1, with reference to the counterspindle,
units digit =0 corresponds to CNC measurement input 1
=11: Toolsetter no.= n+1, with reference to the counterspindle,
units digit =1 corresponds to CNC measurement input 2

54670	MEA_CM_MAX_PERI_SPEED	-	-
m/min	Max. permissible peripheral speed of the tool to be measured	DOUBLE	Immediately
-			
-	2	100, 100	0

Description: Max. permissible peripheral speed of the tool to be measured when the spindle rotates.
Monitoring parameter for tool measuring with rotating spindle

54671	MEA_CM_MAX_REVOLUTIONS	-	-
rev/min	Maximum tool speed for tool measuring	DOUBLE	Immediately
-			
-	2	1000, 1000	0

Description: Max. permissible tool speed for tool measuring with rotating spindle.
The speed is automatically reduced when this value is exceeded.
Monitoring parameter for tool measuring with rotating spindle

54672	MEA_CM_MAX_FEEDRATE	-	-
mm/min	Maximum feed for contact of the tool with the probe	DOUBLE	Immediately
-			
-	2	20, 20	0 100000 7/7 U

Description: Max. permissible feed for contact of the tool to be measured with the probe when the spindle rotates.

Monitoring parameter for tool measuring with rotating spindle

54673	MEA_CM_MIN_FEEDRATE	-	-
mm/min	Minimum feed for 1st contact of the tool with the probe	DOUBLE	Immediately
-			
-	2	1, 1	0 100000 7/7 U

Description: Min. feed for first contact of the tool to be measured with the probe when the spindle rotates.

Too small feeds for large tool radii are thus avoided!

Monitoring parameter for tool measuring with rotating spindle

54674	MEA_CM_SPIND_ROT_DIR	-	-
-	Direction of spindle rotation for tool measuring	DOUBLE	Immediately
-			
-	2	4, 4	3 4 7/7 U

Description: Direction of spindle rotation for tool measuring with rotating spindle (default: 4 = M4)

Notice: if the spindle is already rotating when the measuring cycle is called, the direction of rotation is maintained

independently of \$SNS_MEA_CM_SPIND_ROT_DIR!

Monitoring parameter for tool measuring with rotating spindle

54675	MEA_CM_FEEDFACTOR_1	-	-
-	Feedrate factor 1, for tool measuring	DOUBLE	Immediately
-			
-	2	10, 10	- - 7/7 U

Description: Feedrate factor 1, for tool measuring with rotating spindle

=0: single probing with the feedrate calculated by the cycle (but at least with the value of \$SNS_MEA_CM_MIN_FEEDRATE)

>=1: first probing with calculated feedrate (but at least with the value of \$SNS_MEA_CM_MIN_FEEDRATE).

Monitoring parameter for tool measuring with rotating spindle

54676	MEA_CM_FEEDFACTOR_2	-	-
-	Feedrate factor 2, for tool measuring	DOUBLE	Immediately
-			
-	2	0, 0	- - 7/7 U

Description: Feedrate factor 2, for tool measuring with rotating spindle

=0: second probing with the feedrate calculated by the cycle (only effective with MEA_CM_FEEDFACTOR_1 > 0)

>=1: second probing with calculated feedrate, feedrate factor 2

Third probing with calculated feedrate (tool speed is influenced by SD54749 \$SNS_MEA_FUNCTION_MASK_TOOL, Bit 12)

Notice: - Feedrate factor 2 should be smaller than feedrate factor 1!

2.5 Machine and setting data cycles

- If the value of feedrate factor 2 is 0, a third probing will not be performed!

Monitoring parameter for tool measuring with rotating spindle

54677	MEA_CM_MEASURING_ACCURACY			-	-	
mm	Required measuring accuracy, for tool measuring			DOUBLE	Immediately	
-						
-	2	0.005, 0.005	0	100000	7/7	U

Description: Required measuring accuracy for tool measuring
The value of this parameter always refers to the last contact of the tool with the probe!
Monitoring parameter for tool measuring with rotating spindle

54689	MEA_T_PROBE_MANUFACTURER			-	-	
-	Tool probe type (manufacturer)			BYTE	Immediately	
-						
-	-	0	0	2	7/5	U

Description: Tool probe type (manufacturer)
These indications are required for tool measuring with rotating spindle.
=0: no indication
=1: TT130 (Heidenhain)
=2: TS27R (Renishaw)

54691	MEA_T_PROBE_OFFSET			-	-	
-	Measurement result offset for tool measuring			BYTE	Immediately	
-						
-	-	0	0	2	7/5	U

Description: Measurement result offset for tool measuring with rotating spindle.
=0: no offset
=1: cycle-internal offset (only effective with SD54690
\$SNS_MEA_T_PROBE_MANUFACTURER<>0)
=2: offset through user-defined offset table

54692	MEA_T_CIRCULAR_ARC_DIST			-	-	
mm	Distance between meas. pts with meas. function "Check teeth individually"			DOUBLE	Immediately	
-						
-	-	0.25	0	5	7/7	U

Description: The data value is used for measuring the tool radius with the function "Check teeth individually".
The distance (measured at the circumference of the tool) between the points at which measurements are made to find the "highest point on the longest tooth" must be entered.
If the data value is ZERO, then the search for the "highest point on the longest tooth" is not made with a stationary spindle,
instead the value is measured by sampling while the spindle is rotating.

54693	MEA_T_MAX_STEPS			-	-	
-	Max. number of contacts for measuring function "Check teeth individually"			BYTE	Immediately	
-						
-	-	10	0	15	7/7	U

Description: Maximum number of contacts for finding the "highest point on the longest tooth" when measuring the tool radius.

If the data value is ZERO, then the search for the "highest point on the longest tooth" is not made with a stationary spindle, instead the value is measured by sampling while the spindle is rotating.

54695	MEA_RESULT_OFFSET_TAB_RAD1			-	-	
mm	Offset table (measure tool radius with rotating spindle)			DOUBLE	Immediately	
-						
-	5	0, 0, 0, 0, 0	-	-	7/5	U

Description: Parameter for user-defined measurement result offset for tool measuring with rotating spindle

\$SNS_MEA_RESULT_OFFSET_TAB_RAD1[0] ... this element always has value ZERO

\$SNS_MEA_RESULT_OFFSET_TAB_RAD1[1] ... 1st tool radius

\$SNS_MEA_RESULT_OFFSET_TAB_RAD1[2] ... 2nd tool radius

\$SNS_MEA_RESULT_OFFSET_TAB_RAD1[3] ... 3rd tool radius

\$SNS_MEA_RESULT_OFFSET_TAB_RAD1[4] ... 4th tool radius

54696	MEA_RESULT_OFFSET_TAB_RAD2			-	-	
mm	Offset table 1st peripheral speed (radius)			DOUBLE	Immediately	
-						
-	5	0, 0, 0, 0, 0	-	-	7/5	U

Description: Parameter for user-defined measurement result offset for tool measuring with rotating spindle

\$SNS_MEA_RESULT_OFFSET_TAB_RAD2[0] ... 1st peripheral speed

\$SNS_MEA_RESULT_OFFSET_TAB_RAD2[1] ... offset value for radius regarding 1st radius and 1st peripheral speed

\$SNS_MEA_RESULT_OFFSET_TAB_RAD2[2] ... offset value for radius regarding 2nd radius and 1st peripheral speed

\$SNS_MEA_RESULT_OFFSET_TAB_RAD2[3] ... offset value for radius regarding 3rd radius and 1st peripheral speed

\$SNS_MEA_RESULT_OFFSET_TAB_RAD2[4] ... offset value for radius regarding 4th radius and 1st peripheral speed

54697	MEA_RESULT_OFFSET_TAB_RAD3			-	-	
mm	Offset table 2nd peripheral speed (radius)			DOUBLE	Immediately	
-						
-	5	0, 0, 0, 0, 0	-	-	7/5	U

Description: Parameter for user-defined measurement result offset for tool measuring with rotating spindle

\$SNS_MEA_RESULT_OFFSET_TAB_RAD3[0] ... 2nd peripheral speed

\$SNS_MEA_RESULT_OFFSET_TAB_RAD3[1] ... offset value for radius regarding 1st radius and 2nd peripheral speed

\$SNS_MEA_RESULT_OFFSET_TAB_RAD3[2] ... offset value for radius regarding 2nd radius and 2nd peripheral speed

\$SNS_MEA_RESULT_OFFSET_TAB_RAD3[3] ... offset value for radius regarding 3rd radius and 2nd peripheral speed

\$SNS_MEA_RESULT_OFFSET_TAB_RAD3[4] ... offset value for radius regarding 4th radius and 2nd peripheral speed

2.5 Machine and setting data cycles

54698	MEA_RESULT_OFFSET_TAB_RAD4			-	-	
mm	Offset table 3rd peripheral speed (radius)			DOUBLE	Immediately	
-						
-	5	0, 0, 0, 0, 0	-	-	7/5	U

Description: Parameter for user-defined measurement result offset for tool measuring with rotating spindle

\$SNS_MEA_RESULT_OFFSET_TAB_RAD4[0] ... 3rd peripheral speed

\$SNS_MEA_RESULT_OFFSET_TAB_RAD4[1] ... offset value for radius regarding 1st radius and 3rd peripheral speed

\$SNS_MEA_RESULT_OFFSET_TAB_RAD4[2] ... offset value for radius regarding 2nd radius and 3rd peripheral speed

\$SNS_MEA_RESULT_OFFSET_TAB_RAD4[3] ... offset value for radius regarding 3rd radius and 3rd peripheral speed

\$SNS_MEA_RESULT_OFFSET_TAB_RAD4[4] ... offset value for radius regarding 4th radius and 3rd peripheral speed

54699	MEA_RESULT_OFFSET_TAB_RAD5			-	-	
mm	Offset table 4th peripheral speed (radius)			DOUBLE	Immediately	
-						
-	5	0, 0, 0, 0, 0	-	-	7/5	U

Description: Parameter for user-defined measurement result offset for tool measuring with rotating spindle

\$SNS_MEA_RESULT_OFFSET_TAB_RAD5[0] ... 4th peripheral speed

\$SNS_MEA_RESULT_OFFSET_TAB_RAD5[1] ... offset value for radius regarding 1st radius and 4th peripheral speed

\$SNS_MEA_RESULT_OFFSET_TAB_RAD5[2] ... offset value for radius regarding 2nd radius and 4th peripheral speed

\$SNS_MEA_RESULT_OFFSET_TAB_RAD5[3] ... offset value for radius regarding 3rd radius and 4th peripheral speed

\$SNS_MEA_RESULT_OFFSET_TAB_RAD5[4] ... offset value for radius regarding 4th radius and 4th peripheral speed

54700	MEA_RESULT_OFFSET_TAB_RAD6			-	-	
mm	Offset table 5th peripheral speed (radius)			DOUBLE	Immediately	
-						
-	5	0, 0, 0, 0, 0	-	-	7/5	U

Description: Parameter for user-defined measurement result offset for tool measuring with rotating spindle

\$SNS_MEA_RESULT_OFFSET_TAB_RAD6[0] ... 5th peripheral speed

\$SNS_MEA_RESULT_OFFSET_TAB_RAD6[1] ... offset value for radius regarding 1st radius and 5th peripheral speed

\$SNS_MEA_RESULT_OFFSET_TAB_RAD6[2] ... offset value for radius regarding 2nd radius and 5th peripheral speed

\$SNS_MEA_RESULT_OFFSET_TAB_RAD6[3] ... offset value for radius regarding 3rd radius and 5th peripheral speed

\$SNS_MEA_RESULT_OFFSET_TAB_RAD6[4] ... offset value for radius regarding 4th radius and 5th peripheral speed

54705	MEA_RESULT_OFFSET_TAB_LEN1	-	-
mm	Offset table (measure tool length with rotating spindle)	DOUBLE	Immediately
-			
-	5	0, 0, 0, 0, 0	- - 7/5 U

Description: Parameter for user-defined measurement result offset for tool measuring with rotating spindle

\$SNS_MEA_RESULT_OFFSET_TAB_LEN1[0] ... this element always has value ZERO
 \$SNS_MEA_RESULT_OFFSET_TAB_LEN1[1] ... 1st tool radius
 \$SNS_MEA_RESULT_OFFSET_TAB_LEN1[2] ... 2nd tool radius
 \$SNS_MEA_RESULT_OFFSET_TAB_LEN1[3] ... 3rd tool radius
 \$SNS_MEA_RESULT_OFFSET_TAB_LEN1[4] ... 4th tool radius

54706	MEA_RESULT_OFFSET_TAB_LEN2	-	-
mm	Offset table 1st peripheral speed (length)	DOUBLE	Immediately
-			
-	5	0, 0, 0, 0, 0	- - 7/5 U

Description: Parameter for user-defined measurement result offset for tool measuring with rotating spindle

\$SNS_MEA_RESULT_OFFSET_TAB_LEN2[0] ... 1st peripheral speed
 \$SNS_MEA_RESULT_OFFSET_TAB_LEN2[1] ... offset value for radius regarding 1st radius and 1st peripheral speed
 \$SNS_MEA_RESULT_OFFSET_TAB_LEN2[2] ... offset value for radius regarding 2nd radius and 1st peripheral speed
 \$SNS_MEA_RESULT_OFFSET_TAB_LEN2[3] ... offset value for radius regarding 3rd radius and 1st peripheral speed
 \$SNS_MEA_RESULT_OFFSET_TAB_LEN2[4] ... offset value for radius regarding 4th radius and 1st peripheral speed

54707	MEA_RESULT_OFFSET_TAB_LEN3	-	-
mm	Offset table 2nd peripheral speed (length)	DOUBLE	Immediately
-			
-	5	0, 0, 0, 0, 0	- - 7/5 U

Description: Parameter for user-defined measurement result offset for tool measuring with rotating spindle

\$SNS_MEA_RESULT_OFFSET_TAB_LEN3[0] ... 2nd peripheral speed
 \$SNS_MEA_RESULT_OFFSET_TAB_LEN3[1] ... offset value for radius regarding 1st radius and 2nd peripheral speed
 \$SNS_MEA_RESULT_OFFSET_TAB_LEN3[2] ... offset value for radius regarding 2nd radius and 2nd peripheral speed
 \$SNS_MEA_RESULT_OFFSET_TAB_LEN3[3] ... offset value for radius regarding 3rd radius and 2nd peripheral speed
 \$SNS_MEA_RESULT_OFFSET_TAB_LEN3[4] ... offset value for radius regarding 4th radius and 2nd peripheral speed

54708	MEA_RESULT_OFFSET_TAB_LEN4	-	-
mm	Offset table 3rd peripheral speed (length)	DOUBLE	Immediately
-			
-	5	0, 0, 0, 0, 0	- - 7/5 U

Description: Parameter for user-defined measurement result offset for tool measuring with rotating spindle

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\$SNS_MEA_RESULT_OFFSET_TAB_LEN4[0]	... 3rd peripheral speed
\$SNS_MEA_RESULT_OFFSET_TAB_LEN4[1]	... offset value for radius regarding 1st radius and 3rd peripheral speed
\$SNS_MEA_RESULT_OFFSET_TAB_LEN4[2]	... offset value for radius regarding 2nd radius and 3rd peripheral speed
\$SNS_MEA_RESULT_OFFSET_TAB_LEN4[3]	... offset value for radius regarding 3rd radius and 3rd peripheral speed
\$SNS_MEA_RESULT_OFFSET_TAB_LEN4[4]	... offset value for radius regarding 4th radius and 3rd peripheral speed

54709	MEA_RESULT_OFFSET_TAB_LEN5			-	-	
mm	Offset table 4th peripheral speed (length)			DOUBLE	Immediately	
-						
-	5	0, 0, 0, 0, 0	-	-	7/5	U

Description: Parameter for user-defined measurement result offset for tool measuring with rotating spindle

\$SNS_MEA_RESULT_OFFSET_TAB_LEN5[0]	... 4th peripheral speed
\$SNS_MEA_RESULT_OFFSET_TAB_LEN5[1]	... offset value for radius regarding 1st radius and 4th peripheral speed
\$SNS_MEA_RESULT_OFFSET_TAB_LEN5[2]	... offset value for radius regarding 2nd radius and 4th peripheral speed
\$SNS_MEA_RESULT_OFFSET_TAB_LEN5[3]	... offset value for radius regarding 3rd radius and 4th peripheral speed
\$SNS_MEA_RESULT_OFFSET_TAB_LEN5[4]	... offset value for radius regarding 4th radius and 4th peripheral speed

54710	MEA_RESULT_OFFSET_TAB_LEN6			-	-	
mm	Offset table 5th peripheral speed (length)			DOUBLE	Immediately	
-						
-	5	0, 0, 0, 0, 0	-	-	7/5	U

Description: Parameter for user-defined measurement result offset for tool measuring with rotating spindle

\$SNS_MEA_RESULT_OFFSET_TAB_LEN6[0]	... 5th peripheral speed
\$SNS_MEA_RESULT_OFFSET_TAB_LEN6[1]	... offset value for radius regarding 1st radius and 5th peripheral speed
\$SNS_MEA_RESULT_OFFSET_TAB_LEN6[2]	... offset value for radius regarding 2nd radius and 5th peripheral speed
\$SNS_MEA_RESULT_OFFSET_TAB_LEN6[3]	... offset value for radius regarding 3rd radius and 5th peripheral speed
\$SNS_MEA_RESULT_OFFSET_TAB_LEN6[4]	... offset value for radius regarding 4th radius and 5th peripheral speed

54740	MEA_FUNCTION_MASK			-	-	
-	Function mask for measuring cycles, workpiece and tool measuring			DWORD	Immediately	
-						
-	-	8	-	-	7/5	U

Description: Function mask for measuring cycles

Bit 0: Repeat measurement, workpiece measurement with offset in a tool, after tolerance exceeded for dimension difference (TDIF) or confidence range (TSA)

0: When one of the tolerances is exceeded, the measurement is not repeated and an appropriate alarm

is displayed (alarm 61303 or 61306).

1: When one of the tolerances is exceeded, a measurement is repeated up to four times.

When, for all repeat measurements, one of the tolerances is exceeded, then an appropriate alarm is displayed (alarm 61303 or 61306).

Bit 1: Repeat measurement, workpiece measurement with offset in a tool, program stop at M0,

After every repeat measurement with tolerance of dimension difference (TDIF) or confidence range (TSA) exceeded and alarm output

Bit 1 only effective in conjunction with bit 0 = 1.

0: If one of the tolerances is exceeded, the measurement is not repeated and an appropriate alarm

is displayed (alarm 61303 or 61306).

1: If one of the tolerances is exceeded, the measurement is repeated up to four times.

In the case of a tolerance being repeatedly exceeded, using an appropriate alarm output and M0, the measurement is interrupted (alarm 62303 or 62306).

With "NC-START", the alarm can be acknowledged, and the next repeat measurement started.

Bit 2: Workpiece measurement with offset in a tool, programmed stop at M0 after tolerance exceeded

from lower limit workpiece (TLL) or upper limit workpiece (TUL) and alarm output

0: If one of the tolerances is exceeded, an appropriate reset alarm is displayed

(alarm 61304 or 61305). A tool correction (offset) is not executed.

1: If one of the tolerances is exceeded, then using an appropriate alarm output

and M0, the sequence is canceled (alarm 62304 or 62305).

Using "NC-START" these alarms can be acknowledged, and the sequence restarted. The correction (offset) in the tool is executed.

Bit 3: Accept the calibrated radius of the workpiece probe in the tool data

0: Do not accept the calibrated radius of the workpiece probe in the tool data.

1: Accept the calibrated radius of the workpiece probe in the tool data.

Bit 4: For mixed technologies, turning-milling or milling-turning, the plane between calibrating and

measuring can be different.

0: When measuring workpieces, it is not permissible to have different planes for calibration and measurement.

If the planes differ, alarm 61341 is output during the cycle runtime.

1: When measuring workpieces, different planes for calibration and measurement are permissible.

For example: Calibration in G17 and measurement under turning in G18.

Bit 16: Repeat measurement, tool measurement, after tolerances of the dimension difference are exceeded (TDIF)

or confidence range (TSA) exceeded

0: If one of the tolerances is exceeded, the measurement is not repeated, and an appropriate alarm is displayed (alarm 61303 or 61306).

1: When one of the tolerances is exceeded, the measurement is repeated up to four times.

If, for all repeat measurements, one of the tolerances is exceeded, then an appropriate alarm is displayed (alarm 61303 or 61306).

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Bit 17: Repeat measurement, tool measurement, programmed stop at M0 after tolerance exceeded, dimension difference (TDIF) or confidence range (TSA) and alarm output

0: If one of the tolerances is exceeded, the measurement is not repeated, and an appropriate alarm is displayed (alarm 61303 or 61306).

1: If one of the tolerances is exceeded, the measurement is repeated up to four times.

In the case that the tolerance is exceeded again, using an appropriate alarm output and M0 measurement is canceled (alarm 62303 or 62306).

Using "NC-START", the alarm can be acknowledged, and the next repeat measurement started.

Bit 19: Tool measurement, milling technology, reducing the spindle speed at the last probing

0: The last probing is realized without reducing the spindle speed.

1: At the last probing, the spindle speed is automatically reduced.

54750	MEA_ALARM_MASK			-	-	
-	Expert mode for cycle alarms			DWORD	Immediately	
-						
-	-	0	-	-	7/5	U

Description: Bit 0 - 15 reserved for workpiece measurement
Bit 16 - 31 reserved for tool measurement

54760	MEA_FUNCTION_MASK_PIECE			-	-	
-	Setting f. input screen, measuring cycles in Automatic, workpiece measuring			DWORD	Immediately	
-						
-	-	131586	-	-	7/5	U

Description: Setting for the input screen, measuring cycles in automatic, workpiece measurement

Bit1 Display Selection of softkey 3D measurement
Bit3 Enable Selection of probe calibration data field
Bit4 Select Calibrate input measuring feed 1)
Bit6 Enable Selection of WO compensation in basic frame (SETFRAME)
Bit7 Enable Selection of WO compensation in channel-specific basic frame
Bit8 Enable Selection of WO compensation in global basic frame
Bit9 Enable Selection of WO compensation in settable frame
Bit10 Enable Selection of WO compensation, coarse and fine
Bit11 Select Tool offset geometry and wear
Bit12 Select Tool offset, not inverted and inverted
Bit13 Select Tool offset L1, R or L1, L2, L3 R
Bit14 Select Tool offset work offset (_TZL)
Bit15 Select Tool offset dimensional difference check (_TDIF)
Bit16 Select Workpiece measurement with spindle reversal
Bit17 Select Align workpiece probe in switching direction
Bit18 Select Number of measurements (_NMSP)
Bit19 Select Offset with averaging (_TMV) 1)
Bit20 Select Empirical values (_EVNUM)
Bit21 Select Additive setup offset
Bit22 Select Calibrate to unknown or known center point
Bit24 Select Calibrate with/without positional deviation
Bit25 Enable Select Work offset when measuring the angularity of the spindle

Bit26 Select Do not enable tool offset

Bit27 Do not enable: Select tolerance of linear vectors with measurement of complete kinematics

Bit28 Enable Select adapt tool length

If WO compensation bit 6..10 is not selected, then list "Measure only"..

If WO compensation bit 6..10 is selected, then always also list compensation in active WO in the input screen

For averaging, display the following parameters: _K_TMV, _EVNUM

1) Input measuring feed applies to automatic and JOG

54762	MEA_FUNCTION_MASK_TOOL			-	-	
-	Setting for input screen, measuring cycles in Automatic, tool measuring			DWORD	Immediately	
-						
-	-	0	-	-	7/5	U

Description: Setting for input screen, Measuring cycles in Automatic, Tool measurement

54762 MEA_FUNCTION_MASK_TOOL

Bit3 Enable selection of tool probe calibration data field

Bit4 Select Calibrate input measuring feed (VMS) 1)

Bit5 Select Input feed and spindle speeds for contacting

Bit7 Select Measure in Machine and Work

Bit8 Select Measure absolute and incremental

Bit9 Select Tool offset geometry and wear

Bit10 Select measuring function "Check teeth individually"

Bit11 Select Spindle reversal when calibrating on the plane

Bit12 Select Number of measurements (_NMSP)

Bit13 Select Empirical values (_EVNUM)

Bit14 Select offset correction with selection of direction

1) Measuring feed input applies to Automatic and JOG

54764	MEA_FUNCTION_MASK_TURN			-	-	
-	Setting for input screen, Measuring cycles in Automatic, Workpiece turning			DWORD	Immediately	
-						
-	-	0	-	-	7/5	U

Description: 54764 MEA_FUNCTION_MASK_TURN

Setting for input screen, Measuring cycles Turning in Automatic

Bit0 Measure inside/outside diameter with reversal

Bit1 Measure inside/outside diameter "travel under turning center"?

54780	J_MEA_FUNCTION_MASK_PIECE			-	-	
-	Settings for input screen Workpiece measurement in JOG			DWORD	Immediately	
-						
-	-	131584	-	-	7/5	U

Description: Settings for input screen Workpiece measuring in JOG

Bit2 Activate compensation for electronic workpiece probe

Bit3 Select probe calibration data field, enable

Bit5 Select WO as basis for measuring

Bit6 Select WO compensation in basic frame, enable

Bit7 Select WO compensation in channel basic frame, enable

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Bit8 Select WO compensation in global basic frame, enable
 Bit9 Select WO compensation in settable frame, enable
 Bit16 Select Workpiece measurement with spindle reversal
 Bit17 Select Align workpiece probe in switching direction
 Bit28 Select adapt tool length, enable

54782	J_MEA_FUNCTION_MASK_TOOL	-	-
-	Settings for input screen Tool measuring in JOG	DWORD	Immediately
-			
-	-	0	-
-	-	-	-
-	-	7/5	U

Description: Settings for input screen Tool measuring in JOG
 Bit2 Enable automatic tool measurement
 Bit3 Enable selection of tool probe calibration data field
 Bit10 Select measuring function "Check teeth individually"
 Bit 11 Select spindle reversal when calibrating on the plane

55200	MAX_INP_FEED_PER_REV	-	-
mm/rev	Upper limit feedrate/rev	DOUBLE	Immediately
-			
-	-	1	0
-	-	15	7/4
-	-	M	

Description: Feedrate input upper limit for mm/rev

55201	MAX_INP_FEED_PER_TIME	-	-
mm/min	Upper limit feedrate/min	DOUBLE	Immediately
-			
-	-	10000	0
-	-	100000	7/4
-	-	M	

Description: Feedrate input upper limit for mm/min

55202	MAX_INP_FEED_PER_TOOTH	-	-
mm	Upper limit feedrate/tooth	DOUBLE	Immediately
-			
-	-	1	0
-	-	5	7/4
-	-	M	

Description: Feedrate input upper limit for mm/tooth

55212	FUNCTION_MASK_TECH_SET	-	-
-	Function mask Cross-technology	BYTE	Immediately
-			
-	-	6	-
-	-	-	7/4
-	-	M	

Description: Function mask for all technologies
 Bit 0: Tool preselection active
 Bit 1: Calculate thread depth from thread pitch
 Bit 2: Refer to Table for thread diameter and depth
 Bit 3: Delete programs generated from contour cycles (CYCLE63, CYCLE64, CYCLE952)
 0: Generated programs are not deleted (compatibility as before)
 1: Generated programs are deleted immediately after execution from the calling cycle

55214	FUNCTION_MASK_MILL_SET	-	-
-	Function mask Milling	DWORD	Immediately
-			
-	-	5	-
-	-	-	-
-	-	7/4	M

Description: Function mask for milling
 Bit 0: Default setting - milling cycles with synchronous operation
 Bit 2: Depth calculation in milling cycles without parameter SC
 Bit 3: First circle trochoidal milling islands

55216	FUNCTION_MASK_DRILL_SET	-	-
-	Function mask Drilling	DWORD	Immediately
-			
-	-	24	-
-	-	-	-
-	-	7/4	M

Description: Function mask for drilling
 Bit 0: Tapping CYCLE84: Reverse direction of spindle rotation during cycle
 Bit 1: Boring CYCLE86: Take into consideration rotation of the tool plane when positioning the spindle
 Bit 2: Boring CYCLE86: When positioning the spindle, take into account swiveled table kinematics (toolholder)
 Bit 3: Tapping CYCLE84: Monitoring machine data 31050 and 31060 of the spindle
 Bit 4: Tapping CYCLE840: Monitoring machine data 31050 and 31060 of the spindle
 Bit 6: Boring CYCLE86: Adapt spindle position to the orientation of the tool
 Tool orientation can be realized using TOOLCARR or TRAORI before the cycle is called.
 If bit6=1, bits 1 and 2 are no longer effective.
 Bit 7: Boring CYCLE86: Adapt the direction of the retraction path in the plane to active mirroring
 0: Retraction in the plane is realized as programmed
 1: When mirroring is active, when retracting in the plane, the direction is adapted in the cycle to the active mirroring.

55218	FUNCTION_MASK_TURN_SET	-	-
-	Function mask Turning	DWORD	Immediately
-			
-	-	1	-
-	-	-	-
-	-	7/4	M

Description: Function mask for turning
 Bit 0: New thread table for thread cutting
 Bit 1: Reserved (CYCLE93)
 Bit 2: Reserved (CYCLE93)
 Bit 3: Chamfer in CYCLE930 as chamfer length (CHF)
 Bit 4: Retraction from inside machining (CYCLE951)
 0: Compatibility as before
 If the necessity for rounding the corner is detected in the cycle, the tool is retracted from the inside machining, otherwise it is not.
 1: It is generally retracted from the inside machining in the cutting axis.

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55220	FUNCTION_MASK_MILL_TOL_SET	-	-
-	Function mask for high-speed settings CYCLE832	DWORD	Immediately
-			
-	-	0	-
			7/5
			M

Description:

Function mask for high-speed settings CYCLE832

Bit 0: Display input fields, technology

=0: Hide input fields, technology

=1: Display input fields technology

Bit 1: Enter orientation tolerance (OTOL) as factor of tolerance (CTOL) or directly enter

Bit 1 is only relevant for machines with orientation transformation that has been setup

=0: Orientation tolerance (OTOL) is calculated as factor of the entered tolerance

=1: Directly enter orientation tolerance (OTOL) into the input screen

The factor to calculate the orientation tolerance is saved in the following setting data

\$SCS_MILL_TOL_FACTOR_ROUGH for the machining type, roughing G group 59 DYNROUGH

\$SCS_MILL_TOL_FACTOR_SEMIFIN for the machining type, semi-finishing G group 59 DYNSEMIFIN

\$SCS_MILL_TOL_FACTOR_FINISH for the machining type, finishing G group 59 DYNFINISH

Bit 2: A mould-making function can be selected in the High Speed Settings mask

=0: The best available mould-making function is used automatically

- Top Surface option not active -> Advanced Surface

- Top Surface option active -> Top Surface

=1: The mould-making function (Advanced Surface or Top Surface) can be selected in the mask (only if the Top Surface option is active)

Bit 3: High Speed Settings mask without Advanced Surface option

=0: The High Speed Settings mask is only offered with the Advanced Surface option

=1: The High Speed Settings mask is also offered without the Advanced Surface option

Bit 4: Display smoothing selection

=0: Do not display smoothing selection (corresponds to smoothing = yes)

=1: Display smoothing selection

55221	FUNCTION_MASK_SWIVEL_SET	-	-
-	Function mask for swivel CYCLE800	DWORD	Immediately
-			
-	-	256	-
			7/3
			M

Description:

Function mask for swivel CYCLE800

The settings of the function mask (bits 0 to 4) for swivel act on all swivel data records

Bit 0: Show "No swivel" input field

=0: Hide "No swivel" input field

=1: Show "No swivel" input field

Bit 1: Retract "fixed point 1/2" instead of "Z", "Z XY"

=0: Selection text retract "Z" or retract "Z XY"

=1: Selection text retract "fixed point 1" or retract "fixed point 2"

Bit 2: Permit selection of "deselection" of the swivel data record

=0: Do not permit selection of "deselection" of the swivel data record (hide)

=1: Permit selection of "deselection" of the swivel data record

Bit 3: Show active swivel plane under swivel in JOG

=0: Hide active swivel plane under swivel in JOG
 =1: Show active swivel plane under swivel in JOG
 Bit 4: Evaluate input values for swiveling in the pole position of the machine kinematics
 =0: Evaluation of the input values with swiveling in pole position
 =1: No evaluation of the input values with swiveling in pole position (compatibility)
 Starting from the initial position of the machine kinematics, the input values when swiveling are evaluated so that continuous swiveling around the pole axis is possible
 Pole axis is the rotary axis of the swivel data record that rotates around the tool axis
 Example: rotary axis C rotates around Z for G17./
 Additional settings of the pole axis:
 Angular range (traversing range) of >360 degrees in the swivel data record
 Bit 5 Align tool (turning technology) using frame calculation (TCOFRY) or absolute (TCOABS)
 The tool orientation of the orientable tool carrier is calculated either using a frame calculation (TCOFRY for G18) or in absolute terms with TCOABS
 For B axis kinematics of a turning machine, the tool spindle in the initial setting of the kinematics can be set up parallel to either Z or to X. See also "Swivel data" under Commissioning.
 For new systems being commissioned, it is recommended you set bit 5=1:
 =0: Align tool using frame calculation (TCOFRY for G18)
 =1: Align tool absolutely (TCOABS)
 Bit 6: Do not offer "direct" swivel mode under swivel in JOG
 =0: "Direct" swivel mode is offered under swivel in JOG
 =1: "Direct" swivel mode is not offered under swivel in JOG
 Bit 7: Swivel plane: Direction selection in initial setting of the kinematics
 Behavior with swivel plane in initial setting of the kinematics if the NCK calculates two solutions:
 =0 With selected direction + or -, both calculated solutions of the rotary axes are approached.
 =1 With selected direction + or -, only one of the calculated solutions of the rotary axes is approached.
 Compatibility for PowerLine up to SW 7.x and for SolutionLine up to SW 1.x
 Bit 8: Work offset of the rotary axes of the swivel data record traversed as an offset
 =0 Work offset of the rotary axes of the swivel data record is only taken into account in the WCS (compatibility)
 =1 Work offset of the rotary axes of the swivel data record traversed as an offset
 Setting is in conjunction with MD21186 \$MC_TOCARR_ROT_OFFSET_FROM_FR
 Bit 9: Swivel data set TC permanently assigned to the tool
 =0 Display number of the swivel data record TC
 =1 Do not display number of the swivel data record TC
 Assignment of the swivel data record to the tool is performed in SGUD_TC_GNO if technology cylindrical grinding is set in MD52200 \$MCS_TECHNOLOGY =3
 Example:
 _TC_GNO can be written by the machine manufacturer in the tool change program L6
 Bit 10: Swivel plane: Show input field "positioning direction"
 =0: The input field "positioning direction" is hidden.
 =1: The input field "positioning direction" is displayed with swivel tables and swivel head / table combinations.
 Bit 11: Positioning of both solutions of an AB kinematics

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=0 Compatibility. Positioning of only one solution with specific swivel angles

=1 Positioning of both solutions calculated by the NCK

Bit11 should be set =1 with kinematics, on which - in the basic position - none of the two rotary axes rotates around

the tool axes (AB kinematics with tool axes in Z direction)

Bit 12: Swivel plane, tool alignment: reset behavior taking the rotary axis positions into account

=0 Compatibility. Reset state refers to the end positions of the rotary axes in the swivel data record

=1 Reset state refers to the current positions of the rotary axes in the swivel data record

If bit12=0, a linear axis identifier is written in the parameters \$TC_CARR21/22.

The tool carrier is thus initialized with the end positions of the rotary axes (\$TC_CARR13/14) on reset (TCOABS).

If Bit12=1, the names of the rotary axes of the swivel data record are written in the parameters \$TC_CARR21/22.

The tool carrier is thus initialized with the actual values of the rotary axes on reset (TCOABS).

Bit 13: Activation of the extended evaluation of the rotations with axis-by-axis swiveling in the pole position.

=0 No evaluation of the rotations with swiveling in the pole position (compatibility)

The settings of bits 4 and 11 apply

=1 Extended evaluation of the rotations with swiveling in the pole position

With kinematics with 2 rotary axes, one of the rotary axes can be the pole axis. A rotary axis is then in the pole position, if it rotates around the tool axis. In contrast to bit4, the input values are still evaluated if bit13 is set if the 1st rotary axis is not in the initial position.

Example: Table kinematics with 1st rotary axis A (rotates around X) and 2nd rotary axis B (rotates around Y) G17

After axis-by-axis swiveling around Y and then around X=90°, the 2nd rotary axis is in pole position.

Setting for swivel data record: Rotary axis reference must be set to the rotary axis that is not the pole axis (in the example: rotary axis 1).

When the bit is set, the input rotations are evaluated so that continuous swiveling around the pole axis/tool axis is possible. The following applies: the "+" solution of CYCLE800 has no additional rotation, whereas the "-" solution has an additional 180° rotation in the Actframe in the tool axis.

If bit13 is set, the settings of bits 4 and 11 have no effect.

55230	CIRCLE_RAPID_FEED			-	-	
mm/min	Positional feed on circular paths			DOUBLE	Immediately	
-						
-	-	10000	100	100000	7/4	M

Description: Rapid traverse feedrate in mm/min for positioning on circle path

55232	SUB_SPINDLE_REL_POS			-	-	
mm	Retract position Z for counterspindle			DOUBLE	Immediately	
-						
-	-	0	-	-	7/4	M

Description: Z retraction position for the counterspindle

55260	MAJOG_SAFETY_CLEARANCE			-	-	
mm	Safety clearance for machine JOG			DOUBLE	Immediately	
-						
-	-	1	0.1	100	7/4	M

Description: Safety clearance for machine JOG

55261	MAJOG_RELEASE_PLANE			-	-	
mm	Retraction plane for machine JOG			DOUBLE	Immediately	
-						
-	-	100	-	-	7/4	M

Description: Retraction plane for machine JOG

55300	EASY_SAFETY_CLEARANCE			-	-	
mm	Simple input: Safety clearance			DOUBLE	Immediately	
-						
-	-	1	-	-	7/4	M

Description: Simple input: safety clearance
The input field for the safety clearance is not available in the simple input screens.
Instead, the value of this setting date is always used.

55301	EASY_DWELL_TIME			-	-	
s	Simple input: dwell time			DOUBLE	Immediately	
-						
-	-	0.6	-100	100	7/4	M

Description: Simple input: dwell time in seconds
The input fields for dwell times are not available in the simple input screens.
Instead, the value of this setting data is always used.

55305	EASY_DRILL_DEEP_FD1			-	-	
%	Simple input: percentage 1st feedrate deep-hole drilling			DOUBLE	Immediately	
-						
-	-	90	0	100	7/7	U

Description: Simple input: percentage 1st feedrate deep-hole drilling
The input field for this percentage is not available in the simple input screens.
Instead, the value of this setting data is always used.

55306	EASY_DRILL_DEEP_DF			-	-	
%	Simple input: percentage infeed deep-hole drilling			DOUBLE	Immediately	
-						
-	-	90	0	100	7/7	U

Description: Simple input: percentage infeed deep-hole drilling
The input field for this percentage is not available in the simple input screens.
Instead, the value of this setting data is always used.

55307	EASY_DRILL_DEEP_V1			-	-	
mm	Simple input: min. depth infeed deep-hole drilling			DOUBLE	Immediately	
-						
-	-	1.2	-	-	7/4	M

2.5 Machine and setting data cycles

Description: Simple input: min. depth infeed deep-hole drilling
 The input field for the minimum depth infeed is not available in the simple input screens.
 Instead, the value of this setting data is always used.

55308	EASY_DRILL_DEEP_V2	-	-
mm	Simple input: absolute retraction value deep-hole drilling	DOUBLE	Immediately
-			
-	-	1.4	-

Description: Simple input: absolute retraction value deep-hole drilling
 The input field for the absolute retraction value is not available in the simple input screens.
 Instead, the value of this setting data is always used

55309	EASY_THREAD_RETURN_DIST	-	-
mm	Simple input: return distance thread tapping	DOUBLE	Immediately
-			
-	-	2	-

Description: Simple input: return distance thread tapping
 The input field for the return distance is not available in the simple input screens.
 Instead, the value of this setting data is always used.

55400	MILL_ENGRAVE_POINT_RAD	-	-
mm	Engraving cycle CYCLE60: Circ. path radius for generating the char. "point"	DOUBLE	Immediately
-			
-	-	0	0

Description: Input value equals zero: The character "point" is realised by a simple linear insertion movement of the tool
 (Default setting for conventional engraving tools, compatibility).
 Input value greater than zero: The character "point" is executed as a circle with the radius value from this setting data
 (Setting for certain special tools).

55410	MILL_SWIVEL_ALARM_MASK	-	-
-	Hide and unhide cycle alarms	DWORD	Immediately
-			
-	-	0	-

Description: Display of cycle alarms CYCLE800, CYCLE996, CYCLE9960
 Bit 0: Display alarm 62186: Active work offset G54 ff. and base (basic reference) contain rotations
 Bit 1: Display alarm 62187: Active base and basic reference (G500) contain rotations
 Bit 2: Display alarm 61148: Swivel plane not possible with active turning tool
 Bit 3: Display alarm 61426: Kinematics measurement with CYCLE9960/996. Hide 1 = Alarm 61426

55420	MILL_SWIVEL_RESET_RETRACT	-	-
-	Initial setting swivel: retract	BYTE	Immediately
-			
-	-	0	0

Description:

Initial setting swivel: retract

With this setting data, the status adopted by the toggler "Retract" in the mask "Swivel plane" when activating the "Initial setting" softkey can be set:

- 0 = no change
- 1 = no
- 2 = Z
- 3 = Z XY
- 4 = Tool direction max.
- 5 = Tool direction inc.

55421	MILL_SWIVEL_RESET_TRACK	-	-
-	Initial setting swivel: tool correction	BYTE	Immediately
-			
-	-	0	0
		2	7/5
			M

Description:

Initial setting swivel: Tool correction

With this setting data, the status adopted by the toggler "Tool correction" in the mask "Swivel plane" after activating the softkey "Initial setting" can be set:

- 0 = no change
- 1 = do not correct
- 2 = correct

55422	MILL_SWIVEL_RESET_MODE	-	-
-	Initial setting swivel: swivel mode	BYTE	Immediately
-			
-	-	0	0
		1	7/5
			M

Description:

Initial setting for swivel: Swivel mode

With this setting data, the state of the "Swivel mode" toggler in the "Swivel plane" mask can be set with the "Initial setting" softkey:

- 0 = axis by axis
- 1 = direct

55441	MILL_TOL_FACTOR_ROUGH	-	-
-	Rotary axes tolerance factor for roughing CYCLE832 of G group 59	DOUBLE	Immediately
-			
-	-	10	0
		1000	7/5
			U

Description:

Rotary axes tolerance factor for roughing CYCLE832 of G group 59

55442	MILL_TOL_FACTOR_SEMIFIN	-	-
-	Rotary axes tolerance factor for prefinishing CYCLE832 of G group 59	DOUBLE	Immediately
-			
-	-	10	0
		1000	7/5
			U

Description:

Rotary axes tolerance factor for prefinishing CYCLE832 of G group 59

55443	MILL_TOL_FACTOR_FINISH	-	-
-	Rotary axes tolerance factor for finishing CYCLE832 of G group 59	DOUBLE	Immediately
-			
-	-	10	0
		1000	7/5
			U

2.5 Machine and setting data cycles

Description: Rotary axes tolerance factor for finishing CYCLE832 of G group 59

55446	MILL_TOL_VALUE_ROUGH	-	-
mm	Tolerance value for roughing CYCLE832 (High Speed Settings)	DOUBLE	Immediately
-			
-	-	0.1	0
		10	7/5
			U

Description: Tolerance value for roughing CYCLE832

55447	MILL_TOL_VALUE_SEMIFIN	-	-
mm	Tolerance value for smooth-finishing CYCLE832 (High Speed Settings)	DOUBLE	Immediately
-			
-	-	0.05	0
		10	7/5
			U

Description: Tolerance value for prefinishing CYCLE832

55448	MILL_TOL_VALUE_FINISH	-	-
mm	Tolerance value for finishing CYCLE832 (High Speed Settings)	DOUBLE	Immediately
-			
-	-	0.01	0
		10	7/5
			U

Description: Tolerance value for finishing CYCLE832

55460	MILL_CONT_INITIAL_RAD_FIN	-	-
mm	Contour pocket milling: approach circle radius finishing	DOUBLE	Immediately
-			
-	-	0	0
		100	7/4
			M

Description: This data affects the radius of the approach circle during contour pocket finishing.
 0: the radius is selected to maintain a safety clearance to the finishing allowance in the starting point.
 >0: the radius is selected to maintain the value of this setting data to the finishing allowance in the starting point.

55481	DRILL_TAPPING_SET_GG12	-	-
-	Setting tapping G group 12: block change behavior at exact stop	DOUBLE	Immediately
-			
-	2	0	0
		3	7/4
			M

Description: Settings for tapping G group 12 cycle CYCLE84 and CYCLE840:
 G group 12: block change behavior at exact stop (G60)

55482	DRILL_TAPPING_SET_GG21	-	-
-	Setting tapping G group 21: acceleration profile	DOUBLE	Immediately
-			
-	2	0	0
		3	7/4
			M

Description: Settings for tapping G group 21 cycle CYCLE84
 G group 21: acceleration profile (SOFT, BRISK, ...)

55483	DRILL_TAPPING_SET_GG24	-	-
-	Setting tapping G group 24: precontrol	DOUBLE	Immediately
-			
-	2	0	0
		2	7/4
			M

Description: Settings for tapping G group 24 cycle CYCLE84 and CYCLE840:
G group 24: precontrol (FFWON, FFWOF)

55484	DRILL_TAPPING_SET_MC	-	-
-	Setting tapping: spindle operation at MCALL	DOUBLE	Immediately
-			
-	2	0	0
		1	7/4
			M

Description: Setting for tapping cycle CYCLE84 spindle operation at MCALL
0= reactivate spindle operation at MCALL
1= maintain position-controlled spindle operation at MCALL

55489	DRILL_MID_MAX_ECCENT	-	-
mm	Max. center offset f. center boring	DOUBLE	Immediately
-			
-	-	0.5	0
		10	7/4
			M

Description: Maximum center offset for center boring

55490	DRILL_SPOT_DIST	-	-
mm	Preboring depth drill and thread milling	DOUBLE	Immediately
-			
-	-	1	0
		100	7/4
			M

Description: Preboring depth for drill and thread milling

55500	TURN_FIN_FEED_PERCENT	-	-
%	Roughing feedrate for complete machining in %	BYTE	Immediately
-			
-	-	100	1
		100	7/4
			M

Description: When selecting Complete machining (roughing and finishing), the percentage of the entered feedrate F as specified in this setting data is used for finishing.

55505	TURN_ROUGH_O_RELEASE_DIST	-	-
mm	Return distance stock removal for external machining	DOUBLE	Immediately
-			
-	-	1	-1
		100	7/4
			M

Description: Using this setting data, you enter the clearance, by which the tool is retracted from the contour when removing stock from an outer corner. This is not applicable for removing stock from a contour
1: The safety clearance is used as clearance.

55506	TURN_ROUGH_I_RELEASE_DIST	-	-
mm	Return distance stock removal for internal machining	DOUBLE	Immediately
-			
-	-	0.5	-1
		100	7/4
			M

Description: Using this setting data, you enter the clearance, by which the tool is retracted from the contour when removing stock from an inner corner. This is not applicable for removing stock from a contour.
-1: The safety clearance is used as clearance.

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55510	TURN_GROOVE_DWELL_TIME	-	-
s	Tool clearance time for grooving at the base (neg. value=rotations)	DOUBLE	Immediately
-			
-	-	-1	-100
		100	7/4
			M

Description: If a tool clearance time occurs in a cycle, e.g. deep hole drilling, grooving, the value of this setting data is used

- negative value in spindle revolutions
- positive value in seconds

55540	TURN_PART_OFF_CTRL_DIST	-	-
mm	Path for cut-off check	DOUBLE	Immediately
-			
-	-	0.1	0
		10	7/4
			M

Description: Path for cut-off check

55541	TURN_PART_OFF_CTRL_FEED	-	-
mm/min	Feedrate for cut-off check	DOUBLE	Immediately
-			
-	-	0	-
		-	7/4
			M

Description: Feedrate for cut-off check

55542	TURN_PART_OFF_CTRL_FORCE	-	-
%	Force for cut-off check in %	DOUBLE	Immediately
-			
-	-	10	1
		100	7/4
			M

Description: Force in percent for cut-off check

55543	TURN_PART_OFF_RETRACTION	-	-
mm	Retraction path prior to cut-off with counterspindle	DOUBLE	Immediately
-			
-	-	0	0
		1	7/4
			M

Description: Retraction path prior to cut-off with counterspindle

55550	TURN_FIXED_STOP_DIST	-	-
mm	Counterspindle: path for travel to fixed stop	DOUBLE	Immediately
-			
-	-	10	0.001
		1000	7/4
			M

Description: In this setting data you specify the distance to the programmed target position, after which the counterspindle travels with a special feedrate during travel to fixed stop (see 55551 \$SCS_TURN_FIXED_STOP_FEED).

55551	TURN_FIXED_STOP_FEED	-	-
mm/min	Counterspindle: feedrate for travel to fixed stop	DOUBLE	Immediately
-			
-	-	0	-
		-	7/4
			M

Description: In this setting data you specify the feedrate with which the counterspindle travels to a fixed stop. In setting data 55550 \$SCS_TURN_FIXED_STOP_DIST you specify the distance after which the tool travels in this feedrate.

55552	TURN_FIXED_STOP_FORCE	-	-
%	Counterspindle: force for travel to fixed stop in %	DOUBLE	Immediately
-			
-	-	10	1
		100	7/4
			M

Description: In this setting data you specify at which percentage of the driving force the counterspindle is to stop during travel to fixed stop.

55553	TURN_FIXED_STOP_RETRACTION	-	-
mm	Counterspindle: retraction path prior to chucking after fixed stop	DOUBLE	Immediately
-			
-	-	0	0
		1	7/4
			M

Description: Retraction path prior to chucking after travel to fixed stop

55580	TURN_CONT_RELEASE_ANGLE	-	-
degrees	Contour turning: retraction angle	DOUBLE	Immediately
-			
-	-	45	0
		90	7/4
			M

Description: This setting data defines the angle by which the tool is retracted from the contour during contour turning roughing.

55581	TURN_CONT_RELEASE_DIST	-	-
mm	Contour turning: retraction value	DOUBLE	Immediately
-			
-	-	1	0.01
		10	7/4
			M

Description: This setting data defines the value by which the tool is retracted in both axes during contour turning roughing.

55582	TURN_CONT_TRACE_ANGLE	-	-
degrees	Contour turning: minimum angle for rounding along contour	DOUBLE	Immediately
-			
-	-	5	0
		90	7/4
			M

Description: This setting data specifies the angle between the cutting edge and the contour, at which the contour is rounded in order to remove residual material.

55583	TURN_CONT_VARIABLE_DEPTH	-	-
%	Contour turning: percentage for variable cutting depth	BYTE	Immediately
-			
-	-	20	0
		50	7/4
			M

Description: Percentage for variable cutting depth during contour turning

55584	TURN_CONT_BLANK_OFFSET	-	-
mm	Contour turning: blank allowance	DOUBLE	Immediately
-			
-	-	1	0
		100	7/4
			M

Description: This setting data specifies the distance to the blank, after which contour turning is switched from G0 to G1 in order to adjust any possible blank allowances.

2.5 Machine and setting data cycles

55585	TURN_CONT_INTERRUPT_TIME	-	-
s	Contour turning: feed interrupt time (neg. values = revolutions)	DOUBLE	Immediately
-			
-	-	-1	-

Description: Feed interrupt time during contour turning, contour grooving and plunge turning

- negative value in spindle revolutions
- positive value in seconds

This setting data is effective only if setting data 55586 is
\$SCS_TURN_CONT_INTER_RETRACTION = 0.

55586	TURN_CONT_INTER_RETRACTION	-	-
mm	Contour turning: retraction path after feed interrupt	DOUBLE	Immediately
-			
-	-	1	0

Description: Retraction path feed interrupt during contour turning, contour grooving and plunge turning:

>0: retraction path after feed interrupt (setting data 55585
\$SCS_TURN_CONT_INTERRUPT_TIME is ineffective!)
=0: no retraction path

55587	TURN_CONT_MIN_REST_MAT_AX1	-	-
%	Contour turning: minimum difference dimension residual machining axis 1	DOUBLE	Immediately
-			
-	-	50	0

Description: This MD defines the limit value for stock removal of residual material in the direction of the 1st axis.

Example:

If this MD is set to 50% and if the finishing allowance is 0.5mm, the residual material which is thinner than 0.25mm is not removed in a separate machining step, but during finishing.

55588	TURN_CONT_MIN_REST_MAT_AX2	-	-
%	Contour turning: minimum difference dimension residual machining axis 2	DOUBLE	Immediately
-			
-	-	50	0

Description: This MD defines the limit value for stock removal of residual material in the direction of the 2nd axis.

Example:

If this MD is set to 50% and if the finishing allowance is 0.5mm, the residual material which is thinner than 0.25mm is not removed in a separate machining step, but during finishing.

55595	TURN_CONT_TOOL_BEND_RETR	-	-
mm	Contour plunge turning: retraction path due to tool bending	DOUBLE	Immediately
-			
-	-	0.1	0

Description: Retraction due to tool bending during plunge turning

55596	TURN_CONT_TURN_RETRACTION	-	-
mm	Contour plunge turning: retraction depth prior to turning	DOUBLE	Immediately
-			
-	-	0.1	0
-	-	1	7/4
-	-	M	

Description: Retraction depth prior to plunge turning

55613	MEA_RESULT_DISPLAY	-	-
-	Selection of measurement result display	BYTE	Immediately
-			
-	-	0	0
-	-	10	7/7
-	-	U	

Description: Measurement results screen display

- =0: No measurement results screen
- =1: The measurement results screen is visible for a fixed time of 8 seconds
- =3: When the measurement results screen is visible, the cycle is stopped by an internal M0;
on NC start the measuring cycle is resumed and the measurement results screen is deselected.
- =4: The measurement results screen only appears in the case of cycle alarms 61303, 61304, 61305, 61306.

55614	MEA_RESULT_MRD	-	-
-	Program control of the display of the measurement result image MRD	BYTE	Immediately
-			
-	-	1	0
-	-	1	7/7
-	-	U	

Description: Setting of the program control of the display of the measurement result image MRD

- 0= Hide measurement result image
- 1= Show measurement result image

55618	MEA_SIM_ENABLE	-	-
-	Setting measuring cycles under a simulated environment	BYTE	Immediately
-			
-	-	1	0
-	-	9	7/5
-	-	U	

Description: Setting measuring cycles under a simulated environment

- =0: The measuring cycles are terminated without function.
- =1: The measuring cycles are executed.
 - Simulation in HMI Operate:
The traversing motion is visualized.
No measurement results and measurement result display are available.
 - SinuTrain:
Measurement results and measurement result display are available.
The traversing motion is visualized using simultaneous recording.
- For systems, that only operate with simulated axes
(e.g. virtual machine, test rack):
Measurement results and measurement results display are available.
The traversing motion is visualized with simultaneous recording.
In this case, the following settings must be observed:
MD10360 \$MN_FASTIO_DIG_NUM_OUTPUTS >=1
MD13230 \$MN_MEAS_PROBE_SOURCE = 1 to 4

2.5 Machine and setting data cycles

= 2 to 8: reserved

= 9 internal

55619	MEA_SIM_MEASURE_DIFF	-	-
mm	Value for simulated error of measurement	DOUBLE	Immediately
-			
-	-	0	-100
		100	7/5
			U

Description:

With this parameter simulated measurement errors can be specified on the measuring points.

Provided that SD55618 \$SCS_MEA_SIM_ENABLE=1 is used and that the measuring cycles are executed in a

simulated environment of HMI a measurement difference can be

entered in this parameter. The value of the measurement difference must be smaller than the measuring path in parameter _FA!

Otherwise cycle alarm 61301 "Probe does not switch" is output during active simulation.

55622	MEA_EMPIRIC_VALUE_NUM	-	-
-	Number of empirical values	DWORD	Immediately
-			
-	-	20	0
		20	7/5
			U

Description:

Number of empirical values

55623	MEA_EMPIRIC_VALUE	-	-
mm	Empirical value memory	DOUBLE	Immediately
-			
-	20	0	-100000
		100000	7/7
			U

Description:

In its default setting the empirical value memory consists of 20 memory elements.

Using parameter \$SCS_MEA_EMPIRIC_VALUE_NUM the number of memory elements can be defined! Currently, however, these 20 memory elements cannot be changed!

In the empirical value memory, empirical values can be stored which are cleared with the currently calculated

difference between the setpoint and the actual value.

Using parameter _EVNUM the empirical value element to be cleared is addressed!

55624	MEA_AVERAGE_VALUE_NUM	-	-
-	Number of mean values	DWORD	Immediately
-			
-	-	20	0
		20	7/5
			U

Description:

Number of mean values

55625	MEA_AVERAGE_VALUE	-	-
-	Mean value memory	DOUBLE	Immediately
-			
-	20	0	-100000
		100000	7/7
			U

Description:

In its default setting the mean value memory consists of 20 memory elements.

Using parameter \$SCS_MEA_AVERAGE_VALUE_NUM the number of memory elements can be defined! Currently, however, these 20 memory elements cannot be changed!

In the mean value memory, the mean values calculated in connection with functionality "Automatic tool offset with mean value creation" are stored.

Using parameter _EVNUM the mean value element to be used is addressed!

55628	MEA_TP_FEED_MEASURE	-	-
mm/min	Feed for calibrating a tool probe	DOUBLE	Immediately
-			
-	-	300	0
		5000	7/7
			U

Description: MEA_TP_FEED_MEASURE
Feed for calibrating a tool probe with stationary spindle in AUTO and JOG

55630	MEA_FEED_MEASURE	-	-
mm/min	Feed for calibrating a workpiece probe	DOUBLE	Immediately
-			
-	-	300	0
		5000	7/7
			U

Description: MEA_FEED_MEASURE
Feed for calibrating a workpiece probe in Automatic and JOG

55631	MEA_FEED_MEASURE_DEG	-	-
rev/min	Measurement feedrate of workpiece probe during positioning of a rotary axis	DOUBLE	Immediately
-			
-	-	1	0
		10	7/7
			U

Description: Measurement feedrate of workpiece probe during positioning of a rotary axis

55632	MEA_FEED_RAPID_IN_PERCENT	-	-
%	Rapid traverse velocity in per cent, for intermediate positioning	DOUBLE	Immediately
-			
-	-	50	0
		100	7/7
			U

Description: Traverse velocities for positioning in the measuring cycle between the measuring positions,
with rapid traverse velocity in per cent, with collision detection not active
Note:
If necessary, adapt the value of the rapid traverse velocity in per cent to the probe type used and to the
machine characteristics! This means that the maximum deflection of the actual probe type must be considered!!
Explanations:
In the measuring cycles any intermediate positions are calculated prior to the actual set of measurements. These positions can be approached

- with collision detection (SD55740 \$SCS_MEA_FUNCTION_MASK Bit0/Bit16=1 or
- without collision detection (SD55740 \$SCS_MEA_FUNCTION_MASK Bit0/Bit16=0).

Depending on this setting different velocities are used for the approach:

- with collision detection (SD55740 \$SCS_MEA_FUNCTION_MASK Bit0/Bit16=1):
With SD55634 \$SCS_MEA_FEED_PLAN_VALUE the traversing feed is performed in the plane and
with SD55636 \$SCS_MEA_FEED_FEEDAX_VALUE during traversing in the feed axis (applicable).
If the probe switches when these intermediate positions are approached, the movement is stopped and the alarm "Probe collision" is output.
- without collision detection (SD55740 \$SCS_MEA_FUNCTION_MASK Bit0/Bit16=0):
The intermediate positions are approached with the maximum axis velocity (rapid traverse) in per cent as specified in SD55632 \$SCS_MEA_FEED_RAPID_IN_PERCENT.
With SD55632 \$SCS_MEA_FEED_RAPID_IN_PERCENT=0 and SD55632
\$SCS_MEA_FEED_RAPID_IN_PERCENT=100 the maximum axis velocity is effective.

2.5 Machine and setting data cycles

55634	MEA_FEED_PLANE_VALUE	-	-
mm/min	Traverse velocity for intermediate positioning in the plane	DOUBLE	Immediately
-			
-	-	1000	0
		5000	7/7
			U

Description: MEA_FEED_MEASURE
Traversing velocity for the intermediate positioning in the plane in Automatic and JOG

55636	MEA_FEED_FEEDAX_VALUE	-	-
mm/min	Positioning velocity in the infeed axis	DOUBLE	Immediately
-			
-	-	1000	0
		10000	7/7
			U

Description: Traversing speed for intermediate positioning in the measuring cycle in the infeed axis, with or without collision detection

Note:

If necessary, adapt the value of the speed in the infeed axis to the probe type used and to the

machine characteristics! This means that the maximum deflection of the actual probe type must be considered!!

Explanations:

In the measuring cycles any intermediate positions are calculated prior to the actual set of measurements. These positions can be approached

- with collision detection (SD55740 \$SCS_MEA_FUNCTION_MASK Bit0/Bit16=1) or
- without collision detection (SD55740 \$SCS_MEA_FUNCTION_MASK Bit0/Bit16=0).

Depending on this setting different speeds are used for the approach:

- with collision detection (SD55740 \$SCS_MEA_FUNCTION_MASK Bit0/Bit16=1):
With SD55636 \$SCS_MEA_FEED_FEEDAX_VALUE the traversing feed is performed in the infeed axis (applicable).
If the probe switches when these intermediate positions are approached, the movement is stopped and the alarm "Probe collision" is output.
- without collision detection (SD55740 \$SCS_MEA_FUNCTION_MASK Bit0/Bit16=0):
The intermediate positions are approached with the maximum axis velocity (rapid traverse) in per cent as specified in SD55632 \$SCS_MEA_FEED_RAPID_IN_PERCENT.
With SD55632 \$SCS_MEA_FEED_RAPID_IN_PERCENT=0 and SD55632 \$SCS_MEA_FEED_RAPID_IN_PERCENT=100 the maximum axis velocity is effective.

55637	MEA_FEED_POS_DEG	-	-
rev/min	Feedrate when positioning a rotary axis between individual measurements	DOUBLE	Immediately
-			
-	-	10	0
		100	7/7
			U

Description: Feedrate when positioning a rotary axis between individual measurements

55638	MEA_FEED_FAST_MEASURE	-	-
mm/min	Rapid measuring feed	DOUBLE	Immediately
-			
-	-	900	0
		10000	7/7
			U

Description: Rapid measuring feed

Note:

If necessary, adjust the value of the velocity to the probe type used and to the machine characteristics!

This means that the maximum deflection of the actual probe type must be considered!!

The use of "Rapid measuring feed" depends of SD55740 \$SCS_MEA_FUNCTION_MASK Bit4!

55640	MEA_FEED_CIRCLE	-	-
mm/min	Circular feed for measuring circle segment and measuring ball / 3 balls	DOUBLE	Immediately
-			
-	-	1000	0
		5000	7/7
			U

Description: MEA_FEED_CIRCLE
Circular feed for measuring circle segment and measuring ball / 3 balls

55642	MEA_EDGE_SAVE_ANG	-	-
degrees	Additional safe angle for measuring corner	DOUBLE	Immediately
-			
-	-	0	0
		10	7/7
			U

Description: Set \$SCS_MEA_EDGE_SAVE_ANG=10 for compatibility programs.
The set angle is added to the measured angle as a safety angle.

55644	MEA_KIN_DM_TOL	-	-
mm	Measure kinematics: Tolerance of diameter of calibration ball	DOUBLE	Immediately
-			
-	-	0	0
		1	7/4
			U

Description: Measure kinematics: Tolerance of diameter of calibration ball
If \$SCS_MEA_KIN_DM_TOL > 0, the measurement of the kinematics (CYCLE996) also checks whether the measured diameter of the calibration ball lies within the tolerance value in \$SCS_MEA_KIN_DM_TOL.

55645	MEA_KIN_MODE	-	-
-	Free component of the linear vector	BYTE	Immediately
-			
-	2	0	0
		10	7/4
			M

Description: Free component of the linear vector
0 = calculate all components of the linear vector
1 = take over free component for X from \$SCS_MEA_KIN_VALUE
2 = take over free component for Y from \$SCS_MEA_KIN_VALUE
3 = take over free component for Z from \$SCS_MEA_KIN_VALUE
4 = retain free component for X from active transformation
5 = retain free component for Y from active transformation
6 = retain free component for Z from active transformation
10 = close vector chain (only with Toocarrier)

55646	MEA_KIN_VALUE	-	-
mm	Measure kinematics completely: value of the linear vector	DOUBLE	Immediately
-			
-	2	0	-
		-	7/4
			U

Description: Perform complete kinematics measurement: Value of the linear vector
SD55646[0] Value for rotary axis 1
SD55646[1] Value for rotary axis 2
See SD55645

2.5 Machine and setting data cycles

55647	MEA_KIN_MIN_ANG_TRIANGLE	-	-
degrees	Minimum interior angle of the measurement triangle	DOUBLE	Immediately
-			
-	-	10	2
		60	7/4
			U

Description: Perform complete kinematics measurement
Valid for 3 measuring points only. Minimum interior angle of the measuring triangle.
Value range 2 to 60 degrees

55648	MEA_KIN_MIN_ANG_POS	-	-
degrees	Minimum angle range when positioning a rotary axis	DOUBLE	Immediately
-			
-	-	10	2
		180	7/4
			U

Description: Perform complete kinematics measurement
Minimum measuring range of a rotary axis. If the measuring range of a rotary axis is less than 90°, then inaccuracies caused by measuring inaccuracies in the micrometer range of the probe can be expected.
Value range 10 to 180 degrees

55649	MEA_KIN_BALL_VEC	-	-
-	Perform complete kinematics measurement: Vector of the ball mounting	DOUBLE	Immediately
-			
-	3	0	-
		-	7/4
			U

Description: Perform complete kinematics measurement: Vector of the ball mounting

55730	MEA_PROTOCOL_USER_EXT	-	-
-	File extension for application protocol	STRING	Immediately
-			
-	-	TXT	-
		-	7/4
			U

Description: File extension for application protocol

55740	MEA_FUNCTION_MASK	-	-
-	Function mask for measuring cycles, workpiece and tool measuring	DWORD	Immediately
-			
-	-	65537	-
		-	7/4
			M

Description: Function mask for measuring cycles
Bit 0: Collision monitoring using workpiece probe for intermediate positioning
In JOG mode, collision monitoring is always activated.
0: No collision monitoring
1: For positioning operations executed by the measuring cycles between the measurement points,
motion is interrupted, as soon as the probe supplies a switching signal.
An alarm message is output (Alarm 61302).
Bit 1: Workpiece measurement with 3D-probe, coupling of the spindle alignment with the coordinate rotation around the
infeed axis of the active plane (Z axis for G17)
In JOG mode, the coupling is always activated.
0: no coupling between the spindle alignment and coordinate rotation

The trigger data are automatically corrected.

1: For 3D and star probes (tool type 710, 714) the spindle is aligned depending

on the coordinate rotation around the infeed axis of the active plane.

The positioning direction of the spindle is defined by SD55740 \$SCS_MEA_FUNCTION_MASK bit2.

Caution

The coupling or the correction calculation is cancelled via the measuring cycle without issuing an alarm message if one of the following conditions applies:

- No TRAORI orientation transformation and no tool holder that can be oriented, TCARR (CYCLE800) is active and, in addition to the rotation around Z, additional rotations are active that are not identical between measurement and calibration.
- The working spindle is not position-controlled (SPOS not possible).
- The spindle position between calibration and measurement is not identical.

Bit 2: Workpiece measurement, for coupling of the spindle position, reverse the positioning direction,

Function refers to SD55740 \$SCS_MEA_FUNCTION_MASK, bit1 = 1

0: Spindle positioning is based on the standard.

1: Spindle positioning is realized in the opposite direction (adapted angular values).

Example:

Angle of the coordinate rotation in the plane 90°

if bit2 = 0 then spindle is positioned to 270°

if bit2 = 1 then spindle is positioned to 90°

Bit 3: Workpiece measurement, number of repeated measurements if the probe does not switch

In the JOG mode, the measurement is not repeated.

0: Measurements are repeated up to 4 times, then a measuring cycle alarm (alarm 61301) is output.

1: Measurement is not repeated if the probe does not switch, a measuring cycle alarm is output (alarm 61301).

Bit 4: Workpiece measurement, 1st probing for each measurement with fast measuring feedrate

0: When measuring, the measurement velocity saved in the calibration data is effective.

1: "Fast measuring feed rate (SD 55638 \$SCS_MEA_FEED_FAST_MEASURE) is used. After the first probing, the probe retracts through 2 mm.

After this, the measurement is realized with the measurement velocity saved in the calibration data.

The "Fast measurement feedrate" function is not executed if the measurement distance < 1mm!

Bit 5: Workpiece measurement, fast retraction after measuring

0: The retraction after measurement is realized with the same velocity as for

intermediate positioning (SD 55634 \$SCS_MEA_FEED_PLANE_VALUE).

Is only active when collision monitoring is active (SD55740 \$SCS_MEA_FUNCTION_MASK, bit0 = 1).

1: The retraction after measurement is realized with the percentage rapid traverse velocity defined in SD 55632 \$SCS_MEA_FEED_RAPID_IN_PERCENT

.

Is only active when collision monitoring is active (SD 55740
 \$SCS_MEA_FUNCTION_MASK, bit0 = 1).

Bit 6: Workpiece measurement, probe activation-deactivation while the spindle is being positioned

0: Workpiece probe is not deactivated before positioning the spindle.
 1: Spindle positioning is realized centrally in the manufacturer's cycle

CUST_MEACYC.

The machine manufacturer has the option of activating and reactivating the probe before and after spindle positioning.

Bit 7: Kinematic measurement, scaling based on the input values of the rotary axis vectors

0: Scaling based on the calculated rotary axis vectors (V1xyz, V2xyz)
 1: Scaling based on the rotary axis vectors saved in the swivel data set (V1xyz, V2xyz)

The swivel data set is displayed under start-up, "Swivel cycle data".

Bit 8: Kinematic measurement: measuring with active swivel (TCARR) or active TRAORI

0: Measurement without active swivel (TCARR) or without active TRAORI

In the cycle, when measuring, the corresponding orientation transformation is deactivated, and reactivated after the measurement has been made.

1: Measurement with active swivel (TCARR) or with active TRAORI

For measurement, the corresponding orientation transformation remains active.

If no orientation transformation is active, then alarm 61167 is output.

Bit 9: Measure kinematics, user-specific scaling of rotary axis vectors V1xyz and V2xyz

0: Scaling of rotary axis vectors V1xyz und V2xyz as unit vector
 1: User-specific scaling of rotary axis vectors V1xyz and V2xyz

With user-specific scaling, one vector component is always 1 or -1.
 The other two vector components are correspondingly converted by a factor.

Bit 10: Complete kinematic measurement with reference

0: Measuring without reference (compatibility)
 1: Measuring with reference with swivel heads

The reference comprises the "Measure reference head" functions and "Adjust head to reference head". See CYCLE9960

Bit 11: Measure kinematics, number of measuring points for measuring the calibration ball

0: 10 Measuring points for measuring on circular path (compatibility)
 1: 8 Measuring points for measuring on circular path

10 measuring points are always approached for paraxial measurement

Bit 15: Workpiece measurement, calibration radius with starting point at the centre of the ring, JOG mode

0: The starting point for calibration, radius need not be precisely located at the centre of the calibration ring.
 1: The starting point for calibration, radius must be precisely located at the centre of the calibration ring.

Bit 16: Collision monitoring using tool probe for intermediate positioning.

In JOG mode, collision monitoring is always activated.

0: No collision monitoring
 1: For positioning operations which are executed by measuring cycles between the measurement points, motion is interrupted as soon as the probe supplies a switching signal.

An alarm message is output (alarm 61302).

Bit 17: Workpiece measurement, number of repeated measurements if the probe does not switch.

In JOG mode, a measurement is not repeated.

0: Measurements are repeated a maximum of 4 times, then a measuring cycle alarm (alarm 61301) is output.

1: The measurement is not repeated if the probe does not switch, a measuring cycle alarm is output (alarm 61301).

Bit 19: Tool measurement: retraction velocity from the measuring point

0: The retraction from the measuring point is realized with the same velocity as for

intermediate positioning (SD55634 \$SCS_MEA_FEED_PLANE_VALUE).

1: The retraction velocity is realized with the percentage rapid traverse velocity specified in SD55632 \$SCS_MEA_FEED_RAPID_IN_PERCENT

and is only effective when collision monitoring is active

(SD55740 \$SCS_MEA_FUNCTION_MASK, bit16 = 1).

Bit 28: Selection of new or continuous protocol for standard protocol measurement in JOG

0: New protocol (default)

1: Continuous, that means it is always appended to an existing protocol

Bit 29: File format selection for standard protocol measurement in JOG

0: Text format (default)

1: Table format

55774	J_MEA_PROTOCOL_FILE			-	-	
-	Name and path of protocol file for measurement in JOG			STRING	Immediately	
-						
-	-	//NC:/WKS.DIR/ TEMP.WPD/ J_MEAPROT.TXT	-	-	7/4	U

Description: Name and path of protocol file for measurement in JOG

55800	ISO_M_DRILLING_AXIS_IS_Z			-	-	
-	Drilling axis depends on the plane / always Z			BYTE	Immediately	
-						
-	-	0	0	1	7/6	U

Description: Selection of the drilling axis
0: drilling axis is vertical to the active plane
1: drilling axis is always "Z", independently of the active plane

55802	ISO_M_DRILLING_TYPE			-	-	
-	Tapping type			BYTE	Immediately	
-						
-	-	0	0	3	7/6	U

Description: Tapping type
0: tapping without compensating chuck
1: tapping with compensating chuck
2: deep hole tapping with chip breakage
3: deep hole tapping with stock removal

2.5 Machine and setting data cycles

55804	ISO_M_RETRACTION_FACTOR	-	-
%	Factor for retraction speed (0...200%)	DWORD	Immediately
-			
-	-	100	0
		200	7/6
			U

Description: Factor for retraction speed (0...200%)

55806	ISO_M_RETRACTION_DIR	-	-
-	Retraction direction at G76/87	BYTE	Immediately
-			
-	-	0	0
		4	7/6
			U

Description: Retraction direction for precision drilling and reverse countersinking G76/G87

0: G17(-X) G18(-Z) G19(-Y)
 1: G17(+X) G18(+Z) G19(+Y)
 2: G17(-X) G18(-Z) G19(-Y)
 3: G17(+Y) G18(+X) G19(+Z)
 4: G17(-Y) G18(-X) G19(-Z)

55807	ISO_M_TAPPING_SET_MC	-	-
-	Setting tapping G84: Spindle mode/position control	DOUBLE	Immediately
-			
-	-	0	0
		1	7/4
			M

Description: Setting when rigid tapping (G84)

0= with G84, reactivate spindle mode
 1= with G84, remain in position-controlled spindle mode

55808	ISO_T_RETRACTION_FACTOR	-	-
%	Factor for retraction speed	DWORD	Immediately
-			
-	-	100	0
		200	7/6
			U

Description: Factor (1-200%) for retraction speed at tapping G84/G88

55810	ISO_T_DWELL_TIME_UNIT	-	-
-	Dwell time evaluation	BYTE	Immediately
-			
-	-	0	0
		1	7/6
			U

Description: Dwell time evaluation for deep hole drilling G83/G87

0: seconds
 1: revolutions

55818	ISO_M_FUNCTION_MASK	-	-
-	Function mask for ISO milling mode	DWORD	Immediately
-			
-	-	0	-
		-	7/4
			M

Description: Function mask for ISO milling mode

55819	ISO_T_FUNCTION_MASK	-	-
-	Function mask for ISO turning mode	DWORD	Immediately
-			
-	-	0	-
-	-	-	-
-	-	7/4	M

Description: Function mask for ISO turning mode

Bit 0: Execution of residual corner cut

0: Complete residual corner cut is executed (compatibility)

1: Without complete residual corner cut

Bit 1: Stock removal roughing (G71/G72) without tool nose radius compensation

0: Roughing with active tool nose radius compensation (with G41/G42, compatibility)

1: Roughing without tool nose radius compensation (with G40)

55820	FRICT_OPT_RADIUS	-	-
mm	Circle radius for optimizing friction compensation	DOUBLE	Immediately
-			
-	-	5	0
-	-	5000	7/4
-	-	M	

Description: MEA_FEED_CIRCLE

Circle radius for optimizing friction compensation

55821	FRICT_OPT_RADIUS_ROT	-	-
degrees	Circle radius for optimizing friction compensation	DOUBLE	Immediately
-			
-	-	5	0
-	-	5000	7/4
-	-	M	

Description: MEA_FEED_CIRCLE

Circle radius for optimizing friction compensation

55822	FRICT_OPT_FEED	-	-
mm/min	Feedrates for optimizing friction compensation	DOUBLE	Immediately
-			
-	9	70,140,350,560,700,1060,1410,1770,2120	0
-	-	100000	7/4
-	-	M	

Description: Setting data contains feedrate values for optimizing friction compensation.

55823	FRICT_OPT_FEED_ROT	-	-
rev/min	Feedrates for optimizing friction compensation for rotary axes	DOUBLE	Immediately
-			
-	9	0.2,0.4,1.0,1.5,2.0,3.0,3.9,5.0,5.9	-
-	-	100	7/4
-	-	M	

Description: Setting data contains the feedrate values for optimizing friction compensation for rotary axes.

55824	FRICT_OPT_STEP	-	-
-	Step number for optimizing friction compensation	DWORD	Immediately
-			
-	-	0	0
-	-	1000	7/4
-	-	M	

Description: Step number for optimizing friction compensation

2.5 Machine and setting data cycles

55826	FRICT_OPT_ACT_STEP	-	-
-	Current step number for optimizing friction compensation	DWORD	Immediately
-			
-	-	0	0
-	-	1000	7/4
-	-		M

Description: Displays current step number for optimizing friction compensation

55828	FRICT_OPT_DIR_MINUS	-	-
-	Direction of rotation for optimizing friction compensation	DWORD	Immediately
-			
-	-	0	0
-	-	1	7/4
-	-		M

Description: Direction of rotation for optimizing friction compensation

0= Travel in positive direction (G03)

1= Travel in negative direction (G02)

55844	GRIND_MEA_KIN_TOL	-	-
mm	Kinematik measurement: Tolerance of kinematic vectors	DOUBLE	Immediately
-			
-	-	1	0
-	-	10	7/4
-	-		U

Description: Measure kinematics: Tolerance of kinematic vectors

When the kinematics are measured (CYCLE496), it is checked whether the measured vectors lie within the tolerance value of setting data \$SCS_GRIND_MEA_KIN_TOL.

55880	GRIND_CONT_RELEASE_ANGLE	-	-
degrees	Grinding - profiling: retraction angle	DOUBLE	Immediately
-			
-	-	45	0
-	-	90	7/4
-	-		M

Description: This setting data specifies the angle of retraction from the contour during profiling.

55881	GRIND_CONT_RELEASE_DIST	-	-
mm	Grinding - profiling: retraction value	DOUBLE	Immediately
-			
-	-	1	0
-	-	10	7/4
-	-		M

Description: This setting data defines the value by which the tool is retracted in both axes during profiling.

55884	GRIND_CONT_BLANK_OFFSET	-	-
mm	Grinding - profiling: blank allowance	DOUBLE	Immediately
-			
-	-	1	0
-	-	100	7/4
-	-		M

Description: This setting data specifies the distance from the grinding wheel at which there is a switch from G0 to G1 during profiling.

2.6 Compile cycles

61516	CC_PROTECT_PAIRS			-	-	
-	Axis collision protection configuration			DWORD	Reset	
-						
-	20	0	-	-	7/2	M

Description: This MD defines the axis pairs that must be protected against mutual collision. The machine axis number of the first axis is entered in the decades of 1s and 10s. The number of the second machine axis must be entered in the decades of 100s and 1000s.

Example:

```
$MN_CC_PROTECT_PAIRS[0] = 1201 ; axis_1 = 1   axis_2 = 12
```

When zero is entered, collision protection is deactivated.

61517	CC_PROTECT_SAFE_DIR			-	-	
-	Axis collision protection. Definition of the retraction direction.			DWORD	Reset	
-						
-	20	0	-	-	7/2	M

Description: In this MD the direction of retraction for both axes of a collision-protected axis pair is entered. Entry in the decade of 1s and 10s defines the direction of retraction of the first axis. Entry in the decade of 100s and 1000s defines that of the second axis. A value > 0 means retraction in the plus direction. 0 means retraction in the minus direction.

The value can only be changed only if collision protection for the axis pair is inactive!

61518	CC_PROTECT_OFFSET			-	-	
mm, degrees	Axis collision protection. Position offset			DOUBLE	Reset	
-						
-	20	0.0	-	-	7/2	M

Description: Position offset for the collision detection of the two axes defined in MD_60972.

The following applies to calculation of distance d between axes AX1 and AX2:

```
d = abs( POS[AX1] + $MN_CC_PROTECT_OFFSET[ n ] - POS[AX2] )
```

The axis collision protection function guarantees that the following condition is always fulfilled:

```
d > $MN_CC_PROTECT_WINDOW+$MN_CC_PROTECT_WINDOW_EXTENSION[ n ]
```

This considers the current axis velocities and the acceleration/braking capacities of the axes in order to be able to brake the axes in time if required.

The value can be changed only if collision protection for the axis pair is inactive!

61519	CC_PROTECT_WINDOW			-	-	
mm, degrees	Axis collision protection. Minimum distance			DOUBLE	Reset	
-						
-	20	10.0	0.0	10000.0	7/2	M

Description: Minimum distance that must be kept by the axes.

The value can be changed even if the protection is active. In this case, however, the axes must have a safe distance between them.

2.6 Compile cycles

61532	CC_PROTECT_DIR_IS_REVERSE			-	-	
-	Axis collision protection. Detection of the reversed direction.			DWORD	Reset	
-						
-	20	0	-	-	7/2	M

Description: This machine data is used to detect the reversed direction of the axes of a collision-protected pair of axes.

61533	CC_PROTECT_WINDOW_EXTENSION			-	-	
mm, degrees	Axis collision protection. Increase in the minimum distance			DOUBLE	NEW CONF	
-						
-	20	0.0	0.0	10000.0	7/2	M

Description: Increasing the distance that must be kept from the axes.
The value can be changed even if the protection is active in the part program.

61534	CC_PROTECT_A_DBD_INDEX			-	-	
-	Axis collision protection. Defining the \$A_DBD index			DWORD	Reset	
-						
-	-	-1	-	-	7/2	M

Description: The global axis screenform of axes, where braking operations are initiated due to the violation of the protection window, is mapped to variable \$A_DBD. The index is defined using this machine data. For index -1, an axis screenform is not output.

61535	CC_PROTECT_OPTIONS			-	-	
-	Axis collision protection options			DWORD	Reset	
-						
-	20	0	0	1	7/2	M

Description: This MD specifies the additional options. The following options can be activated:
Bit 0: Activation of the protection pair by DB3#.DBB24.3 of an axis of the protection pair

62500	CLC_AXNO			-	-	
-	Axis assignment for clearance control			DWORD	PowerOn	
-						
-	-	0	-2	CC_MAXNUM_A XES_PER_CHA N	7/2	M

Description: n=0: Deactivates the clearance control
n > 0:
Activates the 1D clearance control for the channel axis with the axis number indicated under n. This axis must not be a modulo rotary axis.
n < 0: Activates the 3D clearance control.
Activation of the 3D clearance control requires configuration of at least one of the two possible 5-axis transformations in the channel.
-1: with n = -1 the first 5-axis transformation (16 <=transformer type <=149) configured with \$MC_TRAFO_TYPE_n in the 1st channel is selected for clearance control.
-2: with n = -2 the second 5-axis transformation configured in the 1st channel is selected.
The overlaid motion acts on the axes configured as linear axes in the first three elements of \$MC_TRAFO_AXES_IN_n of the selected transformation.
Configuration of 3- and 4-axis transformations is permissible (2D clearance control).

Restriction:

- Only one of the linear axes involved in clearance control must be configured as master axis of a gantry grouping.
- No axis of the clearance control must be configured as slave axis of a gantry grouping.
- Erroneous configurations are rejected after power ON with CLC alarm 75000.

62502	CLC_ANALOG_INPUT	-	-
-	Analog input for clearance control	DWORD	-
-			
-	-	1	1
		8	7/2
			M

Description: The machine data defines the number of the analog input that is used for the clearance sensor.

Differing from the functions realized in the interpolator (synchronized actions) the input of the clearance control cannot be influenced via PLC interface DB10 DBW148ff.

62504	CLC_SENSOR_TOUCHED_INPUT	-	-
-	Input bit assignment for "Sensor collision" signal	DWORD	PowerOn
-			
-	-	0	-40
		40	7/2
			M

Description: This machine data defines the digital input that is used for collision detection.

Requirements:

- The clearance sensor has a "sensor collision" signal.
- The numbering of the digital inputs corresponds to the numbering of the corresponding system variables: \$A_IN[n], with n = number of the digital input.
- Example: 3rd input on the 2nd input byte: \$MC_CLC_SENSOR_TOUCHED_INPUT = 11 ; 3 + 1 * 8

Negative values result in the corresponding input signal being used internally inverted (fail-safe).

See section 2.4, /TE1/ for sensor collision detection.

62505	CLC_SENSOR_LOWER_LIMIT	-	-
mm, degrees	Lower motion limit of the clearance control	DOUBLE	Reset
-			
-	2	-5.0, -10.0	-1.0e40
		0.0	7/2
			M

Description: This machine data consists of 2 field elements:

- CLC_SENSOR_LOWER_LIMIT[0]

With the first field element the lower limit for the deviation from the sensor-controlled machine position from the programmed position is entered.

As soon as the limit is reached, PLC signal DB21.DBX37.4 is set and CLC alarm 75020 is displayed:

- CLC_SENSOR_LOWER_LIMIT[1]

The second field element limits the value of the maximum lower motion limit that can be programmed.

62506	CLC_SENSOR_UPPER_LIMIT	-	-
mm, degrees	Upper motion limit of the clearance control	DOUBLE	Reset
-			
-	2	+10.0, +40.0	0.0
		+1.0e40	7/2
			M

Description: This machine data consists of 2 field elements:

- CLC_SENSOR_UPPER_LIMIT[0]

2.6 Compile cycles

With the first field element the upper limit for the deviation from the sensor-controlled machine position from the programmed position is set.

As soon as the limit is reached, PLC signal DB21.DBB37.5 is set and CLC alarm 75021 is displayed.

- CLC_SENSOR_UPPER_LIMIT[1]

The second field element limits the value of the maximum upper motion limit that can be programmed.

62508	CLC_SPECIAL_FEATURE_MASK			-	-	
-	Special functions and CLC modes			DWORD	PowerOn	
-						
-	-	0x3	-	-	7/2	M

Description:

Bit 0 and bit 1:

Alarm reaction on reaching the CLC motion limits: This machine data configures the alarm reaction on reaching the motion limits set with MD 62505 and MD 62506 or programmed with CLC_LIM .

Bit 0 = 0: Alarm 75020 does not stop program execution. The alarm can be acknowledged by pressing the Cancel key.

Bit 0 = 1: Alarm 75020 stops program execution at the lower limit. The alarm can only be acknowledged with reset.

Bit 1 = 0: Alarm 75021 does not stop program execution. The alarm can be acknowledged by pressing the Cancel key.

Bit 1 = 1: Alarm 75021 stops program execution at the upper limit. The alarm can only be acknowledged with reset.

Bit 4:

Operation as online tool length compensation in orientation direction

Bit 4 = 0: Clearance control works as usual.

Bit 4 = 1: Unlike the clearance control mode the analog input does not specify a velocity, but directly an offset position instead. In this case, the ordinate of the selected sensor characteristic \$MC_CLC_SENSOR_VELO_TABLE_x is interpreted in mm or inch instead of in mm/min (inch/min).

This operating mode can be used for testing purposes and for implementing a 3D tool length compensation. The analog value is thereby not read in in position controller cycle, but in IPO cycle. In this operating mode, a normal influence or definition of the analog values by the PLC is possible via DB10 DBW148ff. The input used must have been activated through the following machine data: MD 10300 \$MN_FASTIO_ANA_NUM_INPUTS

Bit 5:

Mode for rapid retraction in position controller cycle

Bit 5 = 0: Clearance control works as usual.

Bit 5 = 1: The analog input is inactive. If the digital input configured with MD 62504 is activated (inverted, if required), a retraction motion will start in the same position controller cycle that corresponds to an analog signal specification of +10V during operation as "Online tool length compensation" (see bit 4).

The digital input signal that starts the retraction movement cannot be influenced by the PLC. In addition to the reaction in the position controller, the input "sensor collision" and the subsequent stop of the path motion is handled in the interpolator. This signal branch can be influenced by the PLC through default signals DB10 DBB0ff.

Bit 8:

Mode for alarm output when the lower motion limit is reached.

Bit 8 = 0: Alarm 75020 is displayed.

Bit 8 = 1: Alarm 75020 will not be displayed, if the alarm reaction after reaching of the CLC movement limits (bit 0) was configured without program execution stop: bit 0 = 0

Bit 9:

Mode for alarm display when the upper motion limit is reached.

Bit 9 = 0: Alarm 75021 is displayed.

Bit 9 = 1: Alarm 75021 will not be displayed, if the alarm reaction on reaching the CLC motion limits (bit 0) was configured without program execution stop: bit 1 = 0

Bit 14:

Synchronization of the start position with single-axis clearance control.

Bit 14 = 0: If the clearance control has been configured for one axis only (MD62500), the current actual position of the next part program block on clearance control power OFF with CLC(0) is synchronized for this axis only.

Bit 14 = 1: If the clearance control has been configured for one axis only (MD62500), the actual current positions of the next part program block on clearance control power OFF with CLC(0) are synchronized for all axes.

This setting is required only for those applications for which a single-axis clearance control is used together with a 3/4/5-axis transformation (e.g. pipe cutting with rotating workpiece) and when an axis jump in the CLC axis or alarm: "Channel %1 Axis %2 System error 550010" occur at the first traversing block after CLC (0).

62510	CLC_SENSOR_VOLTAGE_TABLE_1				-	-	
V	Coordinate voltage sensor characteristic 1				DOUBLE	Reset	
-							
-	2	-10.0, 10.0, 0.0, 0.0, 0.0	-10.0	10.0	7/2	M	

Description:

This machine data defines the voltage values of sensor characteristic 1. The corresponding velocity value must be entered under the same index i of this machine data:

MD62511 \$MC_CLC_SENSOR_VELO_TABLE_1[i]

For the simplest case it will suffice to define the characteristic via two interpolation points as a symmetrical straight through the zero point:

Example:

- \$MC_CLC_SENSOR_VOLTAGE_TABLE_1[0] = -10.0 ; Volt
- \$MC_CLC_SENSOR_VOLTAGE_TABLE_1[1] = 10.0 ; Volt
- \$MC_CLC_SENSOR_VELO_TABLE_1[0] = 500.0 ; mm/min
- \$MC_CLC_SENSOR_VELO_TABLE_1[1] = -500.0 ; mm/min

For all field elements of the machine data not used in the example value 0.0 must be set.

If the defined sensor characteristic creates an incorrect control direction, i.e. after power ON of the clearance control the sensor "flees" from the workpiece, the control direction can be corrected either by reversing the polarity of the sensor signal at the I/O module, or by changing the sign in front of the voltage values in the machine data.

Notes on how to define the sensor characteristic:

- A point with velocity value 0 must not stand at the end of the table.
- The characteristic must be monotonic, i.e. the velocity values above the voltage must either only rise or only fall.
- The characteristic must not have any jumps in the velocity sequence, i.e. it is not permissible to define different velocities for the same voltage value.
- The characteristic must have at least two interpolation points.
- Do not enter more than 5 interpolation points (3 for 840D prior to SW 5.3) with positive or with negative velocity.
- Characteristics that do not go directly through the zero point may influence the clearance normalization set on the clearance sensor.

2.6 Compile cycles

62511	CLC_SENSOR_VELO_TABLE_1			-	-	
mm/min	Coordinate velocity sensor characteristic 1			DOUBLE	Reset	
-						
-	2	2000.0/60.0, -2000.0/60.0, 0.0, 0.0, 0.0	-	-	7/2	M

Description: This machine data defines the velocity values of sensor characteristic 1. The corresponding voltage value must be entered under the same index i of the machine data:
MD62510 \$MC_CLC_SENSOR_VOLTAGE_TABLE_1[i]
Additional information on how to define the characteristic is available in the description of machine data MD62510.

62512	CLC_SENSOR_VOLTAGE_TABLE_2			-	-	
V	Coordinate voltage sensor characteristic 2			DOUBLE	Reset	
-						
-	2	-10.0, 10.0, 0.0, 0.0, 0.0	-10.0	10.0	7/2	M

Description: This machine data defines the voltage values of sensor characteristic 2.
Additional information on how to define the characteristic is available in the description of machine data MD62510.

62513	CLC_SENSOR_VELO_TABLE_2			-	-	
mm/min	Coordinate velocity sensor characteristic 2			DOUBLE	Reset	
-						
-	2	2000.0/60.0, -2000.0/60.0, 0.0, 0.0, 0.0	-	-	7/2	M

Description: This machine data defines the voltage values of sensor characteristic 2.
Additional information on how to define the characteristic is available in the description of machine data MD62510.

62516	CLC_SENSOR_VELO_LIMIT			-	-	
%	Velocity of the clearance control motion			DOUBLE	Reset	
-						
-	-	100.0	-200.0	200.0	7/2	M

Description: 1D clearance control:
This machine data defines the maximum traversing velocity of the overlaid control motion as a percentage value of the max. residual axis velocity from the maximum value (MD32000 \$MA_MAX_AX_VELO[AX#]) of the next clearance-controlled axis.
2D/3D clearance control
With 2D or 3D clearance control the maximum velocity of the slowest clearance-controlled axis multiplied with the root of 2 or with the root of 3 is used as reference value.

62517	CLC_SENSOR_ACCEL_LIMIT			-	-	
%	Acceleration of the clearance control movement			DOUBLE	Reset	
-						
-	-	100.0	0.0	200.0	7/2	M

Description: 1D clearance control:
This machine data defines the maximum acceleration of the overlaid control motion as a percentage value of the max. residual axis velocity from the maximum value (MD32300 \$MA_MAX_AX_ACCEL[AX#]) of the next clearance-controlled axis.

2D/3D clearance control:

With 2D or 3D clearance control the maximum velocity of the slowest clearance-controlled axis multiplied with the root of 2 or with the root of 3 is used as reference value.

62520	CLC_SENSOR_STOP_POS_TOL	-	-
mm, degrees	Pos. tolerance for status report "CLC standstill"	DOUBLE	Reset
-			
-	-	0.05	0.0
		1.0e40	7/2
			M

Description:

With the clearance control active and in order to achieve the exact stop condition (G601/G602), not only the axis involved in the programmed traversing motion, but also the clearance-controlled axes must have reached their exact stop conditions.

The exact stop condition of the clearance control is defined via a position window and a dwell time:

- MD62520 \$MC_CLC_SENSOR_STOP_POS_TOL
- MD62521 \$MC_CLC_SENSOR_STOP_DWELL_TIME

If the clearance control or the clearance-controlled axes are within the position tolerance during the parameterized dwell time, the exact stop condition of the clearance control is fulfilled.

Setting notes:

If the clearance control should not be able to keep the parameterized position window for the corresponding dwell time, the following alarm will be displayed in certain situations:

- Alarm "1011 Channel Channel number System error 140002"

In order to avoid the alarm or in case the alarm occurred, the following measures must be taken:

1. Switch on the clearance control with the typical machining clearance between the clearance sensor and a small metal sheet.
2. Tap on the metal sheet so that the laser head performs visible adjustment motions. After these adjustment movements are completed, do not touch the metal sheet again.
3. If the interface signal DB3x.DBX60.7 (position reached with fine exact stop) "flickers" after the tapping or after release of the process gas, the following machine data will have to be adjusted:

- MD36010 \$MA_STOP_LIMIT_FINE (increase)
- MD62520 \$MC_CLC_SENSOR_STOP_POS_TOL (increase)
- MD62521 \$MC_CLC_SENSOR_STOP_DWELL_TIME (shorten)

The changes to the machine data will become active only after NCK RESET. The clearance control therefore may have to be switched on again after NC start.

62521	CLC_SENSOR_STOP_DWELL_TIME	-	-
s	Wait time for "CLC standstill"	DOUBLE	Reset
-			
-	-	0.1	0.0
		1.0e40	7/2
			M

Description:

This machine data defines the dwell time for reaching the exact stop conditions of the clearance control.

The corresponding position tolerance must be entered in machine data:

- MD62520 \$MC_CLC_SENSOR_STOP_POS_TOL

Additional information on the exact stop condition of the clearance control is available in the description of machine data MD62520.

Related to:

The set dwell time must not be longer than the maximum delay for reaching the exact stop condition parameterized in the following machine data:

- MD36020 \$MA_POSITIONING_TIME

2.6 Compile cycles

62522	CLC_OFFSET_ASSIGN_ANAOUT			-	-	
-	Assignment of internal additional analog value to sensor signal			DWORD	PowerOn	
-						
-	-	0	-1020008 , -8	1020008 , 8	7/2	M

Description:

This machine data defines the analog output, the output value of which is subtracted from the input voltage of the clearance sensor.

The numbering of the analog output corresponds to the numbering of the relevant system variables: \$A_OUTA[n], with n = number of the analog output.

The analog output can be used through variable \$A_OUTA[n] both block-synchronous from a part program or asynchronous via a synchronized action.

62523	CLC_LOCK_DIR_ASSIGN_DIGOUT			-	-	
-	Assignment digital output interlocking CLC			DWORD	PowerOn	
-						
-	2	0, 0	-40	40	7/2	M

Description:

This machine data consists of 2 field elements:

- CLC_LOCK_DIR_ASSIGN_DIGOUT[0]

The first field element defines the digital output through which the negative motion direction of the clearance control can be locked.

- CLC_LOCK_DIR_ASSIGN_DIGOUT[1]

The second field element defines the digital output through which the positive motion direction of the clearance control can be locked.

Entering the negative output number will invert the evaluation of the switching signal.

Example:

Digital output 1 (\$A_OUT[1]) shall lock the negative motion direction; digital output 2 (\$A_OUT[2]) shall lock the positive motion direction:

- MD 62523 \$MC_CLC_LOCK_DIR_ASSIGN_DIGOUT[0] = 1
- MD 62523 \$MC_CLC_LOCK_DIR_ASSIGN_DIGOUT[1] = 2

With the corresponding system variables interlocking of the relevant motion direction can be switched on or off either block-synchronous in the part program or asynchronous via synchronized actions.

- Interlock of the negative motion direction ON/OFF: \$A_OUT[1] = 1 / 0
- Interlock of the positive motion direction ON/OFF: \$A_OUT[2] = 1 / 0

With switching signal inversion (MD 62523 \$MA_CLC_LOCK_DIR_ASSIGN_DIGOUT[0] = -1):

Interlock of the negative motion direction ON/OFF: \$A_OUT[1] = 0 / 1

62524	CLC_ACTIVE_AFTER_RESET			-	-	
-	Clearance control active after RESET			BOOLEAN	PowerOn	
-						
-	-	FALSE	-	-	7/2	M

Description:

1D clearance control:

This machine data parameterizes the RESET behavior (program end RESET or NC RESET) of the 1D clearance control.

- CLC_ACTIVE_AFTER_RESET = 0: after RESET the clearance control is switched off analog to the part program command CLC(0).
- CLC_ACTIVE_AFTER_RESET = 1: after RESET the clearance control maintains its current activation status.

3D clearance control:

This machine data does not effective with a 3D clearance control. The clearance control will in this case always be switched off after RESET.

62525	CLC_SENSOR_FILTER_TIME	-	-
s	Time constant of PT1 sensor filtering	DOUBLE	Immediately
-			
-	-	0.0	0.0
-	-	10.0	7/2
-	-		M

Description: This machine data parameterizes the time constant for the PT1 filter of the clearance control (corresponds to an RC element).

With the PT1 filter, the higher-frequency noise components in the input signal of the clearance control can be diminished.

The filter's effect can be observed through the function-specific display data (see section 2.7, /TE1/).

A value of zero switches the filter off completely.

Note:

Any additional time constant in the control loop reduces the max. achievable control loop dynamics.

62528	CLC_PROG_ORI_AX_MASK	-	-
-	Axis screen for CLC with free direction specification	DWORD	PowerOn
-			
-	-	0x0	-
-	-	-	7/2
-	-		M

Description: Each bit of the axis screen refers to the channel axis[n+1] depending on its bit index n. Only exactly 3 bits may be set according to the three direction axes of the compensation vector. The bits are evaluated in ascending order.

The first channel axis parameterized like that corresponds to the X coordinate of the compensation vector. The second channel axis to the Y coordinate, and so on.

62529	CLC_PROG_ORI_MAX_ANGLE	-	-
degrees	Limit angle for CLC with free direction specification	DOUBLE	Reset
-			
-	-	45.0	0.0
-	-	180.0	7/2
-	-		M

Description: Permissible limit angle between tool orientation and CLC direction defined freely through additional axes.

62530	CLC_PROG_ORI_ANGLE_AC_PARAM	-	-
-	Index of the display variables f. the current differential angle	DWORD	Reset
-			
-	-	-1	-1
-	-	20000	7/2
-	-		M

Description: Index n of system variable \$AC_PARAM[n] in which the current differential angle between tool orientation and CLC direction is output.

62560	FASTON_NUM_DIG_OUTPUT	-	-
-	Configuration of the switching output	BYTE	PowerOn
-			
-	-	0	0
-	-	4	7/2
-	-		M

Description: This machine data assigns the number of the digital onboard output (1...4) to the NCU, on which the fast switching signal is output.

Output of the switching signal is deactivated with 0.

2.6 Compile cycles

62561	FASTON_OUT_DELAY_MICRO_SEC			-	-	
-	Still missing			DWORD	NEW CONF	
-						
-	2	0, 0	-5000	5000	7/2	M

Description:

This MD enables separate specification of time delay values for the switch-on and switch-off edge of the fast switching signal.

\$MC_FASTON_OUT_DELAY_MICRO_SEC[0] Time delay of the switch-on edge

\$MC_FASTON_OUT_DELAY_MICRO_SEC[1] Time delay of the switch-off edge

Negative values create a derivative action time for signal output. Positive values cause the output to be delayed. Derivative action time or delay are used to compensate external switching delays. The values must be determined empirically and should not exceed a few 100 microseconds. Values that are larger than approx. a half position control cycle clock will possibly not have a correct effect.

62571	RESU_RING_BUFFER_SIZE			-	-	
-	RESU ring buffer size (block buffer)			DWORD	PowerOn	
-						
-	-	1000	10	1000000	7/2	M

Description:

The block buffer includes the geometrical information for the part program. The value entered in the machine data corresponds to the number of loggable part program blocks (with 32 byte / part program block). The block buffer size corresponds to the number of retrace-capable blocks.

62572	RESU_SHARE_OF_CC_HEAP_MEM			-	-	
%	RESU share of the parameterized heap memory			DOUBLE	PowerOn	
-						
-	-	100.0	1.0	100.0	7/2	M

Description:

The total heap memory size available for all compile cycles is parameterized by channel-specific machine data MD 28105 \$MC_MM_NUM_CC_HEAP_MEM

The RESU machine data can limit the maximum heap memory share that RESU is to use.

62573	RESU_INFO_SA_VAR_INDEX			-	-	
-	RESU indices of the synchronized action variables used			DWORD	PowerOn	
-						
-	2	-1	-1	10000	7/2	M

Description:

Reserved. This machine data must not be used.

62574	RESU_SPECIAL_FEATURE_MASK			-	-	
-	RESU parameterizable behavior			DWORD	PowerOn	
-						
-	-	0x0	0x0	0x0f	7/2	M

Description:

With bit settings parameterizable behavior of the RESU function:

Bit 0: reserved. Do not use!

Bit 1:

Bit 1 = 0: (default) RESU main program CC_RESU.MPF is created in the dynamic memory area

of the NC (DRAM) (recommended setting)

Bit 1 = 1: RESU main program CC_RESU.MPF is created in the buffered part program memory

of the NC (SRAM).

Bit 2:

Bit 2 = 0: (default)

The following RESU-specific subroutines are created as user cycles:

- CC_RESU_INI.SPF
- CC_RESU_END.SPF
- CC_RESU_BS_ASUP.SPF
- CC_RESU_ASUP.SPF

Bit 2 = 1: (recommended setting)

The RESU-specific subroutines (see above) are created as OEM cycles.

Bit 3:

Bit 3 = 0: (default)

No effect (see under bit 3 = 1).

Bit 3 = 1: (recommended setting, if bit 2 = 1)

If the RESU-specific subroutines (see above) are created as OEM cycles and if during NC start RESU-specific subroutines are nevertheless available as user cycles, these will be canceled without prior checkback.

62575	RESU_SPECIAL_FEATURE_MASK_2	-	-
-	RESU additional parameterizable behavior	DWORD	Reset
-			
-	-	0x0	0x0
		0x01	7/2
			M

Description: With bit settings parameterizable behavior of the RESU function:

Bit 0:

Bit 0 = 0: (default)

For continued machining at the contour, a block search with contour calculation beginning at

the part program start is used (recommended setting).

Bit 0 = 1: In order to accelerate that machining is continued, 2 different block search types are used:

- From part program start to the last main block: block search without calculation
- From the last main block to the current part program block: block search with contour calculation

62580	RESU_WORKING_PLANE	-	-
-	RESU determination of the working plane	DWORD	NEW CONF
-			
-	-	1	1
		3	7/2
			M

Description: These machine data determine the working plane for the 2-dim. function RESU. The following settings are possible:

- 1 : for working plane G17 (first and second geometry axis)
- 2 : for working plane G18 (first and third geometry axis)
- 3 : for working plane G19 (second and third geometry axis)

62600	TRAFO6_KINCLASS	-	-
-	Kinematics class	DWORD	NEW CONF
-			
-	-	1	1
		2	7/2
			M

Description: The following kinematics classes can be indicated:

- Standard transformation: 1
- Special transformation: 2

2.6 Compile cycles

62601	TRAFO6_AXES_TYPE			-	-	
-	Axis type for transformation [axis no.]: 0...5			DWORD	NEW CONF	
-						
-	6	1, 1, 1, 3, 3, 3	1	4	7/2	M

Description: This machine data identifies the axis type used in the transformation.
The following axis types can be indicated:

- Linear axis: 1
- Delta/acme spindle drive: 2
- Rotary axis: 3 (4)

62602	TRAFO6_SPECIAL_KIN			-	-	
-	Special kinematics type			DWORD	NEW CONF	
-						
-	-	1	-	-	7/2	M

Description: This machine data identifies the type of special kinematics.
The following special kinematics are available:

- No special kinematics: 1
- 5-axis articulated arm with coupling of axis 2 to axis 3: 2
- 2-axis SCARA with forced coupling to tool: 3
- 3-axis SCARA with degrees of freedom X, Y, A: 4
- 2-articulated arm with coupling of axis 1 to axis 2: 5
- 2-axis articulated arm without coupling of axis 1 to axis 2: 8
- 4-axis SCARA with coupling of axis 1 to axis 2: 7

62603	TRAFO6_MAIN_AXES			-	-	
-	Basic axis identification			DWORD	NEW CONF	
-						
-	-	1	1	7	7/2	M

Description: This machine data identifies the type of basic axis assignment. Normally, the first 3 axes are the basic axes.
The following basic axis assignments are included:

- SS (gantry): 1
- CC (SCARA): 2
- NR (articulated arm): 3
- SC (SCARA): 4
- RR (articulated arm): 5
- CS (SCARA): 6
- NN (articulated arm): 7

62604	TRAFO6_WRIST_AXES			-	-	
-	Identification of the hand axes			DWORD	NEW CONF	
-						
-	-	1	1	6	7/2	M

Description: This machine data identifies the robot hand type. Normally, axes 4 to 6 are the robot hand.
The following hand types are included:

- No hand: 1
- Central hand: 2
- Beveled hand: 3
- Hand with elbow: 5
- Beveled hand with elbow: 6

62605	TRAFO6_NUM_AXES	-	-
-	Number of transformed axes	DWORD	NEW CONF
-			
-	-	3	2
-	-	6	7/2
-	-		M

Description: This machine data identifies the number of axes involved in the transformation.
Package 2.3 (810D) or 4.3 (840D) support kinematics with a max. of 5 axes.

62606	TRAFO6_A4PAR	-	-
-	Axis 4 parallel / antiparallel to the last basic axis	DWORD	NEW CONF
-			
-	-	0	0
-	-	1	7/2
-	-		M

Description: This machine data identifies whether the 4th axis is parallel / antiparallel to the last rotary basic axis.

This machine data only applies for kinematics with more than 3 axes.

- Axis 4 is parallel / antiparallel: 1
- Axis 4 is not parallel: 0

62607	TRAFO6_MAIN_LENGTH_AB	-	-
mm	Basic axis length A and B, n = 0...1	DOUBLE	NEW CONF
-			
-	2	0.0, 500.0	-
-	-		7/2
-	-		M

Description: This machine data identifies the basic axis lengths A and B. These lengths are particularly defined for each basic axis type.

- n = 0: basic axis length A
- n = 1: basic axis length B

62608	TRAFO6_TX3P3_POS	-	-
mm	Attachment of the hand (position share), n = 0...2	DOUBLE	NEW CONF
-			
-	3	0.0, 0.0, 0.0	-
-	-		7/2
-	-		M

Description: This machine data identifies the position share of frame TX3P3 connecting the basic axes with the hand.

- Index 0: X component
- Index 1: Y component
- Index 2: Z component

62609	TRAFO6_TX3P3_RPY	-	-
degrees	Attachment of the hand (rotation share), n = 0...2	DOUBLE	NEW CONF
-			
-	3	0.0, 0.0, 0.0	-
-	-		7/2
-	-		M

Description: This machine data identifies the orientation share of frame TX3P3 connecting the basic axes with the hand.

2.6 Compile cycles

- Index 0: rotation with RPY angle A
- Index 1: rotation with RPY angle B
- Index 2: rotation with RPY angle C

62610	TRAFO6_TFLWP_POS	-	-
mm	Frame between hand pt. and flange coordinate system, n = 0...2	DOUBLE	NEW CONF
-			
-	3	0.0, 0.0, 0.0	-

Description: This machine data identifies the position share of frame TFLWP that connects the hand point with the flange.

- Index 0: X component
- Index 1: Y component
- Index 2: Z component

62611	TRAFO6_TFLWP_RPY	-	-
degrees	Frame between hand point and flange coordinate system, n = 0...2	DOUBLE	NEW CONF
-			
-	3	0.0, 0.0, 0.0	-

Description: This machine data identifies the orientation share of frame TFLWP that connects the hand point with the flange.

- Index 0: rotation with RPY angle A
- Index 1: rotation with RPY angle B
- Index 2: rotation with RPY angle C

62612	TRAFO6_TIRORO_POS	-	-
mm	Frame between foot pt. and int. coordinate system, n = 0...2	DOUBLE	NEW CONF
-			
-	3	0.0, 0.0, 0.0	-

Description: This machine data identifies the position share of frame TIRORO that connects the basic coordinate system with the internal transformation coordinate system.

- Index 0: X component
- Index 1: Y component
- Index 2: Z component

62613	TRAFO6_TIRORO_RPY	-	-
degrees	Frame between foot pt. and int. coordinate system, n = 0...2	DOUBLE	NEW CONF
-			
-	3	0.0, 0.0, 0.0	-

Description: This machine data identifies the orientation share of frame TIRORO that connects the basic coordinate system with the internal transformation coordinate system.

- Index 0: rotation with RPY angle A
- Index 1: rotation with RPY angle B
- Index 2: rotation with RPY angle C

62614	TRAFO6_DHPAR4_5A	-	-
mm	Parameter A for configuration of the hand, n = 0...1	DOUBLE	NEW CONF
-			
-	2	0.0, 0.0	-

Description: This machine data identifies length a.

- n = 0: transition axis 4 to 5
- n = 1: transition axis 5 to 6

62615	TRAFO6_DHPAR4_5D			-	-	
mm	Parameter D for configuration of the hand, n = 0...1			DOUBLE	NEW CONF	
-						
-	2	0.0, 0.0	-	-	7/2	M

Description: This machine data identifies length d.

- n = 0: transition axis 4 to 5
- n = 1: transition axis 5 to 6

62616	TRAFO6_DHPAR4_5ALPHA			-	-	
degrees	Parameter ALPHA for configuration of the hand, n = 0...1			DOUBLE	NEW CONF	
-						
-	2	-90.0, 90.0	-	-	7/2	M

Description: This machine data identifies angle alpha

- n = 0: transition axis 4 to 5
- n = 1: transition axis 5 to 6

62617	TRAFO6_MAMES			-	-	
-	Offset of math. to mech. zero point [axis no.]: 0...5			DOUBLE	NEW CONF	
-						
-	6	0.0, 0.0, 0.0, 0.0, 0.0, 0.0	-	-	7/2	M

Description: This machine data can specify an adjustment of the zero point for a rotary axis to the mathematical zero point specified by the transformation.

Based on the mechanical zero point the offset is hereby related to the mathematically positive direction of axis rotation.

62618	TRAFO6_AXES_DIR			-	-	
-	Adjustm. of the phys. and math. dir. of rot. [axis no.]: 0...5			DWORD	NEW CONF	
-						
-	6	1, 1, 1, 1, 1, 1	-1	1	7/2	M

Description: This machine data can adjust the mathematical and physical direction of rotation of the axes.

- +1: same direction of rotation
- -1: different direction of rotation

62619	TRAFO6_DIS_WRP			-	-	
mm	Medium distance between hand point and singularity			DOUBLE	NEW CONF	
-						
-	-	10.0	0.00001	999999.9999	7/2	M

Description: Through this machine data a limit value for the distance between the hand point and the singularity can be entered.

Inactive!

62620	TRAFO6_AXIS_SEQ			-	-	
-	Axis reorganization			DWORD	NEW CONF	
-						
-	6	1, 2, 3, 4, 5, 6	1	6	7/2	M

2.6 Compile cycles

Description: This machine data can reverse the order of the axes in order to internally transfer a kinematic system into a standard kinematic system.

62621	TRAFO6_SPIN_ON	-	-
-	Triangular or acme-screw spindles available	DWORD	NEW CONF
-			
-	-	0	0
-		1	7/2
-			M

Description: This machine data identifies whether triangular spindles or acme connections are available.

- 0: not available
- 1: available

This function is currently not supported.

MD62621 must be set to 0. Machine data MD62622 through MD62628 are thus inactive!

62622	TRAFO6_SPIND_AXIS	-	-
-	Axis on which the triangular spindle has an effect, n = 0...2	DWORD	NEW CONF
-			
-	3	0, 0, 0	-
-		-	7/2
-			M

Description: This machine data identifies for which axis a triangular spindle is active. A maximum of 3 triangular spindles may be available.

- n = 0: 1st triangular axis
- n = 1: 2nd triangular axis
- n = 2: 3rd triangular axis

62623	TRAFO6_SPINDLE_RAD_G	-	-
mm	Length G for triangular spindle, n = 0...2	DOUBLE	NEW CONF
-			
-	3	0.0, 0.0, 0.0	-
-		-	7/2
-			M

Description: This machine data identifies length G for the n-th triangular spindle.

62624	TRAFO6_SPINDLE_RAD_H	-	-
mm	Length H for triangular spindle, n = 0...2	DOUBLE	NEW CONF
-			
-	3	0.0, 0.0, 0.0	-
-		-	7/2
-			M

Description: This machine data identifies length H for the n-th triangular spindle.

62625	TRAFO6_SPINDLE_SIGN	-	-
-	Sign for triangular spindle, n = 0...2	DWORD	NEW CONF
-			
-	3	1, 1, 1	-1
-		1	7/2
-			M

Description: This machine data identifies the sign for the adjustment of the direction of rotation for the n-th triangular spindle.

62626	TRAFO6_SPINDLE_BETA	-	-
degrees	Angular offset for triangular spindles, n = 0...2	DOUBLE	NEW CONF
-			
-	3	0.0, 0.0, 0.0	-
-		-	7/2
-			M

Description: This machine data identifies offset angle b for adjustment of the zero point for the n-th triangular spindle.

62627	TRAFO6_TRP_SPIND_AXIS			-	-	
-	Axes driven by acme spindle, n = 0...1			DWORD	NEW CONF	
-						
-	2	0, 0	-	-	7/2	M

Description: This machine data identifies which axes are driven by an acme connection.

- n = 0: axis driven by an acme
- n = 1: coupling axis

62628	TRAFO6_TRP_SPIND_LEN			-	-	
mm	Acme length, n = 0...3			DOUBLE	NEW CONF	
-						
-	4	0.0, 0.0, 0.0, 0.0	-	-	7/2	M

Description: This machine data specifies the lengths of the acme connection.

62629	TRAFO6_VELCP			-	-	
mm/min	Cartesian velocity [no.]: 0...2			DOUBLE	Immediately	
-						
-	3	600000.0, 600000.0, 600000.0	-	-	7/2	M

Description: This machine data can specify a velocity for the Cartesian directions of traversing blocks with G0.

- n = 0: velocity in X direction
- n = 1: velocity in Y direction
- n = 2: velocity in Z direction

62630	TRAFO6_ACCCP			-	-	
m/s²	Cartesian accelerations [no.]: 0...2			DOUBLE	Immediately	
-						
-	3	0.5, 0.5, 0.5	0.001	100000	7/2	M

Description: This machine data can specify an acceleration for the Cartesian directions of traversing blocks with G0.

- n = 0: velocity in X direction
- n = 1: velocity in Y direction
- n = 2: velocity in Z direction

62631	TRAFO6_VELORI			-	-	
rev/min	Orientation angle velocities [no.]: 0...2			DOUBLE	Immediately	
-						
-	3	1.6666, 1.6666, 1.6666	-	-	7/2	M

Description: This machine data can specify a velocity for the orientation angles of traversing blocks with G0.

- n = 0: velocity angle A
- n = 1: velocity angle B
- n = 2: velocity angle C

2.6 Compile cycles

62632	TRAFO6_ACCORI			-	-	
rev/s²	Orientation angle accelerations [no.]: 0...2			DOUBLE	Immediately	
-						
-	3	0.00277, 0.00277, 0.00277	0.001	100000	7/2	M

Description: This machine data can specify an acceleration for the orientation angles of traversing blocks with G0.

- n = 0: velocity angle A
- n = 1: velocity angle B
- n = 2: velocity angle C

62634	TRAFO6_DYN_LIM_REDUCE			-	-	
-	Reduction factor for velocity controller			DOUBLE	NEW CONF	
-						
-	-	1.0	0.001	1.0	7/2	M

Description: This MD can be used to specify a reserve for the maximum velocity, so that an excessive increase in the velocity by the velocity controller will not cause the maximum velocity to be exceeded.

The value must be regarded as a factor that has an effect on the maximum velocity.

62635	TRAFO6_VEL_FILTER_TIME			-	-	
s	Time constant for velocity controller			DOUBLE	NEW CONF	
-						
-	-	0.024	0.0	100.0	7/2	M

Description: This MD can be used to set the time constant for the velocity controller in the interpolator. This can avoid controller vibration.

62636	TRAFO6_TFL_EXT_RPY			-	-	
degrees	Frame for rotating the flange coordinate system, n = 0...2			DOUBLE	NEW CONF	
-						
-	3	0.0, 0.0, 0.0	-	-	7/2	M

Description: For machines with 5 axes it was specified that the flange coordinate system must be aligned such that the tool is oriented in the X direction (robotics convention).
With the machine data TRAFO6_TFL_EXT_RPY, the flange coordinate system can be aligned such that for a machine with 5 axes a tool direction in accordance with the NC convention is achieved (tool orientation in the Z direction).

- Index 0: Rotation by the RPY angle A
- Index 1: Rotation by the RPY angle B
- Index 2: Rotation by the RPY angle C

62637	TRAFO6_TOOL_DIR			-	-	
-	Definition of tool direction			DWORD	NEW CONF	
-						
-	-	0	0	1	7/2	M

Description: This machine data identifies the tool direction for a machine with 5/6 axes

- 0: Tool orientation in the X direction (robotics convention)
- 1: Tool orientation in the Z direction (NC convention)

This machine data also affects how the rotation sequence of the virtual orientation axes is interpreted and calculated in the Handling Transformation.

- 0: Rotation sequence: 1st rotation around Z, 2nd rotation around Y', 3rd rotation around X" (does not apply for 5-axis machines)
- 1: Rotation sequence: 1st rotation around X, 2nd rotation around Y', 3rd rotation around Z" (does not apply for 5-axis machines)

63514	CC_PROTECT_ACCEL			-	-	
m/s², rev/s²	PROT braking acceleration in the case of collision			DOUBLE	Reset	
-						
-	-	1000.0	1.0	10000.0	7/2	M

Description: If the axis collision protection function PROT has detected a collision, the involved axes are braked using the acceleration set in this machine data.

Recommended setting: a few per cent higher than 32300 `$MA_MAX_AX_ACCEL`, provided that the dimensioning of the drive and the mechanical system allow it.

Notice: the braking acceleration set here always has a BRISK effect independently of other parameterizations (e.g. parameter set, active dyn. G code)

63540	CC_MASTER_AXIS			-	-	
-	Indicates the corresponding CC_Master axis for a CC_Slave axis			DWORD	Reset	
-						
-	-	0	0	CC_MAXNUM_AXES_IN_SYSTEM	7/2	M

Description: By assigning a valid CC_Master axis in this machine data, the relevant axis is defined as the CC-Slave axis of an MCS coupling. The assignment is made by entering the machine axis number of the CC_Master axis.

The machine axis number and the axis name must be taken from the channel-specific machine data:

- 20070 `$MC_AXCONF_MACHAX_USED`
- 20080 `$MC_AXCONF_CHANAX_NAME_TAB`

Notice:

CC_Master and CC_Slave must have the same axis type (linear or rotary axis).

CC_Master and CC_Slave must not be a spindle.

CC_Master and CC_Slave must not be replacement axes.

If the axes show different dynamic response, it is recommended you make the axis with the lower dynamics the CC_Master axis.

The machine data may be changed only when the coupling has been switched off.

63541	CC_POSITION_TOL			-	-	
mm, degrees	Monitoring window (only relevant to a CC_Slave axis)			DOUBLE	Reset	
-						
-	-	0.0	-	-	7/2	M

Description: Monitoring window of the MCS coupling. Only the entry in the machine data of the CC_Slave axis is evaluated. The difference of the actual values between the CC_Master and CC_Slave must always range within this window. Otherwise an alarm will be output.

The following condition is monitored:

$$\text{abs}(\text{ActualPos}[\text{CC\_Master}] - (\text{ActualPos}[\text{CC\_Slave}] + \text{CC\_Offset})) \leq \text{MD63541}$$

with:

CC_Offset = position difference between CC_Master and CC_Slave when switching on the coupling.

Monitoring is switched off by entering value 0.0

2.6 Compile cycles

63542	CC_PROTECT_MASTER			-	-	
-	Indicates the corresponding PMaster axis for a PSlave axis			DWORD	Reset	
-						
-	-	0	0	CC_MAXNUM_AXES_IN_SYSTEM	7/2	M

Description:

By assigning a valid Protect-Master axis in this machine data the relevant axis is defined as the Protect-Slave axis. Assignment is made by entering the machine axis number of the Protect-Master axis.

The machine axis and the axis name must be taken from the channel-specific machine data:

- MD20070 \$MC_AXCONF_MACHAX_USED[n-1]
- MD20080 \$MC_AXCONF_CHANAX_NAME_TAB

Notice:

Protect-Master and Protect-Slave axis must have the same axis type (linear or rotary axis).

63543	CC_PROTECT_OPTIONS			-	-	
-	Configuration of the collision protection function			DWORD	Reset	
-						
-	-	0	0	0xFF	7/2	M

Description:

The collision protection function can be adapted to the special situation by setting the following:

Bit 0 - bit 3 for Protect-Master and Protect-Slave

Bit 0 = 1:

Retraction in PLUS

Bit 1 = 1:

Braking to avoid collision is made by increasing the max. braking acceleration by factor 1.2

Bit 2 = 1:

Monitoring can be activated even without a referenced axis

Bit 3 = 1

Reverse the direction of retraction, if the axis is the master axis

Bit 4 - bit 7 only relevant to Protect-Slave

Bit 4 = 1:

Monitoring always active (otherwise ON/OFF via PLC)

Bit 5

Reserve

Bit 6

Reserve

Bit 7=1:

Display active protection in DB3x, DBX66.0

63544	CC_COLLISION_WIN			-	-	
mm, degrees	Collision protection window			DOUBLE	Reset	
-						
-	-	-1.0	-	-	7/2	M

Description:

Minimum distance between the Protect-Slave axis and the Protect-Master axis. Only the value entered in the Slave axis is used. With a value smaller than 0, the monitoring function cannot be activated.

63545	CC_OFFSET_MASTER			-	-	
mm, degrees	Work offset for collision protection			DOUBLE	PowerOn	
-						
-	-	0.0	-	-	7/2	M

Description: Work offset for collision detection between Protect-Slave and Protect-Master axis.
The value entered for the Protect-Slave axis is used only.

SINAMICS parameters

3.1 Explanation of the parameters

3.1.1 Structure of the data tables

Basic structure of the parameter description

The tables of SINAMICS parameters all have the following standard structure:

Parameter number	BICO: Full parameter name / short parameter name		
Drive object (function module)	Can be changed:	Calculated:	Access level:
	Data type:	Dynamic index:	Function diagram:
	P group:	Unit group:	Unit selection:
	Not for motor type:	Normalizing	Expert list:
	Min.	Max.	Factory setting

Example

r0025[0...3]	CO: Input voltage, smoothed		
A_INF, S_INF	Can be changed: -	Calculated: -	Access level: 2
	Data type: FloatingPoint32	Dynamic index:	Function diagram: 8850, 8950
	P group: Display, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Normalization p2001	Expert list: 1
	Min - [Vrms]	Max - [Vrms]	Factory setting - [Vrms]

References

You can find a detailed description of SINAMICS parameters in the following document:
SINAMICS S120/S150 List Manual

3.1.2 Meaning of table fields

Parameter number pxxxx[0...n]

The "parameter number" field contains the number of the parameter.

3.1 Explanation of the parameters

The number consists of a leading "p" or "r", followed by the parameter number and the index (optional).

Below are some examples of how the number is represented in the parameter list:

p... Adjustable parameter (read and write parameter)
 r... Display parameter (read-only)
 p0918 Adjustable parameter 918
 p0608[0...3] Adjustable parameter 608, indices 0 to 3
 p0610[0...n] Adjustable parameter 6010, indices 0 to n (n = configurable)
 r0944 Display parameter 944
 r2129.0...15 Display parameter 2129 with bit array from bit 0 (lowest bit) to bit 15 (highest bit)

BICO: Full parameter name / short parameter name

The following abbreviations can appear in front of the parameter name:

BI	Binector Input
	This parameter selects the source of a digital signal.
BO	Binector Output
	This parameter is available as an digital signal for interconnection with other parameters.
CI	Connector Input
	This parameter selects the source of an "analog" signal.
CO	Connector Output
	This parameter is available as an "analog" signal for interconnection with other parameters.
CO/BO	Connector/Binector Output
	This parameter is available as both an "analog" and also as digital signals for interconnection with other parameters.

Drive object (function module)

A drive object (DO) is an independent, "self-contained" functional unit with its own parameters, faults messages, and alarms.

The parameter list specifies the associated drive object and function module for each individual parameter.

Additional information is available in the following documentation: /FH1/ SINAMICS S120 Function Manual Drive Functions

Can be changed

The "-" sign indicates that the parameter can be changed in any object state and that the change will be activated immediately.

The information C1(x), C2(x), T, U ((x): optional) means that the parameter can be changed only in the specified drive object state and that the change will not be activated until the object switches to another state. This can be one or more states.

The following states are available:

C1(x)	Device commissioning Device is in the process of being commissioned (p0009 > 0). The pulses cannot be enabled. The parameter can only be changed in the following device commissioning settings (p0009 > 0):	C1: Commissioning 1
	• C1: can be changed for all settings p0009 > 0. • C1(x): can only be changed for the settings p0009 = x. A modified parameter value will not be activated until the device commissioning mode is exited with p0009 = 0.	
C2(x)	Drive object commissioning The drive is in the process of being commissioned (p0009 = 0 and p0010 > 0). The pulses cannot be enabled. The parameter can only be changed in the following device commissioning settings (p0010 > 0):	C2: Commissioning 2
	• C2: can be changed for all settings p0010 > 0. • C2(x): can be changed for the settings p0010 = x. A modified parameter value will not be activated until drive commissioning mode is exited with p0010 = 0	
U	Operation The pulses are enabled	U: Run
T	Ready The pulses are not enabled Status "C1(x)" or "C2(x)" is not active.	T: Ready to run

Calculated

Specifies whether the parameter is influenced by automatic calculations.

The calculation attribute defines which activities influence the parameter.

Access level

Specifies the access level required to be able to display and change this parameter. The required access level can be set using p0003.

The system uses the following access levels

1. Standard
2. Extended

3.1 Explanation of the parameters

3. Expert

4. Service

Parameters with this access level are protected by a password.

Data type

The information on the data type can consist of the following two items (separated by a slash).

- First information
Data type of the parameter.
- Second information (for binector or connector input only)
Data type of the signal source to be interconnected (binector/connector output).

Parameters can have the following data types:

I8	Integer8	8-bit integer number
I16	Integer16	16-bit integer number
I32	Integer32	32-bit integer number
U8	Unsigned8	8 bits without sign
U16	Unsigned16	16 bits without sign
U32	Unsigned32	32 bits without sign
Float	FloatingPoint32	32-bit floating point number

Dynamic index

For parameters with a dynamic index [0 to n], the following information is specified:

- Data set (if available).
- Parameter for the number of indices (n = number - 1).

Function diagram

The parameter is included in this function diagram. The structure of the parameter function and its relationship with other parameters are shown in the function diagram.

The function diagrams are available in the following documentation:

/LH1/ SINAMICS S120/S150 List Manual

P group

Specifies the functional group to which this parameter belongs. The required parameter group can be set via p0004.

Unit, unit group, unit selection

The standard unit of a parameter is specified in square brackets after the values for "Min", "Max", and "Factory setting".

For parameters where the unit can be changed, "Unit Group" and "Unit Selection" specify which group this parameter belongs and which parameter can be used to change the unit.

Not for motor type

Specifies for which motor type this parameter has no significance

ASM	Induction motor
FEM	Separately excited synchronous motor
PEM	Permanent-magnet synchronous motor
REL	Reluctance motor/SIEMOSYN motor

Normalizing

Specification of the reference variable with which a signal value is automatically converted for a BICO interconnection.

The following reference variables are possible:

p2000 ... p2007:	Reference speed, reference voltage, etc.
TEMP:	100°C = 100%
PERCENT:	1.0 = 100 %
4000H:	4000 hex = 100 %

Expert list

Specifies whether this parameter is available in the expert list of the specified drive objects in the commissioning software.

- 1: Parameter does exist in the expert list.
- 0: Parameter does not exist in the expert list

3.1.3 Number ranges of the parameters

Number ranges

Parameters are grouped into the following number ranges:

Range		Description
From	to	
0000	0099	Display and operation
0100	0199	Commissioning
0200	0299	Power unit
0300	0399	Motor
0400	0499	Encoder

3.1 Explanation of the parameters

Range		Description
From	to	
0500	0599	Technology and units, motor-specific data, probes
0600	0699	Thermal monitoring, maximum current, operating hours, motor data, central probe
0700	0799	Control Unit terminals, measuring sockets
0800	0839	CDS, DDS data sets, motor changeover
0840	0879	Sequence control (e.g. signal source for ON/OFF1)
0880	0899	ESR, parking, control and status words
0900	0999	PROFIBUS/PROFIdrive
1000	1199	Setpoint channel (e.g. ramp-function generator)
1200	1299	Functions (e.g. motor holding brake)
1300	1399	U/f control
1400	1799	Closed-loop control
1800	1899	Gating unit
1900	1999	Power unit and motor identification
2000	2009	Reference values
2010	2099	Communication (fieldbus)
2100	2139	Faults and alarms
2140	2199	Signals and monitoring
2200	2359	Technology controller
2360	2399	Staging, hibernation
2500	2699	Position control (LR) and basic positioning (EPOS)
2700	2719	Reference values, display
2720	2729	Load gearbox
2800	2819	Logic operations
2900	2930	Fixed values (e.g. percent, torque)
3000	3099	Motor identification results
3100	3109	Real-time clock (RTC)
3110	3199	Faults and alarms
3200	3299	Signals and monitoring
3400	3659	Infeed closed-loop control
3660	3699	Voltage Sensing Module (VSM), Braking Module internal
3700	3779	Advanced Positioning Control (APC)
3780	3819	Synchronization
3820	3849	Friction characteristic
3850	3899	Functions (e.g. long stator)
3900	3999	Management
4000	4599	Terminal Board, Terminal Module (e.g. TB30, TM31)
4600	4699	Sensor Module
4700	4799	Trace
4800	4849	Function Generator
4950	4999	OA application
5400	5499	Line droop control (e.g. shaft generator)

Range		Description
From	to	
5500	5599	Dynamic grid support (solar)
5600	5913	PROFenergy
5900	6999	SINAMICS GM/SM/GL/SL
7000	7499	Parallel connection of power units
7500	7599	SINAMICS SM120
7700	7729	External messages
7770	7789	NVRAM, system parameters
7800	7839	EEPROM read/write parameters
7840	8399	Internal system parameters
8400	8449	Real-time clock (RTC)
8500	8599	Data and macro management
8600	8799	CAN bus
8800	8899	Communication Board Ethernet (CBE), PROFIdrive
8900	8999	Industrial Ethernet, PROFINET, CBE20
9000	9299	Topology
9300	9399	Safety Integrated
9400	9499	Parameter consistency and storage
9500	9899	Safety Integrated
9900	9949	Topology
9950	9999	Diagnostics, internal
10000	10199	Safety Integrated
11000	11299	Free technology controller 0, 1, 2
20000	20999	Free function blocks (FBLOCKS)
21000	25999	Drive Control Chart (DCC)
50000	53999	SINAMICS DC MASTER (DC closed-loop control)
61000	61001	PROFINET

3.2 SINAMICS parameters

All objects: A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_LINK, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, HUB, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41, TM54F_MA, TM54F_SL, VECTOR, VECTOR_AC

r0002

CU_I_840,
CU_NX_840,
CU_S_AC_DP,
CU_S_AC_PN,
CU_S120_DP,
CU_S120_PN

Control Unit operating display / CU op_display

Changeable: -
Data type: Integer16
P group: -
Not for motor type: -
Min:
0

Calculation: -
Dynamic index: -
Unit group: -
Scaling: -
Max:
117

Access level: 1
Function plan: -
Unit selection: -
Expert list: 1
Default:
-

r0002 HLA, HLA_840, HLA_DBSI	Drive operating display / Drv op_display Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 250	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r0002 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Drive operating display / Drv op_display Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 250	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r0002 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed operating display / INF op_display Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 250	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r0002 B_INF, B_INF_840	Infeed operating display / INF op_display Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 250	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r0002 TM120	TM120 operating display / TM120 op_display Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 250	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r0002 TM15	TM15 operating display / TM15 op_display Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 250	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -

r0002 TM150	TM150 operating display / TM150 op_display Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 250	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r0002 TM15DI_DO	TM15DI/DO operating display / TM15D op_display Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 250	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r0002 TM17	TM17 operating display / TM17 op_display Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 250	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r0002 TM31	TM31 operating display / TM31 op_display Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 250	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r0002 TM41	TM41 operating display / TM41 op_display Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 250	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r0002 TB30	TB30 operating display / TB30 op_display Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 250	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -

r0002	TM54F operating display / TM54F op_display		
TM54F_MA, TM54F_SL	Changeable: -	Calculation: -	Access level: 1
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	250	-
r0002	Encoder DO operating display / Enc DO op_display		
ENC, ENC_840	Changeable: -	Calculation: -	Access level: 1
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	250	-
r0002	DRIVE-CLiQ Hub Module operating display / Hub op_display		
HUB	Changeable: -	Calculation: -	Access level: 1
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	250	-
p0003	BOP access level / BOP acc_level		
CU_I_840, CU_NX_840	Changeable: C1, T, U	Calculation: -	Access level: 1
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: All groups	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 0
	Min:	Max:	Default:
	1	4	1
p0003	BOP access level / BOP acc_level		
CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: C1, T, U	Calculation: -	Access level: 1
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: All groups	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	1	4	1
p0004	BOP display filter / BOP disp_filter		
CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: C2(1), T, U	Calculation: -	Access level: 1
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: All groups	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	99	0

p0005[0...1] A_INF, B_INF, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, HLA, HUB, R_INF, S_INF, SERVO, SERVO_AC, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41, TM54F_MA, TM54F_SL, VECTOR, VECTOR_AC	BOP operating display selection / BOP op_disp sel Changeable: T, U Data type: Unsigned16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: [0] 2 [1] 0
p0006 CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, HLA, HUB, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41, TM54F_MA, TM54F_SL	BOP operating display mode / BOP op_disp mode Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: 4	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 4
p0006 A_INF, B_INF, R_INF, S_INF, SERVO, SERVO_AC, VECTOR, VECTOR_AC	BOP operating display mode / BOP op_disp mode Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 4
p0007 CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	BOP background lighting / BOP lighting Changeable: T, U Data type: Unsigned32 P group: - Not for motor type: - Min: 0 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2000 [s]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0 [s]
p0008 CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	BOP drive object after booting / BOP DO after boot Changeable: T, U Data type: Unsigned16 P group: - Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1

p0009 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Device commissioning parameter filter / Dev comm par_filt Changeable: C1, T Data type: Integer16 P group: All groups Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 1
p0010 HLA, HLA_840, HLA_DBSI	Drive commissioning parameter filter / Drv comm. par_filt Changeable: C2(1), T Data type: Integer16 P group: All groups Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 1
p0010 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Drive commissioning parameter filter / Drv comm. par_filt Changeable: C2(1), T Data type: Integer16 P group: All groups Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000	Access level: 1 Function plan: 2800, 2818 Unit selection: - Expert list: 1 Default: 1
p0010 A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	Infeed commissioning parameter filter / INF comm par_filt Changeable: C2(1), T Data type: Integer16 P group: All groups Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 30	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 1
p0010 TM120	TM120 commissioning parameter filter / TM120 com par_filt Changeable: C2(1), T Data type: Integer16 P group: All groups Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 30	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0010 TM15	TM15 commissioning parameter filter / TM15 comm par_filt Changeable: C2(1), T Data type: Integer16 P group: All groups Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 30	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0010 TM150	TM150 commissioning parameter filter / TM150 com par_filt Changeable: C2(1), T Data type: Integer16 P group: All groups Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 30	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0010 TM15DI_DO	TM15DI/DO commissioning the parameterizing filter / TM15D com par_filt Changeable: C2(1), T Data type: Integer16 P group: All groups Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 30	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0010 TM17	TM17 commissioning parameter filter / TM17 comm par_filt Changeable: C2(1), T Data type: Integer16 P group: All groups Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 30	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0010 TM31	TM31 commissioning parameter filter / TM31 comm par_filt Changeable: C2(1), T Data type: Integer16 P group: All groups Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 30	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0010 TM41	TM41 commissioning parameter filter / TM41 comm par_filt Changeable: C2(1), T Data type: Integer16 P group: All groups Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 30	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0010 TB30	TB30 commissioning parameter filter / TB30 comm.par_filt Changeable: C2(1), T Data type: Integer16 P group: All groups Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 30	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0010 TM54F_MA	TM54F commissioning parameter filter / TM54F com par_filt Changeable: C2(1), T Data type: Integer16 P group: All groups Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 95	Access level: 1 Function plan: 2891 Unit selection: - Expert list: 1 Default: 0
p0010 ENC, ENC_840	Encoder DO commissioning parameter filter / EncDO com par_filt Changeable: C2(1), T Data type: Integer16 P group: All groups Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 30	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0011 CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	BOP password entry (p0013) / BOP passw ent p13 Changeable: T, U Data type: Unsigned16 P group: Functions Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0012 CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	BOP password acknowledgment (p0013) / BOP passw ackn p13 Changeable: T, U Data type: Unsigned16 P group: Functions Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0013[0...49] A_INF, B_INF, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, HLA, HUB, R_INF, S_INF, SERVO, SERVO_AC, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41, TM54F_MA, TM54F_SL, VECTOR, VECTOR_AC	BOP user-defined list / BOP list Changeable: T, U Data type: Unsigned16 P group: Functions Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0015 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Macro drive unit / Macro drv unit Changeable: C1 Data type: Unsigned32 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999999	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0015 A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM120, TM150, TM15DI_DO, TM31, VECTOR, VECTOR_AC	Macro drive object / Macro DO Changeable: C2(1) Data type: Unsigned32 P group: Commands Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999999	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0016 CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Activate BOP user-defined list / BOP user list act Changeable: C1, T, U Data type: Integer16 P group: All groups Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
r0018 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Control Unit firmware version / CU FW version Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4294967295	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r0019.0...14 CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	CO/BO: Control word BOP / STW BOP Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9912 Unit selection: - Expert list: 1 Default: -

r0020 HLA, HLA_840, HLA_DBSI	Velocity setpoint smoothed / v_set smth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 2 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [m/min]
r0020 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Speed setpoint smoothed / n_set smth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 2 Function plan: 5020, 6799 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r0020 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity setpoint smoothed / v_set smth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 2 Function plan: 5020, 6799 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r0021 HLA, HLA_840, HLA_DBSI	CO: Actual velocity smoothed / v_act smooth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 2 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [m/min]
r0021 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Actual speed smoothed / n_act smooth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 2 Function plan: 4700, 4710 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r0021 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Actual velocity smoothed / v_act smooth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 2 Function plan: 4700, 4710 Unit selection: p0505 Expert list: 1 Default: - [m/min]

r0021 VECTOR, VECTOR_AC	CO: Actual speed smoothed / n_act smooth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 2 Function plan: 6799 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r0022 HLA, HLA_840, HLA_DBSI	Actual velocity smoothed / v_act smooth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: - Scaling: p2000 Max: - [m/min]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: - [m/min]
r0022 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Speed actual value rpm smoothed / n_act rpm smooth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: p2000 Max: - [rpm]	Access level: 2 Function plan: 4700, 4710 Unit selection: - Expert list: 1 Default: - [rpm]
r0022 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Actual velocity smoothed / v_act smooth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: - Scaling: p2000 Max: - [m/min]	Access level: 2 Function plan: 4700, 4710 Unit selection: - Expert list: 1 Default: - [m/min]
r0022 VECTOR, VECTOR_AC	Speed actual value rpm smoothed / n_act rpm smooth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 6799 Unit selection: - Expert list: 1 Default: - [rpm]
r0024 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Output frequency smoothed / f_outp smooth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Hz]	Calculation: - Dynamic index: - Unit group: - Scaling: p2000 Max: - [Hz]	Access level: 3 Function plan: 5300, 5730 Unit selection: - Expert list: 1 Default: - [Hz]

r0024 VECTOR, VECTOR_AC	Output frequency smoothed / f_outp smooth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Hz]	Calculation: - Dynamic index: - Unit group: - Scaling: p2000 Max: - [Hz]	Access level: 3 Function plan: 6300, 6799 Unit selection: - Expert list: 1 Default: - [Hz]
r0024 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	CO: Line supply frequency smoothed / f_line smooth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Hz]	Calculation: - Dynamic index: - Unit group: - Scaling: p2000 Max: - [Hz]	Access level: 3 Function plan: 8850, 8950 Unit selection: - Expert list: 1 Default: - [Hz]
r0025 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Output voltage smoothed / U_outp smooth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: - [Vrms]	Access level: 2 Function plan: 5730, 6300, 6799 Unit selection: - Expert list: 1 Default: - [Vrms]
r0025[0...4] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	CO: Input voltage smoothed / U_inp smooth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: - [Vrms]	Access level: 2 Function plan: 8850, 8950 Unit selection: - Expert list: 1 Default: - [Vrms]
r0026 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: DC link voltage smoothed / Vdc smooth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: - [V]	Access level: 2 Function plan: 5730, 8750, 8850, 8950 Unit selection: - Expert list: 1 Default: - [V]
r0026 VECTOR, VECTOR_AC	CO: DC link voltage smoothed / Vdc smooth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: - [V]	Access level: 2 Function plan: 6799, 8750, 8850, 8950 Unit selection: - Expert list: 1 Default: - [V]

r0026 A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	CO: DC link voltage smoothed / Vdc smooth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: - [V]	Access level: 2 Function plan: 5730, 6799, 8750, 8850, 8950 Unit selection: - Expert list: 1 Default: - [V]
r0027 A_INF, A_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Absolute actual current smoothed / I_act abs val smth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: - Scaling: p2002 Max: - [Arms]	Access level: 2 Function plan: 5730, 6799, 8850, 8950 Unit selection: - Expert list: 1 Default: - [Arms]
r0027 B_INF, B_INF_840	CO: Absolute actual current smoothed / I_act abs val smth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [A]	Calculation: - Dynamic index: - Unit group: 6_4 Scaling: p2002 Max: - [A]	Access level: 2 Function plan: 8750 Unit selection: p0505 Expert list: 1 Default: - [A]
r0028 A_INF, A_INF_840, R_INF, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Modulation depth smoothed / Mod_depth smth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: p2002 Max: - [%]	Access level: 3 Function plan: 5730, 6799, 8950 Unit selection: - Expert list: 1 Default: - [%]
r0029 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Current actual value field-generating smoothed / Id_act smooth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: - Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 5730, 6799 Unit selection: - Expert list: 1 Default: - [Arms]
r0029 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Reactive current actual value smoothed / I_react smooth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: - Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 8850, 8950 Unit selection: - Expert list: 1 Default: - [Arms]

r0030	Current actual value torque-generating smoothed / I_q_act smooth		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 5730, 6799
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: p2002	Expert list: 1
	Min:	Max:	Default:
	- [Arms]	- [Arms]	- [Arms]

r0030	Current actual value force generating smoothed / I_q_act smooth		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 5730, 6799
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: p2002	Expert list: 1
	Min:	Max:	Default:
	- [Arms]	- [Arms]	- [Arms]

r0030	Active current actual value smoothed / I_{active} smooth		
A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 8850, 8950
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: p2002	Expert list: 1
	Min:	Max:	Default:
	- [Arms]	- [Arms]	- [Arms]

r0031	Force actual value smoothed / F_{act} smooth		
HLA, HLA_840, HLA_DBSI	Changeable: -	Calculation: -	Access level: 2
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Displays, signals	Unit group: 8_1	Unit selection: p0505
	Not for motor type: -	Scaling: p2003	Expert list: 1
	Min:	Max:	Default:
	- [N]	- [N]	- [N]

r0031	Actual torque smoothed / M_{act} smooth		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: -	Calculation: -	Access level: 2
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 5730, 6799
	P group: Displays, signals	Unit group: 7_1	Unit selection: p0505
	Not for motor type: -	Scaling: p2003	Expert list: 1
	Min:	Max:	Default:
	- [Nm]	- [Nm]	- [Nm]

r0031	Force actual value smoothed / F_{act} smooth		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: -	Calculation: -	Access level: 2
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 5730, 6799
	P group: Displays, signals	Unit group: 8_1	Unit selection: p0505
	Not for motor type: -	Scaling: p2003	Expert list: 1
	Min:	Max:	Default:
	- [N]	- [N]	- [N]

r0032 A_INF, A_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Active power actual value smoothed / P_actv_act smth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [kW]	Calculation: - Dynamic index: - Unit group: 14_10 Scaling: r2004 Max: - [kW]	Access level: 2 Function plan: 5730, 6799, 8750, 8850, 8950 Unit selection: p0505 Expert list: 1 Default: - [kW]
r0032 B_INF, B_INF_840	CO: Active power actual value smoothed / P_actv_act smth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [kW]	Calculation: - Dynamic index: - Unit group: 14_10 Scaling: r2004 Max: - [kW]	Access level: 2 Function plan: 5730, 6799, 8750, 8850, 8950 Unit selection: p0505 Expert list: 1 Default: - [kW]
r0033 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Torque utilization smoothed / M_util smooth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: 8012 Unit selection: - Expert list: 1 Default: - [%]
r0033 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Force utilization smoothed / F_util smooth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: 8012 Unit selection: - Expert list: 1 Default: - [%]
r0033 VECTOR, VECTOR_AC	Torque utilization smoothed / M_util smooth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: 8012 Unit selection: - Expert list: 1 Default: - [%]

r0034	CO: Motor utilization thermal / Mot_util therm		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: ASM, SESM, REL Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 2 Function plan: 8017, 8019 Unit selection: - Expert list: 1 Default: - [%]

r0035	CO: Motor temperature / Mot temp		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: - Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 2 Function plan: 8016, 8017 Unit selection: p0505 Expert list: 1 Default: - [°C]

r0035	CO: Temperature input / Temp_input		
A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: - Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 2 Function plan: 8850, 8950 Unit selection: p0505 Expert list: 1 Default: - [°C]

r0035	CO: Temperature input / Temp_input		
B_INF, B_INF_840	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: - Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 2 Function plan: 8750 Unit selection: p0505 Expert list: 1 Default: - [°C]

r0036	CO: Power unit overload I2t / PU overload I2t		
A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: 8021 Unit selection: - Expert list: 1 Default: - [%]

r0037[0...1]	Control Unit temperature / CU temp		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: - Unit group: - Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [°C]

r0037[0...1] HLA, HLA_840, HLA_DBSI	CO: HLA temperature / HLA temp Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: - Unit group: - Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [°C]
r0037[0...19] A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Power unit temperatures / PU temperatures Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: - Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: 8021 Unit selection: p0505 Expert list: 1 Default: - [°C]
r0038 A_INF, A_INF_840, R_INF, S_INF, S_INF_840, VECTOR, VECTOR_AC	Power factor smoothed / Cos phi smooth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 6799, 8850, 8950 Unit selection: - Expert list: 1 Default: -
r0039[0...2] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Energy display / Energy displ Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [kWh]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [kWh]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: - [kWh]
p0040 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Reset energy consumption display / Energy usage reset Changeable: T, U Data type: Unsigned8 P group: Displays, signals Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
r0041 VECTOR, VECTOR_AC	Energy consumption saved / Energy cons saved Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [kWh]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [kWh]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: - [kWh]

r0042[0...2] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Process energy display / Proc energy disp Changeable: - Data type: Integer32 P group: Displays, signals Not for motor type: - Min: - [Wh]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Wh]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: - [Wh]
p0043 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BI: Enable energy usage display / Enab energy usage Changeable: T, U Data type: Unsigned32 / Binary P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0045 HLA, HLA_840, HLA_DBSI, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Display values smoothing time constant / Disp_val T_smooth Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000.00 [ms]	Access level: 2 Function plan: 4715, 5610, 5730, 6714, 8012 Unit selection: - Expert list: 1 Default: 1.00 [ms]
p0045 A_INF, A_INF_840, R_INF	Display values smoothing time constant / Disp_val T_smooth Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000.00 [ms]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 150.00 [ms]
r0046.0...30 HLA, HLA_840, HLA_DBSI	CO/BO: Missing enable signal / Missing enable sig Changeable: - Data type: Unsigned32 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2634 Unit selection: - Expert list: 1 Default: -
r0046.0...31 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO/BO: Missing enable signal / Missing enable sig Changeable: - Data type: Unsigned32 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2634 Unit selection: - Expert list: 1 Default: -

r0046.0...31 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO/BO: Missing enable signal / Missing enable sig Changeable: - Data type: Unsigned32 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2634 Unit selection: - Expert list: 1 Default: -
r0046.0...31 VECTOR, VECTOR_AC	CO/BO: Missing enable signal / Missing enable sig Changeable: - Data type: Unsigned32 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2634 Unit selection: - Expert list: 1 Default: -
r0046.0...29 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	CO/BO: Missing enable signal / Missing enable sig Changeable: - Data type: Unsigned32 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 8834, 8934 Unit selection: - Expert list: 1 Default: -
r0046.0...29 B_INF, B_INF_840	CO/BO: Missing enable signal / Missing enable sig Changeable: - Data type: Unsigned32 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 8734 Unit selection: - Expert list: 1 Default: -
r0047 HLA, HLA_840, HLA_DBSI	Identification status / Ident status Changeable: - Data type: Integer16 P group: Displays, signals Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 200	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r0047 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Identification status / Ident status Changeable: - Data type: Integer16 P group: Displays, signals Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 104	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -

r0047 VECTOR, VECTOR_AC	Motor data identification and speed controller optimization / MotID and n_opt		
	Changeable: -	Calculation: -	Access level: 1
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: 0	Max: 300	Default: -
r0049[0...3] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Motor data set/encoder data set effective / MDS/EDS effective		
	Changeable: -	Calculation: -	Access level: 2
	Data type: Unsigned8	Dynamic index: -	Function plan: 8565
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: -	Max: -	Default: -
r0050.0...3 A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	CO/BO: Command Data Set CDS effective / CDS effective		
	Changeable: -	Calculation: -	Access level: 2
	Data type: Unsigned8	Dynamic index: -	Function plan: 8560
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: -	Max: -	Default: -
r0051.0...4 ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	CO/BO: Drive Data Set DDS effective / DDS effective		
	Changeable: -	Calculation: -	Access level: 2
	Data type: Unsigned8	Dynamic index: -	Function plan: 8565
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: -	Max: -	Default: -
r0056.1...15 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO/BO: Status word, closed-loop control / ZSW cl-loop ctrl		
	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: 2526
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: -	Max: -	Default: -
r0056.0...15 VECTOR, VECTOR_AC	CO/BO: Status word, closed-loop control / ZSW cl-loop ctrl		
	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: 2526
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: -	Max: -	Default: -

r0056.0...13 VECTOR (F3E), VECTOR_AC (F3E)	CO/BO: Status word, closed-loop control / ZSW cl-loop ctrl Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2526 Unit selection: - Expert list: 1 Default: -
r0060 HLA, HLA_840, HLA_DBSI	CO: Velocity setpoint before the setpoint filter / v_set before filt Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 4965 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r0060 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Speed setpoint before the setpoint filter / n_set before filt. Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 2701, 2704, 5020, 6030, 6799 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r0060 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Velocity setpoint before the setpoint filter / v_set before filt Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 2701, 2704, 5020, 6030, 6799 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r0061[0...1] HLA, HLA_840, HLA_DBSI	CO: Actual velocity unsmoothed / v_act unsmoothed Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 2 Function plan: 4965 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r0061[0...1] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Actual speed unsmoothed / n_act unsmoothed Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 2 Function plan: 4700, 4710, 4715 Unit selection: p0505 Expert list: 1 Default: - [rpm]

r0061[0...1] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Actual velocity unsmoothed / v_act unsmoothed Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 2 Function plan: 4700, 4710, 4715 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r0061[0...2] VECTOR, VECTOR_AC	CO: Actual speed unsmoothed / n_act unsmoothed Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 2 Function plan: 4700, 4710, 4715 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r0061 ENC, ENC_840	CO: Actual speed unsmoothed / n_act unsmoothed Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 2 Function plan: 4700, 4710, 4715 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r0061 ENC (Lin_enc), ENC_840 (Lin_enc)	CO: Actual velocity unsmoothed / v_act unsmoothed Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 2 Function plan: 4700, 4710, 4715 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r0062 HLA, HLA_840, HLA_DBSI	CO: Velocity setpoint after the filter / v_set after filter Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 4965 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r0062 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Speed setpoint after the filter / n_set after filter Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 5019, 5020, 5030, 5042, 5210 Unit selection: p0505 Expert list: 1 Default: - [rpm]

r0062 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Velocity setpoint after the filter / v_set after filter Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 5019, 5020, 5030, 5042, 5210 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r0062 VECTOR, VECTOR_AC	CO: Speed setpoint after the filter / n_set after filter Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 6020, 6030, 6031 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r0063 HLA, HLA_840, HLA_DBSI	CO: Actual velocity smoothed / v_act smooth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 4965 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r0063 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Actual speed smoothed / n_act smooth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 4700, 4710, 5019, 5300, 8019 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r0063 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Actual velocity smoothed / v_act smooth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 4700, 4710, 5019, 5300, 8019 Unit selection: p0505 Expert list: 1 Default: - [m/min]

r0063[0...2] VECTOR, VECTOR_AC	CO: Speed actual value / n_act Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 4702, 4715, 6799 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r0063 TM41	CO: Speed actual value / n_act Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [rpm]
r0064 HLA, HLA_840, HLA_DBSI	CO: Velocity controller system deviation / v_ctrl sys dev Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [m/min]
r0064 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Speed controller system deviation / n_ctrl sys dev Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 5040, 6040 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r0064 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Velocity controller system deviation / v_ctrl sys dev Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 5040, 6040 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r0065 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Slip frequency / f_Slip Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Hz]	Calculation: - Dynamic index: - Unit group: 2_1 Scaling: p2000 Max: - [Hz]	Access level: 3 Function plan: 6310, 6700, 6727, 6730, 6732 Unit selection: p0505 Expert list: 1 Default: - [Hz]

r0066 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Output frequency / f_outp Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Hz]	Calculation: - Dynamic index: - Unit group: 2_1 Scaling: p2000 Max: - [Hz]	Access level: 3 Function plan: 5300, 5730, 6300, 6310, 6730, 6731, 6799 Unit selection: p0505 Expert list: 1 Default: - [Hz]
r0066[0...1] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	CO: Line frequency / f_line Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Hz]	Calculation: - Dynamic index: - Unit group: 2_1 Scaling: p2000 Max: - [Hz]	Access level: 3 Function plan: 8850, 8864, 8950, 8964 Unit selection: p0505 Expert list: 1 Default: - [Hz]
r0067[0...1] HLA, HLA_840, HLA_DBSI	CO: Pressure actual value A / Press act val A Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [bar]	Calculation: - Dynamic index: - Unit group: - Scaling: p2002 Max: - [bar]	Access level: 3 Function plan: 4970 Unit selection: - Expert list: 1 Default: - [bar]
r0067 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Output current maximum / I_outp max Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 5722, 6300, 6301, 6640 Unit selection: p0505 Expert list: 1 Default: - [Arms]
r0067[0...1] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Absolute current value permissible / I_abs val perm Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [Arms]

r0068[0...1] HLA, HLA_840, HLA_DBSI	CO: Pressure actual value B / Press act val B Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [bar]	Calculation: - Dynamic index: - Unit group: - Scaling: p2002 Max: - [bar]	Access level: 3 Function plan: 4970 Unit selection: - Expert list: 1 Default: - [bar]
r0068 A_INF, A_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Absolute current actual value / I_act abs val Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 5730, 7017, 8017, 8019, 8021, 8850, 8950 Unit selection: p0505 Expert list: 1 Default: - [Arms]
r0068[0...1] VECTOR, VECTOR_AC	CO: Absolute current actual value / I_act abs val Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 6300, 6714, 6799, 7017, 8017, 8019, 8029, 8021 Unit selection: p0505 Expert list: 1 Default: - [Arms]
r0068 B_INF, B_INF_840	CO: DC current in the DC link / Idc DC link Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [A]	Calculation: - Dynamic index: - Unit group: 6_4 Scaling: p2002 Max: - [A]	Access level: 3 Function plan: 8021, 8750 Unit selection: p0505 Expert list: 1 Default: - [A]
r0069 HLA, HLA_840, HLA_DBSI	CO: System pressure actual value / Sys press act val Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [bar]	Calculation: - Dynamic index: - Unit group: - Scaling: p2002 Max: - [bar]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [bar]
r0069[0...8] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Phase current actual value / I_phase act val Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [A]	Calculation: - Dynamic index: - Unit group: 6_5 Scaling: p2002 Max: - [A]	Access level: 3 Function plan: 5700, 5730, 7008 Unit selection: p0505 Expert list: 1 Default: - [A]

r0069[0...8] A_INF, A_INF_840, R_INF, S_INF, S_INF_840, VECTOR, VECTOR_AC	CO: Phase current actual value / I_{phase} act val Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [A]	Calculation: - Dynamic index: - Unit group: 6_5 Scaling: p2002 Max: - [A]	Access level: 3 Function plan: 6730, 6731, 6732, 7983, 7987, 8850, 8950 Unit selection: p0505 Expert list: 1 Default: - [A]
r0070[0...1] HLA, HLA_840, HLA_DBSI	CO: Valve position voltage setpoint before inversion / U_{set} before inv Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: 5_2 Scaling: p2001 Max: - [V]	Access level: 3 Function plan: 4966 Unit selection: p0505 Expert list: 1 Default: - [V]
r0070 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Actual DC link voltage / V_{dc} act val Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: 5_2 Scaling: p2001 Max: - [V]	Access level: 3 Function plan: 5730 Unit selection: p0505 Expert list: 1 Default: - [V]
r0070 VECTOR, VECTOR_AC	CO: Actual DC link voltage / V_{dc} act val Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: 5_2 Scaling: p2001 Max: - [V]	Access level: 3 Function plan: 6723, 6724, 6730, 6731, 6799 Unit selection: p0505 Expert list: 1 Default: - [V]
r0070 A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	CO: Actual DC link voltage / V_{dc} act val Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: 5_2 Scaling: p2001 Max: - [V]	Access level: 3 Function plan: 8750, 8850, 8910, 8940, 8950, 8964 Unit selection: p0505 Expert list: 1 Default: - [V]

r0071[0...1] HLA, HLA_840, HLA_DBSI	CO: Valve position voltage setpoint / Valve U_set Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: 5_2 Scaling: p2001 Max: - [V]	Access level: 3 Function plan: 4966 Unit selection: p0505 Expert list: 1 Default: - [V]
r0071 VECTOR, VECTOR_AC	Maximum output voltage / U_output max Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: 5_1 Scaling: p2001 Max: - [Vrms]	Access level: 3 Function plan: 6301, 6640, 6700, 6722, 6723, 6724, 6725, 6727 Unit selection: p0505 Expert list: 1 Default: - [Vrms]
r0072[0...1] HLA, HLA_840, HLA_DBSI	CO: Valve position voltage actual value / Valve U_act Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: 5_2 Scaling: p2001 Max: - [V]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [V]
r0072 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Output voltage / U_output Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: 5_1 Scaling: p2001 Max: - [Vrms]	Access level: 3 Function plan: 5700, 5730, 6730, 6731, 6799 Unit selection: p0505 Expert list: 1 Default: - [Vrms]
r0072[0...4] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	CO: Input voltage / U_in Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: 5_1 Scaling: p2001 Max: - [Vrms]	Access level: 3 Function plan: 8850, 8950 Unit selection: p0505 Expert list: 1 Default: - [Vrms]
r0073[0...1] HLA, HLA_840, HLA_DBSI	Controller valve position voltage setpoint / Valve U_set Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: 5_2 Scaling: p2001 Max: - [V]	Access level: 3 Function plan: 4965, 4970 Unit selection: p0505 Expert list: 1 Default: - [V]

r0073 VECTOR, VECTOR_AC	Maximum modulation depth / Modulat_depth max Changeable: - Data type: FloatingPoint32 P group: Modulation Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: 6723, 6724, 6725 Unit selection: - Expert list: 1 Default: - [%]
r0074 HLA, HLA_840, HLA_DBSI	CO: Piston position with respect to the piston zero point / Piston pos zero Changeable: - Data type: Integer32 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0074 A_INF, A_INF_840, R_INF, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Modulat_depth / Mod_depth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: 5730, 6730, 6731, 6799, 8940, 8950 Unit selection: - Expert list: 1 Default: - [%]
r0075 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Current setpoint field-generating / Id_set Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: REL Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 5700, 5714, 5722 Unit selection: p0505 Expert list: 1 Default: - [Arms]
r0075 VECTOR, VECTOR_AC	CO: Current setpoint field-generating / Id_set Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: REL Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 6700, 6714, 6725 Unit selection: p0505 Expert list: 1 Default: - [Arms]
r0075 A_INF, A_INF_840, R_INF	CO: Reactive current setpoint / I_react_set Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 7997, 8945, 8946 Unit selection: p0505 Expert list: 1 Default: - [Arms]

r0076 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Current actual value field-generating / Id_act Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 5700, 5714, 5730, 6700, 6714, 6799 Unit selection: p0505 Expert list: 1 Default: - [Arms]
r0076 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	CO: Reactive current actual value / I_reactive_act Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 8810, 8850, 8910, 8946, 8950 Unit selection: p0505 Expert list: 1 Default: - [Arms]
r0077 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Current setpoint torque-generating / Iq_set Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: REL Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 5700, 5714, 5722 Unit selection: p0505 Expert list: 1 Default: - [Arms]
r0077 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Current setpoint force-generating / Iq_set Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: REL Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 5700, 5714, 5722 Unit selection: p0505 Expert list: 1 Default: - [Arms]
r0077 VECTOR, VECTOR_AC	CO: Current setpoint torque-generating / Iq_set Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: REL Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 6700, 6710 Unit selection: p0505 Expert list: 1 Default: - [Arms]

r0077 A_INF, A_INF_840, R_INF	CO: Active current setpoint / I_active_set Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 7997, 8910, 8940, 8945 Unit selection: p0505 Expert list: 1 Default: - [Arms]
r0078[0...1] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Current actual value torque-generating / Iq_act Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 5700, 5714, 5730 Unit selection: p0505 Expert list: 1 Default: - [Arms]
r0078[0...1] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Current actual value force-generating / Iq_act Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 5700, 5714, 5730 Unit selection: p0505 Expert list: 1 Default: - [Arms]
r0078 VECTOR, VECTOR_AC	CO: Current actual value torque-generating / Iq_act Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 6310, 6700, 6714, 6799 Unit selection: p0505 Expert list: 1 Default: - [Arms]
r0078 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	CO: Active current actual value / I_active_act Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 8810, 8850, 8910, 8946, 8950 Unit selection: p0505 Expert list: 1 Default: - [Arms]

r0079 HLA, HLA_840, HLA_DBSI	CO: Total force setpoint / F_set total Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: REL Min: - [N]	Calculation: - Dynamic index: - Unit group: 8_1 Scaling: p2003 Max: - [N]	Access level: 3 Function plan: 4970 Unit selection: p0505 Expert list: 1 Default: - [N]
r0079[0...1] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Torque setpoint total / M_set total Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: REL Min: - [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: p2003 Max: - [Nm]	Access level: 3 Function plan: 5610 Unit selection: p0505 Expert list: 1 Default: - [Nm]
r0079[0...1] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Total force setpoint / F_set total Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: REL Min: - [N]	Calculation: - Dynamic index: - Unit group: 8_1 Scaling: p2003 Max: - [N]	Access level: 3 Function plan: 5610 Unit selection: p0505 Expert list: 1 Default: - [N]
r0079 VECTOR, VECTOR_AC	CO: Torque setpoint / M_set Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: REL Min: - [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: p2003 Max: - [Nm]	Access level: 3 Function plan: 6020, 6060, 6710 Unit selection: p0505 Expert list: 1 Default: - [Nm]
r0080[0...1] HLA, HLA_840, HLA_DBSI	CO: Force actual value / F_act Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [N]	Calculation: - Dynamic index: - Unit group: 8_1 Scaling: p2003 Max: - [N]	Access level: 3 Function plan: 4970 Unit selection: p0505 Expert list: 1 Default: - [N]
r0080 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Torque actual value / M_act Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: p2003 Max: - [Nm]	Access level: 3 Function plan: 5730 Unit selection: p0505 Expert list: 1 Default: - [Nm]

r0080 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Force actual value / F_act Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [N]	Calculation: - Dynamic index: - Unit group: 8_1 Scaling: p2003 Max: - [N]	Access level: 3 Function plan: 5730 Unit selection: p0505 Expert list: 1 Default: - [N]
r0080[0...1] VECTOR, VECTOR_AC	CO: Torque actual value / M_act Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: p2003 Max: - [Nm]	Access level: 3 Function plan: 6714, 6799 Unit selection: p0505 Expert list: 1 Default: - [Nm]
r0081 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Torque utilization / M_Utilization Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: 8012 Unit selection: - Expert list: 1 Default: - [%]
r0081 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Force utilization / F_utilization Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: 8012 Unit selection: - Expert list: 1 Default: - [%]
r0081 VECTOR, VECTOR_AC	CO: Torque utilization / M_Utilization Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: 8012 Unit selection: - Expert list: 1 Default: - [%]
r0082[0...1] HLA, HLA_840, HLA_DBSI	CO: Active power actual value / P_act Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [kW]	Calculation: - Dynamic index: - Unit group: 14_8 Scaling: r2004 Max: - [kW]	Access level: 3 Function plan: 5730 Unit selection: p0505 Expert list: 1 Default: - [kW]

r0082[0...3] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Active power actual value / P_act Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [kW]	Calculation: - Dynamic index: - Unit group: 14_5 Scaling: r2004 Max: - [kW]	Access level: 3 Function plan: 5730 Unit selection: p0505 Expert list: 1 Default: - [kW]
r0082[0...3] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Active power actual value / P_act Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [kW]	Calculation: - Dynamic index: - Unit group: 14_8 Scaling: r2004 Max: - [kW]	Access level: 3 Function plan: 5730 Unit selection: p0505 Expert list: 1 Default: - [kW]
r0082[0...2] VECTOR, VECTOR_AC	CO: Active power actual value / P_act Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [kW]	Calculation: - Dynamic index: - Unit group: 14_5 Scaling: r2004 Max: - [kW]	Access level: 3 Function plan: 6714, 6799 Unit selection: p0505 Expert list: 1 Default: - [kW]
r0082 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	CO: Active power actual value / P_act Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [kW]	Calculation: - Dynamic index: - Unit group: 14_7 Scaling: r2004 Max: - [kW]	Access level: 3 Function plan: 8750, 8850, 8950 Unit selection: p0505 Expert list: 1 Default: - [kW]
r0082 B_INF, B_INF_840	CO: Active power actual value / P_act Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [kW]	Calculation: - Dynamic index: - Unit group: 14_7 Scaling: r2004 Max: - [kW]	Access level: 3 Function plan: 8750, 8850, 8950 Unit selection: p0505 Expert list: 1 Default: - [kW]
r0083 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Flux setpoint / Flex setp Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: 5722 Unit selection: - Expert list: 1 Default: - [%]

r0083 VECTOR, VECTOR_AC	CO: Flux setpoint / Flex setp Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [%]
r0084 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Flux actual value / Flux act val Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: 5722 Unit selection: - Expert list: 1 Default: - [%]
r0084[0...1] VECTOR, VECTOR_AC	CO: Flux actual value / Flux act val Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: 6726, 6730, 6732 Unit selection: - Expert list: 1 Default: - [%]
r0087 VECTOR, VECTOR_AC	CO: Actual power factor / Cos phi act Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 6714, 6730, 6732, 6799 Unit selection: - Expert list: 1 Default: -
r0088 A_INF, A_INF_840, R_INF, SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl)	CO: DC link voltage setpoint / Vdc setpoint Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: 5_2 Scaling: p2001 Max: - [V]	Access level: 3 Function plan: 8940, 8964 Unit selection: p0505 Expert list: 1 Default: - [V]

r0088 VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	CO: DC link voltage setpoint / Vdc setpoint Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: 5_2 Scaling: p2001 Max: - [V]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [V]
r0089[0...2] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Actual phase voltage / U_phase act val Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: 5_3 Scaling: p2001 Max: - [V]	Access level: 3 Function plan: 6719 Unit selection: p0505 Expert list: 1 Default: - [V]
p0092 CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Clock synchronous operation pre-assignment/check / CI sync op pre-as Changeable: C1(1) Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0092 CU_I_840, CU_NX_840	Clock synchronous operation pre-assignment/check / CI sync op pre-as Changeable: C1(1) Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 1
r0093 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Pole position angle electrically scaled / Pole pos el scale Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°]	Calculation: - Dynamic index: - Unit group: - Scaling: p2005 Max: - [°]	Access level: 3 Function plan: 4710 Unit selection: - Expert list: 1 Default: - [°]
r0094 HLA, HLA_840, HLA_DBSI	CO: Piston position actual value / Piston pos act val Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: p2005 Max: - [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [mm]

r0094 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Transformation angle / Transformat_angle Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°]	Calculation: - Dynamic index: - Unit group: - Scaling: p2005 Max: - [°]	Access level: 3 Function plan: 4700, 4702, 4710, 6300, 6714, 6730, 6731, 6732 Unit selection: - Expert list: 1 Default: - [°]
r0094 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	CO: Transformation angle / Transformat_angle Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°]	Calculation: - Dynamic index: - Unit group: - Scaling: p2005 Max: - [°]	Access level: 3 Function plan: 8850, 8950 Unit selection: - Expert list: 1 Default: - [°]
p0097 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Select drive object type / Select DO type Changeable: C1(1) Data type: Integer16 P group: Topology Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 24	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
r0098[0...5] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Actual device topology / Device_act topo Changeable: - Data type: Unsigned32 P group: Topology Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
p0099[0...5] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Device target topology / Device_target topo Changeable: C1(1) Data type: Unsigned32 P group: Topology Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0000 hex
p0100 HLA, HLA_840, HLA_DBSI	IEC/NEMA Standards / IEC/NEMA Standards Changeable: C2(1) Data type: Integer16 P group: Converter Not for motor type: SESM Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0100 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	IEC/NEMA Standards / IEC/NEMA Standards Changeable: C2(1) Data type: Integer16 P group: Converter Not for motor type: SESM Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 0	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0100 VECTOR, VECTOR_AC	IEC/NEMA Standards / IEC/NEMA Standards Changeable: C2(1) Data type: Integer16 P group: Converter Not for motor type: SESM Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0101[0...n] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Drive object numbers / DO numbers Changeable: C1(1) Data type: Unsigned16 P group: Topology Not for motor type: - Min: 0	Calculation: - Dynamic index: r0095 Unit group: - Scaling: - Max: 62	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
r0102[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Number of drive objects / DO count Changeable: - Data type: Unsigned16 P group: Topology Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
p0103[0...n] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Application-specific view / Appl_spec view Changeable: C1(2) Data type: Unsigned16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: r0095 Unit group: - Scaling: - Max: 999	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0

r0103	Application-specific view / Appl_spec view		
A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
p0105	Activate/deactivate drive object / DO act/deact		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 1
p0105	Activate/deactivate drive object / DO act/deact		
A_INF, A_INF_840, B_INF, B_INF_840, CU_LINK, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, HUB, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM150, TM15DI_DO, TM17, VECTOR, VECTOR_AC	Changeable: T Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 1
p0105	Activate/deactivate drive object / DO act/deact		
TM15, TM31, TM41	Changeable: T Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 1
p0105	Activate/deactivate drive object / DO act/deact		
TM54F_MA, TM54F_SL	Changeable: T Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1

r0106 A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_LINK, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, HUB, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41, VECTOR, VECTOR_AC	Drive object active/inactive / DO act/inact Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
p0107[0...n] CU_I_840	Drive object type / DO type Changeable: C1(2) Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: r0095 Unit group: - Scaling: - Max: 300	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0107[0...n] CU_NX_840	Drive object type / DO type Changeable: C1(2) Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: r0095 Unit group: - Scaling: - Max: 300	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0107[0...n] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Drive object type / DO type Changeable: C1(2) Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: r0095 Unit group: - Scaling: - Max: 300	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
r0107 HLA, HLA_840, HLA_DBSI	Drive object type / DO type Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 70	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 70	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -

r0107 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Drive object type / DO type Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 11	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 11	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0107 VECTOR, VECTOR_AC	Drive object type / DO type Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 12	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 12	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0107 A_INF, A_INF_840	Drive object type / DO type Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 10	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0107 B_INF, B_INF_840	Drive object type / DO type Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 30	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 30	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0107 R_INF	Drive object type / DO type Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 21	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 21	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0107 S_INF, S_INF_840	Drive object type / DO type Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 20	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -

r0107 TM120	Drive object type / DO type Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 207	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 207	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0107 TM15	Drive object type / DO type Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 203	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 203	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0107 TM150	Drive object type / DO type Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 208	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 208	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0107 TM15DI_DO	Drive object type / DO type Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 204	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 204	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0107 TM17	Drive object type / DO type Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 202	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 202	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0107 TM31	Drive object type / DO type Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 200	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 200	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -

r0107 TM41	Drive object type / DO type Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 201	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 201	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0107 TB30	Drive object type / DO type Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 100	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0107 TM54F_MA	Drive object type / DO type Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 205	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 205	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0107 TM54F_SL	Drive object type / DO type Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 206	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 206	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0107 ENC, ENC_840	Drive object type / DO type Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 300	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 300	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0107 CU_LINK	Drive object type / DO type Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 254	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 254	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -

r0107 HUB	Drive object type / DO type Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 150	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 150	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
p0108[0...n] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Drive objects function module / DO fct_mod Changeable: C1(2) Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: r0095 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
r0108 HLA, HLA_840, HLA_DBSI	Drive objects function module / DO fct_mod Changeable: - Data type: Unsigned32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0108 SERVO	Drive objects function module / DO fct_mod Changeable: - Data type: Unsigned32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0108 SERVO_840, SERVO_DBSI	Drive objects function module / DO fct_mod Changeable: - Data type: Unsigned32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0108 SERVO_AC	Drive objects function module / DO fct_mod Changeable: - Data type: Unsigned32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -

r0108 VECTOR	Drive objects function module / DO fct_mod Changeable: - Data type: Unsigned32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0108 VECTOR_AC	Drive objects function module / DO fct_mod Changeable: - Data type: Unsigned32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0108 A_INF_840	Drive objects function module / DO fct_mod Changeable: - Data type: Unsigned32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0108 A_INF, R_INF	Drive objects function module / DO fct_mod Changeable: - Data type: Unsigned32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0108 B_INF_840, S_INF_840	Drive objects function module / DO fct_mod Changeable: - Data type: Unsigned32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0108 B_INF, S_INF	Drive objects function module / DO fct_mod Changeable: - Data type: Unsigned32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -

r0108 TB30, TM120, TM150, TM15DI_DO, TM31, TM41	Drive objects function module / DO fct_mod Changeable: - Data type: Unsigned32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0108 ENC, ENC_840	Drive objects function module / DO fct_mod Changeable: - Data type: Unsigned32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0110[0...2] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Basic sampling times / t_basis Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [μs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [μs]
r0111 A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Basic sampling time selection / t_basis sel Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p0112 A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Sampling times pre-setting p0115 / t_sample for p0115 Changeable: C1(3) Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 5	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 3

p0113 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Minimum pulse frequency, selection / f_puls min sel Changeable: C1(3) Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 2.000 [kHz]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4.000 [kHz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 4.000 [kHz]
p0113 SERVO (Dig IO), SERVO_840 (Dig IO), SERVO_DBSI (Dig IO)	Minimum pulse frequency, selection / f_puls min sel Changeable: C1(3) Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 4.000 [kHz]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4.000 [kHz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 4.000 [kHz]
p0113 VECTOR, VECTOR_AC	Minimum pulse frequency, selection / f_puls min sel Changeable: C1(3) Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 1.000 [kHz]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4.000 [kHz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2.000 [kHz]
r0114[0...9] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Minimum pulse frequency recommended / f_puls min recom Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [kHz]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [kHz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [kHz]
p0115[0] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Sampling time for supplementary functions / t_samp suppl_fct Changeable: C1(3) Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 16000.00 [μs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 4000.00 [μs]

p0115[0...6]	Sampling times for internal control loops / t_sample int ctrl		
HLA, HLA_840, HLA_DBSI	Changeable: C1(3)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [μs]	16000.00 [μs]	[0] 125.00 [μs]
			[1] 125.00 [μs]
			[2] 125.00 [μs]
			[3] 4000.00 [μs]
			[4] 1000.00 [μs]
			[5] 4000.00 [μs]
			[6] 4000.00 [μs]

p0115[0...6]	Sampling times for internal control loops / t_sample int ctrl		
A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: C1(3)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [μs]	16000.00 [μs]	[0] 125.00 [μs]
			[1] 125.00 [μs]
			[2] 125.00 [μs]
			[3] 4000.00 [μs]
			[4] 1000.00 [μs]
			[5] 4000.00 [μs]
			[6] 4000.00 [μs]

p0115[0...6]	Sampling times for internal control loops / t_sample int ctrl		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: C1(3)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [μs]	16000.00 [μs]	[0] 125.00 [μs]
			[1] 125.00 [μs]
			[2] 125.00 [μs]
			[3] 4000.00 [μs]
			[4] 1000.00 [μs]
			[5] 4000.00 [μs]
			[6] 4000.00 [μs]

p0115[0...6] VECTOR, VECTOR_AC	Sampling times for internal control loops / t_sample int ctrl Changeable: C1(3) Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 16000.00 [μs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: [0] 250.00 [μs] [1] 1000.00 [μs] [2] 1000.00 [μs] [3] 1000.00 [μs] [4] 2000.00 [μs] [5] 4000.00 [μs] [6] 4000.00 [μs]
p0115[0] TM120	Sampling time for supplementary functions / t_samp suppl_fct Changeable: C1(3) Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 16000.00 [μs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 4000.00 [μs]
p0115[0] TB30, TM150, TM15DI_DO, TM31	Sampling time for supplementary functions / t_samp suppl_fct Changeable: C1(3) Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 16000.00 [μs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 4000.00 [μs]
p0115[0] TM41	Sampling time for supplementary functions / t_samp suppl_fct Changeable: C1(3) Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 16000.00 [μs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 4000.00 [μs]
p0115[0] ENC, ENC_840	Sampling time for speed detection / t_sample n_det Changeable: C1(3) Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 125.00 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 500.00 [μs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 125.00 [μs]

r0116[0...1] A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM15, TM15DI_DO, TM17, TM31, TM41, VECTOR, VECTOR_AC	Drive object clock cycle recommended / DO_clock recom Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [μs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [μs]
p0117 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Current controller computing dead time mode / I_ctrl t_dead mode Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 6
p0118 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Current controller computing dead time / I_ctrl t_dead Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [μs]	Calculation: CALC_MOD_CON Dynamic index: - Unit group: - Scaling: - Max: 2000.00 [μs]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [μs]
p0118 A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, VECTOR, VECTOR_AC	Current controller computing dead time / I_ctrl t_dead Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2000.00 [μs]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [μs]
p0120 HLA, HLA_840, HLA_DBSI	Number of valve data sets (PDS) / PDS count Changeable: C1(3) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 1

p0120	Number of Power unit Data Sets (PDS) / PDS count		
A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: C1(3) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 1
p0121[0...n]	Power unit component number / PU comp_no		
A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C1(4) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 199	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0124[0...n]	Main component detection using LED / M_comp detect LED		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: T, U Data type: Unsigned8 P group: Converter Not for motor type: - Min: 0	Calculation: - Dynamic index: r0095 Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0124[0...n]	Power unit detection via LED / PU detection LED		
A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned8 P group: Converter Not for motor type: - Min: 0	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0125[0...n]	Activate/deactivate power unit components / PU_comp act/deact		
A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C1(4), T Data type: Integer16 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 2	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 1

r0126[0...n] A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Power unit components active/inactive / PU comp act/inact Changeable: - Data type: Integer16 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0127[0...n] A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Power unit EEPROM data version / PU EEPROM version Changeable: - Data type: Unsigned32 P group: Converter Not for motor type: - Min: -	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0128[0...n] A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Power unit firmware version / PU FW version Changeable: - Data type: Unsigned32 P group: Converter Not for motor type: - Min: -	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p0130 HLA, HLA_840, HLA_DBSI	Number of Motor Data Sets (MDS) / MDS count Changeable: C1(3) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: 8575 Unit selection: - Expert list: 1 Default: 1
p0130 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Number of Motor Data Sets (MDS) / MDS count Changeable: C1(3) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 16	Access level: 2 Function plan: 8575 Unit selection: - Expert list: 1 Default: 1

p0131[0...n] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Motor component number / Mot comp_no Changeable: C1(4) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 199	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0133[0...n] VECTOR, VECTOR_AC	Motor configuration / Motor config Changeable: C2(1, 3) Data type: Unsigned16 P group: Motor Not for motor type: PMSM, SESM, REL Min: -	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
p0139[0...2] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Copy Motor Data Set MDS / Copy MDS Changeable: C2(15) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 31	Access level: 2 Function plan: 8575 Unit selection: - Expert list: 1 Default: 0
p0140 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Number of Encoder Data Sets (EDS) / EDS count Changeable: C1(3) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 16	Access level: 2 Function plan: 8570 Unit selection: - Expert list: 1 Default: 1
p0140 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Number of VSM data sets / VSM count Changeable: C1(3) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8	Access level: 4 Function plan: 8570 Unit selection: - Expert list: 1 Default: 1
p0140 ENC, ENC_840	Number of Encoder Data Sets (EDS) / EDS count Changeable: C1(3) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: 8570 Unit selection: - Expert list: 1 Default: 1

p0141[0...n]	Encoder interface (Sensor Module) component number / Enc_interf comp_no		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C1(4) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 199	Access level: 3 Function plan: 4704, 8570 Unit selection: - Expert list: 1 Default: 0

p0141[0...n]	VSM component number / VSM comp_no		
A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Changeable: C1(4) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: p0140 Unit group: - Scaling: - Max: 199	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0142[0...n]	Encoder component number / Encoder comp_no		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C1(4) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 199	Access level: 3 Function plan: 4704 Unit selection: - Expert list: 1 Default: 0

p0144[0...n]	Sensor Module detection via LED / SM detection LED		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned8 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0144[0...n]	Voltage Sensing Module detection via LED / VSM detection LED		
A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Changeable: T, U Data type: Unsigned8 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: p0140 Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0145[0...n]	Activate/deactivate encoder interface / Enc_intf act/deact		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C1(4), T, U Data type: Integer16 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 2	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 1

p0145[0...n] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Voltage Sensing Module activate/deactivate / VSM act/deact Changeable: C1(4), T Data type: Integer16 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: p0140 Unit group: - Scaling: - Max: 2	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 1
r0146[0...n] ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Encoder interface active/inactive / Enc_intf act/inact Changeable: - Data type: Integer16 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0146[0...n] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Voltage Sensing Module active/inactive / VSM act/inact Changeable: - Data type: Integer16 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: p0140 Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0147[0...n] ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Sensor Module EEPROM data version / SM EEPROM version Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0147[0...n] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Voltage Sensing Module EEPROM data version / VSM EEPROM version Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: p0140 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0148[0...n] ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Sensor Module firmware version / SM FW version Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r0148[0...n] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Voltage Sensing Module firmware version / VSM FW version Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: p0140 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p0150 VECTOR, VECTOR_AC	Number of VSM data sets / VSM dat_sets qty. Changeable: C1(3) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 1
p0150 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	VSM2 data sets selection / VSM2 dat_sets qty Changeable: C1(3) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 1
p0151[0...n] VECTOR, VECTOR_AC	Voltage Sensing Module component number / VSM comp_no Changeable: C1(4) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: p0150 Unit group: - Scaling: - Max: 199	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0151[0...n] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Voltage Sensing Module 2 component number / VSM2 comp_no Changeable: C1(4) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: p0150 Unit group: - Scaling: - Max: 199	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0151 TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41, TM54F_MA, TM54F_SL	Terminal Module component number / TM comp_no Changeable: C1(4) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 199	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0151[0...1] HUB	DRIVE-CLiQ Hub Module component number / Hub comp_no Changeable: C1(4) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 199	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0154[0...n] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Voltage Sensing Module 2 detection via LED / VSM2 detection LED Changeable: T, U Data type: Unsigned8 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: p0150 Unit group: - Scaling: - Max: 1	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0154 TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41, TM54F_MA, TM54F_SL	Terminal Module detection via LED / TM detection LED Changeable: T, U Data type: Unsigned8 P group: Terminals Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0154 HUB	DRIVE-CLiQ Hub Module detection via LED / Hub detection LED Changeable: T, U Data type: Unsigned8 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0155[0...n] VECTOR, VECTOR_AC	Voltage Sensing Module activate/deactivate / VSM act/deact Changeable: C1(4), T Data type: Integer16 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: p0150 Unit group: - Scaling: - Max: 2	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 1
p0155[0...n] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Voltage Sensing Module 2 activate/deactivate / VSM2 act/deact Changeable: C1(4), T Data type: Integer16 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: p0150 Unit group: - Scaling: - Max: 2	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 1

r0156[0...n] VECTOR, VECTOR_AC	Voltage Sensing Module active/inactive / VSM act/inact Changeable: - Data type: Integer16 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: p0150 Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0156[0...n] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Voltage Sensing Module 2 active/inactive / VSM2 act/inact Changeable: - Data type: Integer16 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: p0150 Unit group: - Scaling: - Max: 1	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r0157[0...n] VECTOR, VECTOR_AC	Voltage Sensing Module EEPROM data version / VSM EEPROM version Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: p0150 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0157[0...n] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Voltage Sensing Module 2 EEPROM data version / VSM2 EEPROM vers Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: p0150 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r0157 TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41, TM54F_MA, TM54F_SL	Terminal Module EEPROM data version / TM EEPROM version Changeable: - Data type: Unsigned32 P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0157 HUB	DRIVE-CLiQ Hub Module EEPROM data version / Hub EEPROM version Changeable: - Data type: Unsigned32 P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r0158[0...n] VECTOR, VECTOR_AC	Voltage Sensing Module firmware version / VSM FW version Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: p0150 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0158[0...n] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Voltage Sensing Module 2 firmware version / VSM2 FW version Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: p0150 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r0158 TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41, TM54F_MA, TM54F_SL	Terminal Module firmware version / TM FW version Changeable: - Data type: Unsigned32 P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0158 HUB	DRIVE-CLiQ Hub Module firmware version / Hub FW version Changeable: - Data type: Unsigned32 P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p0161 HLA, HLA_840, HLA_DBSI	Valve component number / Valve comp_no Changeable: C1(4) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 199	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0161 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	HF Damping Module component number / HF Damp comp_no Changeable: C1(4) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 199	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0161 TB30	Option board component number / Opt board comp_no Changeable: C1(4) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 199	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0162 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	HF Choke Module component number / HF Choke comp_no Changeable: C1(4) Data type: Unsigned8 P group: Terminals Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 199	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0162 CU_LINK	CU-LINK slave component number / CU-LINK comp_no Changeable: C1(4) Data type: Unsigned8 P group: Terminals Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 199	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0165 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Activate/deactivate filter module / FM act/deact Changeable: C1(4), T Data type: Integer16 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 1
r0166 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Filter module active/inactive / FM act/inact Changeable: - Data type: Integer16 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
p0170 HLA, HLA_840, HLA_DBSI, TM41	Number of Command Data Sets (CDS) / CDS count Changeable: C1(3) Data type: Unsigned8 P group: Commands Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 1

p0170 A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Number of Command Data Sets (CDS) / CDS count Changeable: C1(3) Data type: Unsigned8 P group: Commands Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 1
p0170 VECTOR, VECTOR_AC	Number of Command Data Sets (CDS) / CDS count Changeable: C1(3) Data type: Unsigned8 P group: Commands Not for motor type: - Min: 2	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 2
p0171[0...n] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Drive objects function module 1 / DO fct_mod 1 Changeable: C1(2) Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: r0095 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
r0171 A_INF, A_INF_840, B_INF, B_INF_840, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	Drive objects function module 1 / DO fct_mod 1 Changeable: - Data type: Unsigned32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
p0172[0...n] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Drive objects function module 2 / DO fct_mod 2 Changeable: C1(2) Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: r0095 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin

r0172	Drive objects function module 2 / DO fct_mod 2		
A_INF, A_INF_840, B_INF, B_INF_840, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
p0173[0...n]	Drive objects function module 3 / DO fct_mod 3		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: C1(2) Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: r0095 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
r0173	Drive objects function module 3 / DO fct_mod 3		
A_INF, A_INF_840, B_INF, B_INF_840, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
p0180	Number of Drive Data Sets (DDS) / DDS count		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: C1(3) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 32	Access level: 2 Function plan: 8565 Unit selection: - Expert list: 1 Default: 1
p0186[0...n]	Motor Data Sets (MDS) number / MDS number		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C1(4) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 15	Access level: 3 Function plan: 8575 Unit selection: - Expert list: 1 Default: 0

p0187[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Encoder 1 encoder data set number / Enc 1 EDS number Changeable: C1(4) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 99	Access level: 3 Function plan: 4700, 8570 Unit selection: - Expert list: 1 Default: 99
p0187[0...n] HLA, HLA_840, HLA_DBSI, VECTOR, VECTOR_AC	Encoder 1 encoder data set number / Enc 1 EDS number Changeable: C1(4) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 99	Access level: 3 Function plan: 4700, 8570 Unit selection: - Expert list: 1 Default: 99
p0188[0...n] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Encoder 2 encoder data set number / Enc 2 EDS number Changeable: C1(4) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 99	Access level: 3 Function plan: 4700, 8570 Unit selection: - Expert list: 1 Default: 99
p0189[0...n] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Encoder 3 encoder data set number / Enc 3 EDS number Changeable: C1(4) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 99	Access level: 3 Function plan: 4700, 8570 Unit selection: - Expert list: 1 Default: 99
r0192 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Power unit firmware properties 1 / PU FW property 1 Changeable: - Data type: Unsigned32 P group: Converter Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0192 A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, VECTOR, VECTOR_AC	Power unit firmware properties 1 / PU FW property 1 Changeable: - Data type: Unsigned32 P group: Converter Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r0193 A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Power unit firmware properties 2 / PU FW property 2 Changeable: - Data type: Unsigned32 P group: Converter Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0194[0...n] VECTOR, VECTOR_AC	VSM properties / VSM properties Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: p0150 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r0194[0...n] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	VSM properties / VSM properties Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: p0140 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r0196[0...255] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Topology component status / Top comp stat Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0197[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Bootloader version / Bootloader vers Changeable: - Data type: Unsigned32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r0198[0...2] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	BIOS/EEPROM data version / BIOS/EEPROM vers Changeable: - Data type: Unsigned32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -

p0199[0...24] All objects	Drive object name / DO name Changeable: C1 Data type: Unsigned16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
r0200[0...n] A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Power unit code number actual / PU code no. act Changeable: - Data type: Unsigned16 P group: Converter Not for motor type: - Min: -	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p0201[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Power unit code number / PU code no Changeable: C2(2) Data type: Unsigned16 P group: Converter Not for motor type: - Min: 0	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0201[0...n] A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	Power unit code number / PU code no Changeable: C2(2) Data type: Unsigned16 P group: Converter Not for motor type: - Min: 0	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
r0203[0...15] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Firmware package name / FW pkg name Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -

r0203[0...n] A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Actual power unit type / PU actual type Changeable: - Data type: Integer16 P group: Converter Not for motor type: - Min: 2	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 400	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0204[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Power unit hardware properties / PU HW property Changeable: - Data type: Unsigned32 P group: Converter Not for motor type: - Min: -	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0204[0...n] A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	Power unit hardware properties / PU HW property Changeable: - Data type: Unsigned32 P group: Converter Not for motor type: - Min: -	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p0205[0...n] HLA, HLA_840, HLA_DBSI	Valve rated voltage / Valve Un Changeable: C2(1, 2) Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.500 [V]	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 15.000 [V]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 10.000 [V]
p0205 VECTOR, VECTOR_AC	Power unit application / PU application Changeable: C2(1, 2) Data type: Integer16 P group: Converter Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 7	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 6
p0206[0...n] HLA, HLA_840, HLA_DBSI	Valve transition point flow rate / Valve trans flow Changeable: C2(1, 2) Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.2 [%]	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 95.0 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 10.0 [%]

r0206[0...4]	Rated power unit power / PU P_{rated}		
A_INF, A_INF_840, B_INF, B_INF_840, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: - [kW]	Calculation: - Dynamic index: - Unit group: 14_6 Scaling: - Max: - [kW]	Access level: 2 Function plan: - Unit selection: p0100 Expert list: 1 Default: - [kW]

r0206[0...4]	Rated power unit power / PU P_{rated}		
R_INF	Changeable: - Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: - [kW]	Calculation: - Dynamic index: - Unit group: 14_6 Scaling: - Max: - [kW]	Access level: 2 Function plan: - Unit selection: p0100 Expert list: 1 Default: - [kW]

p0207[0...n]	Valve transition point voltage / Valve trans U		
HLA, HLA_840, HLA_DBSI	Changeable: C2(1, 2) Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.2 [%]	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 95.0 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 10.0 [%]

r0207[0...4]	Rated power unit current / PU PI_{rated}		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Arms]	Access level: 2 Function plan: 8021 Unit selection: - Expert list: 1 Default: - [Arms]

r0207[0...4]	Rated power unit current / PU PI_{rated}		
A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	Changeable: - Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Arms]	Access level: 2 Function plan: 8021 Unit selection: - Expert list: 1 Default: - [Arms]

p0208[0...n]	Valve rated flow rate / Valve Vn		
HLA, HLA_840, HLA_DBSI	Changeable: C2(1, 2) Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.000 [ltr/min]	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 1000.000 [ltr/min]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [ltr/min]

r0208 A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Rated power unit line supply voltage / PU U_{rated} Changeable: - Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Vrms]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: - [Vrms]
p0209[0...n] HLA, HLA_840, HLA_DBSI	Valve rated pressure drop / Valve P_n Changeable: C2(1, 2) Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 1.0 [bar]	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 300.0 [bar]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 35.0 [bar]
r0209[0...4] A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Power unit maximum current / PU I_{max} Changeable: - Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Arms]	Access level: 2 Function plan: 8750, 8850, 8950 Unit selection: - Expert list: 1 Default: - [Arms]
p0210 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Drive unit line supply voltage / U_{connect} Changeable: C2(2), T Data type: Unsigned16 P group: Converter Not for motor type: - Min: 1 [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 63000 [V]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 600 [V]
p0210 VECTOR, VECTOR_AC	Drive unit line supply voltage / U_{connect} Changeable: C2(2), T Data type: Unsigned16 P group: Converter Not for motor type: - Min: 1 [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 63000 [V]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 600 [V]

p0210 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Drive unit line supply voltage / U_connect Changeable: C2(1) Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 70 [Vrms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000 [Vrms]	Access level: 1 Function plan: 8860, 8960 Unit selection: - Expert list: 1 Default: 400 [Vrms]
p0210 B_INF, B_INF_840	Drive unit line supply voltage / U_connect Changeable: C2(1) Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 70 [Vrms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000 [Vrms]	Access level: 1 Function plan: 8760 Unit selection: - Expert list: 1 Default: 400 [Vrms]
p0211[0...n] HLA, HLA_840, HLA_DBSI	Valve, flow rate ratio A to B side / Flowrate_ratio A/B Changeable: C2(1, 2) Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.500	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 2.000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1.000
p0211 A_INF_840, S_INF_840	Rated line frequency / Rated line freq Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 10 [Hz]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100 [Hz]	Access level: 3 Function plan: 8864, 8964 Unit selection: - Expert list: 1 Default: 55 [Hz]
p0211 A_INF, R_INF, S_INF	Rated line frequency / Rated line freq Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 10 [Hz]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100 [Hz]	Access level: 3 Function plan: 8864, 8964 Unit selection: - Expert list: 1 Default: 50 [Hz]
p0212 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Power unit configuration / PU config Changeable: C2(2) Data type: Unsigned16 P group: Converter Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin

p0212 VECTOR, VECTOR_AC	Power unit configuration / PU config Changeable: C2(2) Data type: Unsigned16 P group: Converter Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 bin
p0212 VECTOR (n/M), VECTOR_AC (n/M)	Power unit configuration / PU config Changeable: C2(2) Data type: Unsigned16 P group: Converter Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 bin
p0212 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Power unit configuration / PU config Changeable: C2(2) Data type: Unsigned16 P group: Converter Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 bin
p0212 B_INF, B_INF_840	Power unit configuration / PU config Changeable: C2(2) Data type: Unsigned16 P group: Converter Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 bin
p0216[0...n] HLA, HLA_840, HLA_DBSI	Valve natural frequency / Valve fn Changeable: C2(1, 2) Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 1.0 [Hz]	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 1000.0 [Hz]	Access level: 3 Function plan: 4966 Unit selection: - Expert list: 1 Default: 150.0 [Hz]
p0217[0...n] HLA, HLA_840, HLA_DBSI	Valve damping / Valve D Changeable: C2(1, 2) Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.400	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 1.000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.800

p0218[0...n] HLA, HLA_840, HLA_DBSI	Cylinder safety configuration / Cyl safety config Changeable: C2(1, 2) Data type: Unsigned16 P group: Converter Not for motor type: - Min: -	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0111 bin
p0220 HLA, HLA_840, HLA_DBSI	Hydraulic oil modulus of elasticity / Hydr_oil e_module Changeable: C2(1, 2) Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 1000.0 [bar]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 21000.0 [bar]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 11000.0 [bar]
p0220[0...1] A_INF, A_INF_840, R_INF	Infeed line filter type / INF line filt type Changeable: C2(1) Data type: Integer16 P group: Converter Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 105	Access level: 3 Function plan: 8950 Unit selection: - Expert list: 1 Default: 0
p0221 HLA, HLA_840, HLA_DBSI	System pressure / p_system Changeable: C2(1, 2) Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.0 [bar]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000.0 [bar]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [bar]
p0221[0...1] A_INF, A_INF_840, R_INF	Infeed filter capacitance / INF C_filter Changeable: C2(1) Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.00 [μF]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100000.00 [μF]	Access level: 3 Function plan: 8950 Unit selection: - Expert list: 1 Default: 0.00 [μF]
p0222[0...n] HLA, HLA_840, HLA_DBSI	Valve precontrol pressure / Valve p_prectrl Changeable: C2(1, 2) Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.0 [bar]	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 350.0 [bar]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [bar]

p0222[0...1] A_INF, A_INF_840, R_INF	Infeed filter resistance / INF R_filter Changeable: C2(1) Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.00000 [ohm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.00000 [ohm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00000 [ohm]
p0223 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed inductance between filter and power unit / INF L filter/PU Changeable: C2(1) Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.001 [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.000 [mH]	Access level: 3 Function plan: 8850, 8950 Unit selection: - Expert list: 1 Default: 2.100 [mH]
p0224 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed resistance between filter and power unit / INF R filter/PU Changeable: C2(1) Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.00000 [ohm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.00000 [ohm]	Access level: 3 Function plan: 8850, 8950 Unit selection: - Expert list: 1 Default: 0.00100 [ohm]
p0225 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed inductance between line supply and filter / INF L line/filter Changeable: C2(1) Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.001 [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.000 [mH]	Access level: 3 Function plan: 8850, 8950 Unit selection: - Expert list: 1 Default: 0.001 [mH]
p0226 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed resistance between line supply and filter / INF R line/filter Changeable: C2(1) Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.00 [ohm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.00 [ohm]	Access level: 3 Function plan: 8850, 8950 Unit selection: - Expert list: 1 Default: 0.00 [ohm]
p0227 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed DC link capacitance, power unit / INF C Changeable: C2(1) Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.20 [mF]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.00 [mF]	Access level: 3 Function plan: 8850, 8950 Unit selection: - Expert list: 1 Default: 1.00 [mF]

p0230[0...n] HLA, HLA_840, HLA_DBSI	Manipulated variable inhibit time / Manip var t_inhib Changeable: T Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 1000 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 300 [ms]
p0230 VECTOR, VECTOR_AC	Drive filter type motor side / Drv filt type mot Changeable: C2(1, 2) Data type: Integer16 P group: Converter Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0231[0...n] HLA, HLA_840, HLA_DBSI	Power enable inhibit time / Pow_enab t_inhib Changeable: T, U Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 300 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100 [ms]
p0232[0...n] HLA, HLA_840, HLA_DBSI	Valve monitoring time / Valve t_monit Changeable: T, U Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 1 [ms]	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 1000 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 50 [ms]
p0233 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Power unit motor reactor / PU mot reactor Changeable: C2(2), T, U Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.000 [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.000 [mH]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [mH]
p0233 VECTOR, VECTOR_AC	Power unit motor reactor / PU mot reactor Changeable: C2(2), T, U Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.000 [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.000 [mH]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [mH]

p0234 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Power unit sine-wave filter capacitance / PU sine filter C Changeable: C2(2), T, U Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.000 [μF]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.000 [μF]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [μF]
p0234 VECTOR, VECTOR_AC	Power unit sine-wave filter capacitance / PU sine filter C Changeable: C2(2), T, U Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.000 [μF]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.000 [μF]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [μF]
p0235 VECTOR, VECTOR_AC	Motor reactor in series number / L_mot in SeriesQty Changeable: C2(1, 2) Data type: Unsigned8 P group: Converter Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 1
r0238 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Internal power unit resistance / PU R internal Changeable: - Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: - [ohm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [ohm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [ohm]
p0240[0...n] HLA, HLA_840, HLA_DBSI	Pressure sensor A reference value at 10 V / Sensor A ref 10V Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 50.0 [bar]	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 1000.0 [bar]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 200.0 [bar]
p0241[0...n] HLA, HLA_840, HLA_DBSI	Pressure sensor A offset correction / Sensor A offs Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: -5000.000 [bar]	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 5000.000 [bar]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [bar]

p0242[0...n] HLA, HLA_840, HLA_DBSI	Pressure sensor B reference value at 10 V / Sensor B ref 10V Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 50.0 [bar]	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 1000.0 [bar]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 200.0 [bar]
p0243[0...n] HLA, HLA_840, HLA_DBSI	Pressure sensor B offset correction / Sensor B offs Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: -5000.000 [bar]	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 5000.000 [bar]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [bar]
p0244[0...n] HLA, HLA_840, HLA_DBSI	Pressure sensor P reference value at 10 V / Sensor P ref 10V Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 50.0 [bar]	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 1000.0 [bar]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 200.0 [bar]
p0245[0...n] HLA, HLA_840, HLA_DBSI	Pressure sensor P offset correction / Sensor P offs Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: -5000.000 [bar]	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 5000.000 [bar]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [bar]
p0246 HLA, HLA_840, HLA_DBSI	CI: System pressure external / Sys pressure ext Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Motor Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2002 Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0247 VECTOR, VECTOR_AC	Voltage measurement configuration / U_mes config Changeable: C2(2), T, U Data type: Unsigned32 P group: Converter Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 bin

p0249	Power unit cooling type / PU cool type		
S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(1, 2) Data type: Integer16 P group: Converter Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0251[0...n]	Power unit heat sink fan operating hours counter / PU fan t_oper		
A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T Data type: Unsigned32 P group: Modulation Not for motor type: - Min: 0 [h]	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 4294967295 [h]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0 [h]
p0252	Power unit heat sink fan operating time maximum / PU fan t_oper max		
A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T Data type: Unsigned32 P group: Modulation Not for motor type: - Min: 0 [h]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100000 [h]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 40000 [h]
p0254[0...n]	Operating hours counter power unit fan inside the converter / PU inner fan t_op		
A_INF, A_INF_840, R_INF, S_INF, S_INF_840, VECTOR, VECTOR_AC	Changeable: T Data type: Unsigned32 P group: Modulation Not for motor type: - Min: 0 [h]	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 4294967295 [h]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0 [h]
p0255[0...7]	Power unit contactor monitoring time / PU cont t_monit		
A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T Data type: FloatingPoint32 P group: Modulation Not for motor type: - Min: -1 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: [0] 0 [ms] [1] 0 [ms] [2] -1 [ms] [3] -1 [ms] [4...7] 0 [ms]

r0256.0...31	CO/BO: Power unit contactor inputs/outputs status / PU contact IO stat		
A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned32 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9814 Unit selection: - Expert list: 1 Default: -

p0260	Cooling unit starting time 1 / RKA start time 1		
A_INF (Cool_unit), A_INF_840 (Cool_unit), B_INF (Cool_unit), B_INF_840 (Cool_unit), R_INF (Cool_unit), S_INF (Cool_unit), S_INF_840 (Cool_unit), SERVO (Cool_unit), SERVO_840 (Cool_unit), SERVO_AC (Cool_unit), SERVO_DBSI (Cool_unit), VECTOR (Cool_unit), VECTOR_AC (Cool_unit)	Changeable: T, U Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.0 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 60.0 [s]	Access level: 3 Function plan: 9795 Unit selection: - Expert list: 1 Default: 5.0 [s]

p0261	Cooling unit starting time 2 / RKA start time 2		
A_INF (Cool_unit), A_INF_840 (Cool_unit), B_INF (Cool_unit), B_INF_840 (Cool_unit), R_INF (Cool_unit), S_INF (Cool_unit), S_INF_840 (Cool_unit), SERVO (Cool_unit), SERVO_840 (Cool_unit), SERVO_AC (Cool_unit), SERVO_DBSI (Cool_unit), VECTOR (Cool_unit), VECTOR_AC (Cool_unit)	Changeable: T, U Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.0 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1200.0 [s]	Access level: 3 Function plan: 9795 Unit selection: - Expert list: 1 Default: 180.0 [s]

p0262	Cooling unit fault conductivity delay time / RKA cond t_del		
A_INF (Cool_unit), A_INF_840 (Cool_unit), B_INF (Cool_unit), B_INF_840 (Cool_unit), R_INF (Cool_unit), S_INF (Cool_unit), S_INF_840 (Cool_unit), SERVO (Cool_unit), SERVO_840 (Cool_unit), SERVO_AC (Cool_unit), SERVO_DBSI (Cool_unit), VECTOR (Cool_unit), VECTOR_AC (Cool_unit)	Changeable: T, U Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.0 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 30.0 [s]	Access level: 3 Function plan: 9795 Unit selection: - Expert list: 1 Default: 0.0 [s]
p0263	Cooling unit fault liquid flow delay time / RKA flow t_del		
A_INF (Cool_unit), A_INF_840 (Cool_unit), B_INF (Cool_unit), B_INF_840 (Cool_unit), R_INF (Cool_unit), S_INF (Cool_unit), S_INF_840 (Cool_unit), SERVO (Cool_unit), SERVO_840 (Cool_unit), SERVO_AC (Cool_unit), SERVO_DBSI (Cool_unit), VECTOR (Cool_unit), VECTOR_AC (Cool_unit)	Changeable: T, U Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.0 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20.0 [s]	Access level: 3 Function plan: 9795 Unit selection: - Expert list: 1 Default: 3.0 [s]
p0264	Cooling unit run-on time / RKA run-on time		
A_INF (Cool_unit), A_INF_840 (Cool_unit), B_INF (Cool_unit), B_INF_840 (Cool_unit), R_INF (Cool_unit), S_INF (Cool_unit), S_INF_840 (Cool_unit), SERVO (Cool_unit), SERVO_840 (Cool_unit), SERVO_AC (Cool_unit), SERVO_DBSI (Cool_unit), VECTOR (Cool_unit), VECTOR_AC (Cool_unit)	Changeable: T, U Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.0 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 180.0 [s]	Access level: 3 Function plan: 9795 Unit selection: - Expert list: 1 Default: 30.0 [s]

r0265.0...3 BO: Cooling unit control word / RKA STW

A_INF (Cool_unit),	Changeable: -	Calculation: -	Access level: 3
A_INF_840 (Cool_unit),	Data type: Unsigned8	Dynamic index: -	Function plan: -
B_INF (Cool_unit),	P group: Commands	Unit group: -	Unit selection: -
B_INF_840 (Cool_unit),	Not for motor type: -	Scaling: -	Expert list: 1
R_INF (Cool_unit),	Min:	Max:	Default:
S_INF (Cool_unit),		-	-
S_INF_840 (Cool_unit),			
SERVO (Cool_unit),			
SERVO_840			
(Cool_unit),			
SERVO_AC			
(Cool_unit),			
SERVO_DBSI			
(Cool_unit), VECTOR			
(Cool_unit),			
VECTOR_AC			
(Cool_unit)			

p0266[0...7] BI: Cooling unit feedback signals signal source / RKA fdbk S_src

A_INF (Cool_unit),	Changeable: T, U	Calculation: -	Access level: 3
A_INF_840 (Cool_unit),	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: -
B_INF (Cool_unit),	P group: Communications	Unit group: -	Unit selection: -
B_INF_840 (Cool_unit),	Not for motor type: -	Scaling: -	Expert list: 1
R_INF (Cool_unit),	Min:	Max:	Default:
S_INF (Cool_unit),		-	1
S_INF_840 (Cool_unit),			
SERVO (Cool_unit),			
SERVO_840			
(Cool_unit),			
SERVO_AC			
(Cool_unit),			
SERVO_DBSI			
(Cool_unit), VECTOR			
(Cool_unit),			
VECTOR_AC			
(Cool_unit)			

r0267.0...7 BO: Cooling unit status word / RKA ZSW

A_INF (Cool_unit),	Changeable: -	Calculation: -	Access level: 3
A_INF_840 (Cool_unit),	Data type: Unsigned16	Dynamic index: -	Function plan: -
B_INF (Cool_unit),	P group: Commands	Unit group: -	Unit selection: -
B_INF_840 (Cool_unit),	Not for motor type: -	Scaling: -	Expert list: 1
R_INF (Cool_unit),	Min:	Max:	Default:
S_INF (Cool_unit),		-	-
S_INF_840 (Cool_unit),			
SERVO (Cool_unit),			
SERVO_840			
(Cool_unit),			
SERVO_AC			
(Cool_unit),			
SERVO_DBSI			
(Cool_unit), VECTOR			
(Cool_unit),			
VECTOR_AC			
(Cool_unit)			

p0278	DC link voltage undervoltage threshold reduction / Vdc U_under red		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: -80 [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 0 [V]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0 [V]
p0279	DC link voltage offset alarm threshold / Vdc offs A thresh		
A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	Changeable: T Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0 [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 500 [V]	Access level: 3 Function plan: 8760, 8864, 8964 Unit selection: - Expert list: 1 Default: 0 [V]
p0280	DC link voltage maximum steady-state / Vdc_max stat		
A_INF, A_INF_840, R_INF	Changeable: C2(1), T Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 50 [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1500 [V]	Access level: 3 Function plan: 8940, 8964 Unit selection: - Expert list: 1 Default: 660 [V]
p0281	Line supply overvoltage alarm threshold / U_I_over A thresh		
A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Changeable: T Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 100 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 200 [%]	Access level: 3 Function plan: 8860, 8960 Unit selection: - Expert list: 1 Default: 110 [%]
p0282	Line supply undervoltage alarm threshold / U_I_under A thresh		
A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Changeable: T Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 10 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100 [%]	Access level: 3 Function plan: 8860, 8960 Unit selection: - Expert list: 1 Default: 85 [%]
p0283	Line supply undervoltage shutdown (trip) threshold / U_I_under tr_thrs		
A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Changeable: C2(1), T Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 10 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100 [%]	Access level: 3 Function plan: 8860, 8960 Unit selection: - Expert list: 1 Default: 75 [%]

p0284	Line supply frequency exceeded alarm threshold / f_{I_exc} A thresh		
A_INF_840, S_INF_840	Changeable: T	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 8864, 8964
	P group: Converter	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	100.0 [%]	300.0 [%]	118.0 [%]
p0284	Line supply frequency exceeded alarm threshold / f_{I_exc} A thresh		
A_INF, R_INF, S_INF	Changeable: T	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 8864, 8964
	P group: Converter	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	100.0 [%]	300.0 [%]	110.0 [%]
p0285	Line supply frequency undershot alarm threshold / f_{I_under} A thresh		
A_INF_840, S_INF_840	Changeable: T	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 8864, 8964
	P group: Converter	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.0 [%]	100.0 [%]	82.0 [%]
p0285	Line supply frequency undershot alarm threshold / f_{I_under} A thresh		
A_INF, R_INF, S_INF	Changeable: T	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 8864, 8964
	P group: Converter	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.0 [%]	100.0 [%]	90.0 [%]
p0287[0...1]	Ground fault monitoring threshold / Gnd fit threshold		
A_INF, A_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.0 [%]	100.0 [%]	[0] 6.0 [%] [1] 16.0 [%]
r0289	CO: Maximum power unit output current / PU I_{outp} max		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: p2002	Expert list: 1
	Min:	Max:	Default:
	- [Arms]	- [Arms]	- [Arms]

p0290 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Power unit overload response / PU overld response Changeable: T Data type: Integer16 P group: Converter Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 13	Access level: 3 Function plan: 8021 Unit selection: - Expert list: 1 Default: 0
p0290 VECTOR, VECTOR_AC	Power unit overload response / PU overld response Changeable: T Data type: Integer16 P group: Converter Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 13	Access level: 3 Function plan: 8021 Unit selection: - Expert list: 1 Default: 0
r0293 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Power unit alarm threshold model temperature / PU A_thr mod_temp Changeable: - Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: - Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: 8021 Unit selection: p0505 Expert list: 1 Default: - [°C]
p0294 A_INF, A_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Power unit alarm with I2t overload / PU I2t alrm thresh Changeable: T, U Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 10.0 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.0 [%]	Access level: 3 Function plan: 8021 Unit selection: - Expert list: 1 Default: 95.0 [%]
p0294 B_INF, B_INF_840	Power unit alarm with I2t overload / PU I2t alrm thresh Changeable: T, U Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 10.0 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.0 [%]	Access level: 3 Function plan: 8021 Unit selection: - Expert list: 1 Default: 95.0 [%]
p0295 A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Fan run-on time / Fan run-on time Changeable: T, U Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 600 [s]	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0 [s]

r0296	DC link voltage undervoltage threshold / Vdc U_lower_thresh		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Converter Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [V]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: - [V]
r0296	DC link voltage undervoltage threshold / Vdc U_lower_thresh		
A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	Changeable: - Data type: Unsigned16 P group: Converter Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [V]	Access level: 2 Function plan: 8750, 8760, 8850, 8864, 8950, 8964 Unit selection: - Expert list: 1 Default: - [V]
r0297	DC link voltage overvoltage threshold / Vdc U_upper_thresh		
A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Converter Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [V]	Access level: 2 Function plan: 8750, 8760, 8850, 8864, 8950, 8964 Unit selection: - Expert list: 1 Default: - [V]
p0300[0...n]	Motor type selection / Mot type sel		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: C2(1, 3) Data type: Integer16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 10100	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0300[0...n]	Motor type selection / Mot type sel		
VECTOR, VECTOR_AC	Changeable: C2(1, 3) Data type: Integer16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 10001	Access level: 1 Function plan: 6310 Unit selection: - Expert list: 1 Default: 0

p0301[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor code number selection / Mot code No. sel Changeable: C2(1, 3) Data type: Unsigned16 P group: Motor Not for motor type: SESM Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 65535	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0301[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Motor code number selection / Mot code No. sel Changeable: C2(1, 3) Data type: Unsigned16 P group: Motor Not for motor type: SESM Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 65535	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0301[0...n] VECTOR, VECTOR_AC	Motor code number selection / Mot code No. sel Changeable: C2(1, 3) Data type: Unsigned16 P group: Motor Not for motor type: SESM Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 65535	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
r0302[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Motor code number of motor with DRIVE-CLiQ / Mot code mot w/ DQ Changeable: - Data type: Unsigned16 P group: Motor Not for motor type: - Min: -	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0303[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Motor with DRIVE-CLiQ status word / Motor w DQ ZSW Changeable: - Data type: Unsigned16 P group: Motor Not for motor type: - Min: -	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
p0304[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Rated motor voltage / Mot U_{rated} Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0 [Vrms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 20000 [Vrms]	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0 [Vrms]

p0304[0...n] VECTOR, VECTOR_AC	Rated motor voltage / Mot U_{rated} Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0 [Vrms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 20000 [Vrms]	Access level: 1 Function plan: 6301, 6724 Unit selection: - Expert list: 1 Default: 0 [Vrms]
p0305[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Rated motor current / Mot I_{rated} Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.00 [Arms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 10000.00 [Arms]	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [Arms]
p0305[0...n] VECTOR, VECTOR_AC	Rated motor current / Mot I_{rated} Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.00 [Arms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 10000.00 [Arms]	Access level: 1 Function plan: 6301 Unit selection: - Expert list: 1 Default: 0.00 [Arms]
p0306[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Number of motors connected in parallel / Motor qty Changeable: C2(1, 3) Data type: Unsigned8 P group: Motor Not for motor type: RESM Min: 1	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 10	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 1
p0306[0...n] VECTOR, VECTOR_AC	Number of motors connected in parallel / Motor qty Changeable: C2(1, 3) Data type: Unsigned8 P group: Motor Not for motor type: SESM, RESM Min: 1	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 50	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 1
p0307[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Rated motor power / Mot P_{rated} Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.00 [kW]	Calculation: - Dynamic index: MDS, p0130 Unit group: 14_6 Scaling: - Max: 100000.00 [kW]	Access level: 1 Function plan: - Unit selection: p0100 Expert list: 1 Default: 0.00 [kW]

p0307[0...n]	Rated motor power / Mot P_{rated}		
VECTOR, VECTOR_AC	Changeable: C2(1, 3)	Calculation: -	Access level: 1
	Data type: FloatingPoint32	Dynamic index: MDS, p0130	Function plan: -
	P group: Motor	Unit group: 14_6	Unit selection: p0100
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-100000.00 [kW]	100000.00 [kW]	0.00 [kW]

p0308[0...n]	Rated motor power factor / Mot cos phi rated		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: C2(1, 3)	Calculation: -	Access level: 1
	Data type: FloatingPoint32	Dynamic index: MDS, p0130	Function plan: -
	P group: Motor	Unit group: -	Unit selection: -
	Not for motor type: PMSM, REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.000	1.000	0.000

p0308[0...n]	Rated motor power factor / Mot cos phi rated		
VECTOR, VECTOR_AC	Changeable: C2(1, 3)	Calculation: -	Access level: 1
	Data type: FloatingPoint32	Dynamic index: MDS, p0130	Function plan: -
	P group: Motor	Unit group: -	Unit selection: -
	Not for motor type: PMSM, REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-0.990	1.000	0.000

p0309[0...n]	Rated motor efficiency / Mot eta_{rated}		
VECTOR, VECTOR_AC	Changeable: C2(1, 3)	Calculation: -	Access level: 1
	Data type: FloatingPoint32	Dynamic index: MDS, p0130	Function plan: -
	P group: Motor	Unit group: -	Unit selection: -
	Not for motor type: PMSM, REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.0 [%]	99.9 [%]	0.0 [%]

p0310[0...n]	Cylinder piston diameter / Cyl piston diam		
HLA, HLA_840, HLA_DBSI	Changeable: C2(1, 3)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: MDS, p0130	Function plan: -
	P group: Motor	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.0 [mm]	2500.0 [mm]	0.0 [mm]

p0310[0...n]	Rated motor frequency / Mot f_{rated}		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: C2(1, 3)	Calculation: -	Access level: 1
	Data type: FloatingPoint32	Dynamic index: MDS, p0130	Function plan: -
	P group: Motor	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [Hz]	3000.00 [Hz]	0.00 [Hz]

p0310[0...n] VECTOR, VECTOR_AC	Rated motor frequency / Mot f_{rated} Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.000 [Hz]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 3000.000 [Hz]	Access level: 1 Function plan: 6301 Unit selection: - Expert list: 1 Default: 0.000 [Hz]
p0311[0...n] HLA, HLA_840, HLA_DBSI	Cylinder piston rod diameter A side / Cyl PistRodDiam A Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [mm]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 2400.0 [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [mm]
p0311[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Rated motor speed / Mot n_{rated} Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [rpm]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 210000.0 [rpm]	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [rpm]
p0311[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Rated motor velocity / Mot v_{rated} Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [m/min]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 6000.0 [m/min]	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [m/min]
p0311[0...n] VECTOR, VECTOR_AC	Rated motor speed / Mot n_{rated} Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.00 [rpm]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 210000.00 [rpm]	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [rpm]
p0312[0...n] HLA, HLA_840, HLA_DBSI	Cylinder piston rod diameter B side / Cyl rod diam B Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [mm]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 2400.0 [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [mm]

p0312[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Rated motor torque / Mot M_{rated} Changeable: C2(3) Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: 0.00 [Nm]	Calculation: - Dynamic index: MDS, p0130 Unit group: 7_4 Scaling: - Max: 1000000.00 [Nm]	Access level: 3 Function plan: - Unit selection: p0100 Expert list: 1 Default: 0.00 [Nm]
p0312[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Rated motor force / Mot F_{rated} Changeable: C2(3) Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: 0.00 [N]	Calculation: - Dynamic index: MDS, p0130 Unit group: 8_4 Scaling: - Max: 1000000.00 [N]	Access level: 3 Function plan: - Unit selection: p0100 Expert list: 1 Default: 0.00 [N]
p0313[0...n] HLA, HLA_840, HLA_DBSI	Cylinder piston stroke / Cyl pist stroke Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [mm]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 6000.0 [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [mm]
r0313[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor pole pair number, actual (or calculated) / Mot PolePairNo act Changeable: - Data type: Unsigned16 P group: Motor Not for motor type: - Min: -	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 5300 Unit selection: - Expert list: 1 Default: -
r0313[0...n] VECTOR, VECTOR_AC	Motor pole pair number, actual (or calculated) / Mot PolePairNo act Changeable: - Data type: Unsigned16 P group: Motor Not for motor type: - Min: -	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 5300 Unit selection: - Expert list: 1 Default: -
p0314[0...n] HLA, HLA_840, HLA_DBSI	Cylinder dead volume A side / Cyl_dead vol A Changeable: C2(1, 3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [cm ³]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 200000.0 [cm ³]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [cm ³]

p0314[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor pole pair number / Mot pole pair No. Changeable: C2(1, 3) Data type: Unsigned16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 4000	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0314[0...n] VECTOR, VECTOR_AC	Motor pole pair number / Mot pole pair No. Changeable: C2(1, 3) Data type: Unsigned16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 255	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0315[0...n] HLA, HLA_840, HLA_DBSI	Cylinder dead volume B side / Cyl_dead vol B Changeable: C2(1, 3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [cm³]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 200000.0 [cm³]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [cm³]
p0315[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Motor pole pair width / MotPolePair width Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 1.00 [mm]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 1000.00 [mm]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 30.00 [mm]
p0316[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor torque constant / Mot kT Changeable: C2(1, 3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: 0.000 [Nm/A]	Calculation: - Dynamic index: MDS, p0130 Unit group: 28_1 Scaling: - Max: 4000.000 [Nm/A]	Access level: 1 Function plan: - Unit selection: p0100 Expert list: 1 Default: 0.000 [Nm/A]
p0316[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Motor force constant / Mot kT Changeable: C2(1, 3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: 0.000 [N/Arms]	Calculation: - Dynamic index: MDS, p0130 Unit group: 29_1 Scaling: - Max: 150000.000 [N/Arms]	Access level: 1 Function plan: - Unit selection: p0100 Expert list: 1 Default: 0.000 [N/Arms]

p0316[0...n] VECTOR, VECTOR_AC	Motor torque constant / Mot kT Changeable: C2(1, 3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: 0.000 [Nm/A]	Calculation: - Dynamic index: MDS, p0130 Unit group: 28_1 Scaling: - Max: 400.000 [Nm/A]	Access level: 2 Function plan: - Unit selection: p0100 Expert list: 1 Default: 0.000 [Nm/A]
p0317[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor voltage constant / Mot kE Changeable: C2(3) Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: 0.0 [Vrms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 240000.0 [Vrms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [Vrms]
p0317[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Motor voltage constant / Mot kE Changeable: C2(3) Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: 0.0 [Vrms s/m]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 50000.0 [Vrms s/m]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [Vrms s/m]
p0318[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor stall current / Mot I_standstill Changeable: C2(3) Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: 0.00 [Arms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 10000.00 [Arms]	Access level: 3 Function plan: 8017 Unit selection: - Expert list: 1 Default: 0.00 [Arms]
p0318[0...n] VECTOR, VECTOR_AC	Motor stall current / Mot I_standstill Changeable: C2(3) Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL Min: 0.00 [Arms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 10000.00 [Arms]	Access level: 3 Function plan: 8017 Unit selection: - Expert list: 1 Default: 0.00 [Arms]
p0319[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor stall torque / Mot M_standstill Changeable: C2(3) Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: 0.00 [Nm]	Calculation: - Dynamic index: MDS, p0130 Unit group: 7_4 Scaling: - Max: 100000.00 [Nm]	Access level: 3 Function plan: - Unit selection: p0100 Expert list: 1 Default: 0.00 [Nm]

p0319[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Motor stall force / Mot F_standstill Changeable: C2(3) Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: 0.00 [N]	Calculation: - Dynamic index: MDS, p0130 Unit group: 8_4 Scaling: - Max: 100000.00 [N]	Access level: 3 Function plan: - Unit selection: p0100 Expert list: 1 Default: 0.00 [N]
p0320[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Motor rated magnetizing current/short-circuit current / Mot I_mag_rated Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: SESM, REL Min: 0.000 [Arms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 5000.000 [Arms]	Access level: 3 Function plan: 5722 Unit selection: - Expert list: 1 Default: 0.000 [Arms]
p0322[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Maximum motor speed / Mot n_max Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [rpm]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 210000.0 [rpm]	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [rpm]
p0322[0...n] SERVO (Lin, Lin, Spin_diag), SERVO_840 (Lin, Lin, Spin_diag), SERVO_AC (Lin, Lin, Spin_diag), SERVO_DBSI (Lin, Lin, Spin_diag)	Motor maximum velocity / Mot v_max Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [m/min]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 1300.0 [m/min]	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [m/min]
p0322[0...n] SERVO (Spin_diag), SERVO_840 (Spin_diag), SERVO_AC (Spin_diag), SERVO_DBSI (Spin_diag)	Maximum motor speed / Mot n_max Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [rpm]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 260000.0 [rpm]	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [rpm]
p0322[0...n] VECTOR, VECTOR_AC	Maximum motor speed / Mot n_max Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [rpm]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 210000.0 [rpm]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [rpm]

p0323[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Maximum motor current / Mot I_max Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, RESM Min: 0.00 [Arms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 20000.00 [Arms]	Access level: 1 Function plan: 5722 Unit selection: - Expert list: 1 Default: 0.00 [Arms]
p0323[0...n] VECTOR, VECTOR_AC	Maximum motor current / Mot I_max Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, RESM Min: 0.00 [Arms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 20000.00 [Arms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [Arms]
p0324[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Winding maximum speed / Winding n_max Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [rpm]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 210000.0 [rpm]	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [rpm]
p0324[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Winding maximum velocity / Winding v_max Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [m/min]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 1300.0 [m/min]	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [m/min]
p0324[0...n] VECTOR, VECTOR_AC	Winding maximum speed / Winding n_max Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [rpm]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 210000.0 [rpm]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [rpm]
p0325[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Motor pole position identification current 1st phase / Mot PolID I 1st ph Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL Min: 0.000 [Arms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 10000.000 [Arms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [Arms]

p0326[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor stall torque correction factor / Mot M_stall_corr Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: SESM, REL, RESM Min: 5 [%]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 300 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 60 [%]
p0326[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Motor stall force correction factor / Mot F_stall_corr Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: SESM, REL, RESM Min: 5 [%]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 300 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 60 [%]
p0327[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Optimum motor load angle / Mot phi_load opt Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, RESM Min: 0.0 [°]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 135.0 [°]	Access level: 3 Function plan: 5722, 6721 Unit selection: - Expert list: 1 Default: 90.0 [°]
p0328[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Motor reluctance torque constant / Mot kT_reluctance Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: -1000.00 [mH]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 1000.00 [mH]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [mH]
p0328[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Motor reluctance force constant / Mot kT_reluctance Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: -1000.00 [mH]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 1000.00 [mH]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [mH]
p0329[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Motor pole position identification current / Mot PolID current Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL Min: 0.00 [Arms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 10000.00 [Arms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [Arms]

r0330[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Rated motor slip / Mot slip_rated Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: PMSM, SESM, REL, RESM Min: - [Hz]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: - [Hz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [Hz]
r0331[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Actual motor magnetizing current/short-circuit current / Mot I_mag_rtd act Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: SESM, REL Min: - [Arms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: - [Arms]	Access level: 3 Function plan: 5722, 6722, 6724 Unit selection: - Expert list: 1 Default: - [Arms]
r0332[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Rated motor power factor / Mot cos phi rated Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: PMSM, REL Min: -	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0333[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Rated motor torque / Mot M_rated Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: - [Nm]	Calculation: - Dynamic index: MDS, p0130 Unit group: 7_4 Scaling: - Max: - [Nm]	Access level: 3 Function plan: - Unit selection: p0100 Expert list: 1 Default: - [Nm]
r0333[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Rated motor force / Mot F_rated Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: - [N]	Calculation: - Dynamic index: MDS, p0130 Unit group: 8_4 Scaling: - Max: - [N]	Access level: 3 Function plan: - Unit selection: p0100 Expert list: 1 Default: - [N]
r0334[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Actual motor-torque constant / Mot kT act Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: - [Nm/A]	Calculation: - Dynamic index: MDS, p0130 Unit group: 28_1 Scaling: - Max: - [Nm/A]	Access level: 3 Function plan: - Unit selection: p0100 Expert list: 1 Default: - [Nm/A]

r0334[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Actual motor force constant / Mot kT act Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: - [N/Arms]	Calculation: - Dynamic index: MDS, p0130 Unit group: 29_1 Scaling: - Max: - [N/Arms]	Access level: 3 Function plan: - Unit selection: p0100 Expert list: 1 Default: - [N/Arms]
r0334[0...n] VECTOR, VECTOR_AC	Actual motor-torque constant / Mot kT act Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: - [Nm/A]	Calculation: - Dynamic index: MDS, p0130 Unit group: 28_1 Scaling: - Max: - [Nm/A]	Access level: 3 Function plan: - Unit selection: p0100 Expert list: 1 Default: - [Nm/A]
p0335[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Motor cooling type / Mot cool type Changeable: C2(1, 3), T Data type: Integer16 P group: Motor Not for motor type: PMSM, SESM, REL Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 128	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
r0336[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Actual rated motor frequency / Mot f_{rated} act Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: - [Hz]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: - [Hz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [Hz]
r0337[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Rated motor EMF / Mot EMF_{rated} Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: REL, RESM Min: - [Vrms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: - [Vrms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [Vrms]
r0337[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Rated motor EMF / Mot EMF_{rated} Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: REL, RESM Min: - [Vrms s/m]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: - [Vrms s/m]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [Vrms s/m]

p0338[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor limit current / Mot I_limit Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: 0.00 [Arms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 10000.00 [Arms]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [Arms]
r0339[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Rated motor voltage / Mot U_rated Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: REL Min: - [Vrms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: - [Vrms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [Vrms]
p0340[0...n] HLA, HLA_840, HLA_DBSI	Automatic parameter calculation / Auto par calc Changeable: C2(1, 3), T Data type: Unsigned16 P group: Motor Not for motor type: - Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 bin
p0340[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Automatic calculation motor/control parameters / Calc auto par Changeable: C2(3), T Data type: Integer16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0340 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Automatic calculation control parameters / Calc auto par Changeable: T Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0341[0...n] HLA, HLA_840, HLA_DBSI	Cylinder weight / Cyl weight Changeable: C2(1, 3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.000000 [kg]	Calculation: - Dynamic index: MDS, p0130 Unit group: 27_1 Scaling: - Max: 100000.000000 [kg]	Access level: 3 Function plan: - Unit selection: p0100 Expert list: 1 Default: 0.000000 [kg]

p0341[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor moment of inertia / Mot M_mom of inert Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: REL Min: - [kgm²]	Calculation: CALC_MOD_ALL Dynamic index: MDS, p0130 Unit group: 25_1 Scaling: - Max: - [kgm²]	Access level: 3 Function plan: 5042, 5210, 6020, 6030, 6031 Unit selection: p0100 Expert list: 1 Default: - [kgm²]
p0341[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Motor weight / Mot weight Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: REL Min: - [kg]	Calculation: CALC_MOD_ALL Dynamic index: MDS, p0130 Unit group: 27_1 Scaling: - Max: - [kg]	Access level: 3 Function plan: 5042, 5210 Unit selection: p0100 Expert list: 1 Default: - [kg]
p0341[0...n] VECTOR, VECTOR_AC	Motor moment of inertia / Mot M_mom of inert Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: REL Min: 0.000000 [kgm²]	Calculation: CALC_MOD_ALL Dynamic index: MDS, p0130 Unit group: 25_1 Scaling: - Max: 100000.000000 [kgm²]	Access level: 3 Function plan: 5042, 5210, 6020, 6030, 6031 Unit selection: p0100 Expert list: 1 Default: 0.000000 [kgm²]
p0342[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Ratio between the total and motor moment of inertia / Mot MomInert Ratio Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: REL Min: 1.000	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 10000.000	Access level: 3 Function plan: 5042, 5210 Unit selection: - Expert list: 1 Default: 1.000
p0342[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Ratio between the total and motor moment of inertia / Mot MomInert Ratio Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: REL Min: 1.000	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 10000.000	Access level: 3 Function plan: 5042, 5210 Unit selection: - Expert list: 1 Default: 1.000
p0342[0...n] VECTOR, VECTOR_AC	Ratio between the total and motor moment of inertia / Mot MomInert Ratio Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: REL Min: 1.000	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 10000.000	Access level: 3 Function plan: 6020, 6030, 6031 Unit selection: - Expert list: 1 Default: 1.000

p0343[0...n] HLA, HLA_840, HLA_DBSI	Valve/cylinder configuration / Valve/cyl config Changeable: C2(1, 3) Data type: Unsigned16 P group: Motor Not for motor type: PMSM, SESM, REL, RESM Min: -	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
p0343[0...n] VECTOR, VECTOR_AC	Rated motor current identified / Mot I_{rated} ident Changeable: C2(3), T Data type: FloatingPoint32 P group: Motor Not for motor type: PMSM, SESM, REL, RESM Min: 0.00 [Arms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 10000.00 [Arms]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [Arms]
p0344[0...n] HLA, HLA_840, HLA_DBSI	Cylinder mounting position A side / Cyl mount pos A Changeable: C2(3), T Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: -90.0 [°]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 90.0 [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [°]
p0344[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Motor weight (for the thermal motor model) / Mot weight th mod Changeable: C2(3), T Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [kg]	Calculation: CALC_MOD_ALL Dynamic index: MDS, p0130 Unit group: 27_1 Scaling: - Max: 50000.0 [kg]	Access level: 3 Function plan: 8018 Unit selection: p0100 Expert list: 1 Default: 0.0 [kg]
p0345[0...n] HLA, HLA_840, HLA_DBSI	Required damping controlled axis / Damped ctrl axis Changeable: T Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.200	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2.000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.700
r0345[0...n] VECTOR, VECTOR_AC	Nominal motor starting time / Mot t_{start} rated Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: REL Min: - [s]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: - [s]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [s]

p0346[0...n] HLA, HLA_840, HLA_DBSI	Line length A side / Line length A Changeable: C2(3), T Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [mm]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 10000.0 [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [mm]
p0346[0...n] VECTOR, VECTOR_AC	Motor excitation build-up time / Mot t_excitation Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: -20.000 [s]	Calculation: CALC_MOD_REG Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 20.000 [s]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [s]
p0347[0...n] HLA, HLA_840, HLA_DBSI	Line length B side / Line length B Changeable: C2(3), T Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [mm]	Calculation: CALC_MOD_REG Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 10000.0 [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [mm]
p0347[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor de-excitation time / Mot t_de-excitat Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.000 [s]	Calculation: CALC_MOD_REG Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 20.000 [s]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [s]
p0347[0...n] VECTOR, VECTOR_AC	Motor de-excitation time / Mot t_de-excitat Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.000 [s]	Calculation: CALC_MOD_REG Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 20.000 [s]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [s]
p0348[0...n] HLA, HLA_840, HLA_DBSI	Internal line diameter / Line_inner diam Changeable: C2(3), T Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [mm]	Calculation: CALC_MOD_REG Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 100.0 [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 5.0 [mm]

p0348[0...n]	Speed at the start of field weakening Vdc = 600 V / n_strt field weak		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [rpm]	Calculation: CALC_MOD_REG Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 210000.0 [rpm]	Access level: 3 Function plan: 5722 Unit selection: - Expert list: 1 Default: 0.0 [rpm]
p0348[0...n]	Velocity at the start of field weakening Vdc = 600 V / v_strt field weak		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [m/min]	Calculation: CALC_MOD_REG Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 1300.0 [m/min]	Access level: 3 Function plan: 5722 Unit selection: - Expert list: 1 Default: 0.0 [m/min]
p0349	System of units motor equivalent circuit diagram data / Unit_sys mot ESB		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(3) Data type: Integer16 P group: Motor Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 1
p0350[0...n]	Damping uncontrolled axis / Damp unctrl axis		
HLA, HLA_840, HLA_DBSI	Changeable: C2(3), T Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.010	Calculation: CALC_MOD_EQU Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2.000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.100
p0350[0...n]	Motor stator resistance cold / Mot R_stator cold		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.00000 [ohm]	Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: 16_1 Scaling: - Max: 2000.00000 [ohm]	Access level: 2 Function plan: - Unit selection: p0349 Expert list: 1 Default: 0.00000 [ohm]
p0351[0...n]	Piston position natural frequency minimum / Piston pos fn min		
HLA, HLA_840, HLA_DBSI	Changeable: C2(3), T Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [mm]	Calculation: CALC_MOD_EQU Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 3000.0 [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [mm]

p0352[0...n] HLA, HLA_840, HLA_DBSI	Axis natural frequency A side / Axis fn A Changeable: C2(3), T Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 1.0 [Hz]	Calculation: CALC_MOD_EQU Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2000.0 [Hz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1.0 [Hz]
p0352[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Cable resistance / R_cable Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.00000 [ohm]	Calculation: - Dynamic index: MDS, p0130 Unit group: 16_1 Scaling: - Max: 120.00000 [ohm]	Access level: 3 Function plan: - Unit selection: p0349 Expert list: 1 Default: 0.00000 [ohm]
p0352[0...n] VECTOR, VECTOR_AC	Cable resistance / R_cable Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.00000 [ohm]	Calculation: - Dynamic index: MDS, p0130 Unit group: 16_1 Scaling: - Max: 120.00000 [ohm]	Access level: 2 Function plan: - Unit selection: p0349 Expert list: 1 Default: 0.00000 [ohm]
p0353[0...n] HLA, HLA_840, HLA_DBSI	Axis natural frequency center / Axis fn center Changeable: C2(3), T Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 1.0 [Hz]	Calculation: CALC_MOD_EQU Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2000.0 [Hz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1.0 [Hz]
p0353[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor series inductance / Mot L_series Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.000 [mH]	Calculation: - Dynamic index: MDS, p0130 Unit group: 15_1 Scaling: - Max: 1000000.000 [mH]	Access level: 2 Function plan: - Unit selection: p0349 Expert list: 1 Default: 0.000 [mH]
p0353[0...n] VECTOR, VECTOR_AC	Motor series inductance / Mot L_series Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.000 [mH]	Calculation: - Dynamic index: MDS, p0130 Unit group: 15_1 Scaling: - Max: 1000000.000 [mH]	Access level: 2 Function plan: - Unit selection: p0349 Expert list: 1 Default: 0.000 [mH]

p0354[0...n] HLA, HLA_840, HLA_DBSI	Axis natural frequency B side / Axis fn B Changeable: C2(3), T Data type: FloatingPoint32 P group: Motor Not for motor type: RESM Min: 1.0 [Hz]	Calculation: CALC_MOD_EQU Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2000.0 [Hz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1.0 [Hz]
p0354[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor rotor resistance cold / damping resistance d axis / Mot R_r cold/R_D d Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: PMSM, REL, RESM Min: 0.00000 [ohm]	Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: 16_1 Scaling: - Max: 300.00000 [ohm]	Access level: 3 Function plan: - Unit selection: p0349 Expert list: 1 Default: 0.00000 [ohm]
p0354[0...n] VECTOR, VECTOR_AC	Motor rotor resistance cold / damping resistance d axis / Mot R_r cold/R_D d Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: PMSM, REL, RESM Min: 0.00000 [ohm]	Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: 16_1 Scaling: - Max: 300.00000 [ohm]	Access level: 3 Function plan: 6727 Unit selection: p0349 Expert list: 1 Default: 0.00000 [ohm]
p0355[0...n] VECTOR, VECTOR_AC	Motor damping resistance q axis / Mot R_damp q Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, PMSM, REL, RESM Min: 0.00000 [ohm]	Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: 16_1 Scaling: - Max: 300.00000 [ohm]	Access level: 3 Function plan: 6727 Unit selection: p0349 Expert list: 1 Default: 0.00000 [ohm]
p0356[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor stator leakage inductance / Mot L_stator leak. Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.00000 [mH]	Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: 15_1 Scaling: - Max: 1000.00000 [mH]	Access level: 3 Function plan: - Unit selection: p0349 Expert list: 1 Default: 0.00000 [mH]
p0356[0...n] VECTOR, VECTOR_AC	Motor stator leakage inductance / Mot L_stator leak. Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.00000 [mH]	Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: 15_1 Scaling: - Max: 1000.00000 [mH]	Access level: 3 Function plan: - Unit selection: p0349 Expert list: 1 Default: 0.00000 [mH]

p0357[0...n] VECTOR, VECTOR_AC	Motor stator inductance d axis / Mot L_stator d Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL Min: 0.00000 [mH]	Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: 15_1 Scaling: - Max: 1000.00000 [mH]	Access level: 3 Function plan: - Unit selection: p0349 Expert list: 1 Default: 0.00000 [mH]
p0358[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor rotor leakage inductance / damping inductance d axis / Mot L_r leak / LDd Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: PMSM, REL, RESM Min: 0.00000 [mH]	Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: 15_1 Scaling: - Max: 1000.00000 [mH]	Access level: 3 Function plan: - Unit selection: p0349 Expert list: 1 Default: 0.00000 [mH]
p0358[0...n] VECTOR, VECTOR_AC	Motor rotor leakage inductance / damping inductance d axis / Mot L_r leak / LDd Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: PMSM, REL, RESM Min: 0.00000 [mH]	Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: 15_1 Scaling: - Max: 1000.00000 [mH]	Access level: 3 Function plan: 6727 Unit selection: p0349 Expert list: 1 Default: 0.00000 [mH]
p0359[0...n] VECTOR, VECTOR_AC	Motor damping inductance q axis / Mot L_damp q Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, PMSM, REL, RESM Min: 0.00000 [mH]	Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: 15_1 Scaling: - Max: 1000.00000 [mH]	Access level: 3 Function plan: 6727 Unit selection: p0349 Expert list: 1 Default: 0.00000 [mH]
p0360[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor magnetizing inductance/magn. inductance d axis saturated / Mot Lh/Lh d sat Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: PMSM, REL, RESM Min: 0.00000 [mH]	Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: 15_1 Scaling: - Max: 10000.00000 [mH]	Access level: 3 Function plan: - Unit selection: p0349 Expert list: 1 Default: 0.00000 [mH]
p0360[0...n] VECTOR, VECTOR_AC	Motor magnetizing inductance/magn. inductance d axis saturated / Mot Lh/Lh d sat Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: PMSM, REL, RESM Min: 0.00000 [mH]	Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: 15_1 Scaling: - Max: 10000.00000 [mH]	Access level: 3 Function plan: 6727 Unit selection: p0349 Expert list: 1 Default: 0.00000 [mH]

p0361[0...n] VECTOR, VECTOR_AC	Motor magnetizing inductance q axis saturated / Mot L_magn q sat Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, PMSM, REL, RESM Min: 0.00000 [mH]	Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: 15_1 Scaling: - Max: 10000.00000 [mH]	Access level: 3 Function plan: 6727 Unit selection: p0349 Expert list: 1 Default: 0.00000 [mH]
p0362[0...n] VECTOR, VECTOR_AC	Motor saturation characteristic flux 1 / Mot saturat.flux 1 Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: RESM Min: 10.0 [%]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 800.0 [%]	Access level: 3 Function plan: 6723, 6726 Unit selection: - Expert list: 1 Default: 60.0 [%]
p0363[0...n] VECTOR, VECTOR_AC	Motor saturation characteristic flux 2 / Mot saturat.flux 2 Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: RESM Min: 10.0 [%]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 800.0 [%]	Access level: 3 Function plan: 6723, 6726 Unit selection: - Expert list: 1 Default: 85.0 [%]
p0364[0...n] VECTOR, VECTOR_AC	Motor saturation characteristic flux 3 / Mot saturat.flux 3 Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: RESM Min: 10.0 [%]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 800.0 [%]	Access level: 3 Function plan: 6723, 6726 Unit selection: - Expert list: 1 Default: 115.0 [%]
p0365[0...n] VECTOR, VECTOR_AC	Motor saturation characteristic flux 4 / Mot saturat.flux 4 Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: RESM Min: 10.0 [%]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 800.0 [%]	Access level: 3 Function plan: 6723, 6726 Unit selection: - Expert list: 1 Default: 125.0 [%]
p0366[0...n] VECTOR, VECTOR_AC	Motor saturation characteristic I_mag 1 / Mot sat. I_mag 1 Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: RESM Min: 5.0 [%]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 800.0 [%]	Access level: 3 Function plan: 6723, 6726 Unit selection: - Expert list: 1 Default: 50.0 [%]

p0367[0...n] VECTOR, VECTOR_AC	Motor saturation characteristic I_mag 2 / Mot sat. I_mag 2 Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: RESM Min: 5.0 [%]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 800.0 [%]	Access level: 3 Function plan: 6723, 6726 Unit selection: - Expert list: 1 Default: 75.0 [%]
p0368[0...n] VECTOR, VECTOR_AC	Motor saturation characteristic I_mag 3 / Mot sat. I_mag 3 Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: RESM Min: 5.0 [%]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 800.0 [%]	Access level: 3 Function plan: 6723, 6726 Unit selection: - Expert list: 1 Default: 150.0 [%]
p0369[0...n] VECTOR, VECTOR_AC	Motor saturation characteristic I_mag 4 / Mot sat. I_mag 4 Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: RESM Min: 5.0 [%]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 800.0 [%]	Access level: 3 Function plan: 6723, 6726 Unit selection: - Expert list: 1 Default: 210.0 [%]
r0370[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Motor stator resistance cold / Mot R_stator cold Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: - [ohm]	Calculation: - Dynamic index: MDS, p0130 Unit group: 16_1 Scaling: - Max: - [ohm]	Access level: 4 Function plan: - Unit selection: p0349 Expert list: 1 Default: - [ohm]
r0372[0...n] VECTOR, VECTOR_AC	Total power unit cable resistance / PU cable R_tot Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: - [ohm]	Calculation: - Dynamic index: MDS, p0130 Unit group: 16_1 Scaling: - Max: - [ohm]	Access level: 4 Function plan: - Unit selection: p0349 Expert list: 1 Default: - [ohm]
r0373[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Motor rated stator resistance / Mot R_stator rated Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: PMSM, SESM, REL Min: - [ohm]	Calculation: - Dynamic index: MDS, p0130 Unit group: 16_1 Scaling: - Max: - [ohm]	Access level: 4 Function plan: - Unit selection: p0349 Expert list: 1 Default: - [ohm]

r0374[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Motor rotor resistance cold / damping resistance d axis / Mot R_r cold/R_D d Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: PMSM, REL, RESM Min: - [ohm]	Calculation: - Dynamic index: MDS, p0130 Unit group: 16_1 Scaling: - Max: - [ohm]	Access level: 4 Function plan: - Unit selection: p0349 Expert list: 1 Default: - [ohm]
r0375[0...n] VECTOR, VECTOR_AC	Motor damping resistance q axis / Mot R_{damp} q Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, PMSM, REL, RESM Min: - [ohm]	Calculation: - Dynamic index: MDS, p0130 Unit group: 16_1 Scaling: - Max: - [ohm]	Access level: 4 Function plan: - Unit selection: p0349 Expert list: 1 Default: - [ohm]
r0376[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Rated motor rotor resistance / Mot rated R_{rotor} Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: PMSM, SESM, REL, RESM Min: - [ohm]	Calculation: - Dynamic index: MDS, p0130 Unit group: 16_1 Scaling: - Max: - [ohm]	Access level: 4 Function plan: - Unit selection: p0349 Expert list: 1 Default: - [ohm]
r0377[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor leakage inductance total / Mot L_{leak} total Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: - [mH]	Calculation: - Dynamic index: MDS, p0130 Unit group: 15_1 Scaling: - Max: - [mH]	Access level: 4 Function plan: 6640 Unit selection: p0349 Expert list: 1 Default: - [mH]
r0377[0...n] VECTOR, VECTOR_AC	Motor leakage inductance total / Mot L_{leak} total Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: - [mH]	Calculation: - Dynamic index: MDS, p0130 Unit group: 15_1 Scaling: - Max: - [mH]	Access level: 4 Function plan: 6640 Unit selection: p0349 Expert list: 1 Default: - [mH]
r0378[0...n] VECTOR, VECTOR_AC	Motor stator inductance d axis / Mot L_{stator} d Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL Min: - [mH]	Calculation: - Dynamic index: MDS, p0130 Unit group: 15_1 Scaling: - Max: - [mH]	Access level: 4 Function plan: - Unit selection: p0349 Expert list: 1 Default: - [mH]

r0380[0...n] VECTOR, VECTOR_AC	Motor damping inductance d axis / Mot L_damp d Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, PMSM, REL, RESM Min: - [mH]	Calculation: - Dynamic index: MDS, p0130 Unit group: 15_1 Scaling: - Max: - [mH]	Access level: 4 Function plan: - Unit selection: p0349 Expert list: 1 Default: - [mH]
r0381[0...n] VECTOR, VECTOR_AC	Motor damping inductance q axis / Mot L_damp q Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, PMSM, REL, RESM Min: - [mH]	Calculation: - Dynamic index: MDS, p0130 Unit group: 15_1 Scaling: - Max: - [mH]	Access level: 4 Function plan: - Unit selection: p0349 Expert list: 1 Default: - [mH]
r0382[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Motor magnetizing inductance transformed / Lh d axis saturated / Mot L_m tr/Lhd sat Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: PMSM, REL, RESM Min: - [mH]	Calculation: - Dynamic index: MDS, p0130 Unit group: 15_1 Scaling: - Max: - [mH]	Access level: 4 Function plan: - Unit selection: p0349 Expert list: 1 Default: - [mH]
r0383[0...n] VECTOR, VECTOR_AC	Motor magnetizing inductance q axis saturated / Mot L_magn q sat Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, PMSM, REL, RESM Min: - [mH]	Calculation: - Dynamic index: MDS, p0130 Unit group: 15_1 Scaling: - Max: - [mH]	Access level: 4 Function plan: - Unit selection: p0349 Expert list: 1 Default: - [mH]
r0384[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Motor rotor time constant / damping time constant d axis / Mot T_rotor/T_Dd Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: PMSM, REL, RESM Min: - [ms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: - [ms]	Access level: 4 Function plan: 6722 Unit selection: - Expert list: 1 Default: - [ms]
r0385[0...n] VECTOR, VECTOR_AC	Motor damping time constant q axis / Mot L_damping q Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, PMSM, REL, RESM Min: - [ms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: - [ms]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [ms]

r0386[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Motor stator leakage time constant / Mot T_stator leak Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: - [ms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: - [ms]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [ms]
r0387[0...n] VECTOR, VECTOR_AC	Motor stator leakage time constant q axis / Mot T_Sleak / T_Sq Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL Min: - [ms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: - [ms]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [ms]
p0388[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor stall correction factor for P1402.6=1 / Mot M_stallCorrNew Changeable: C2(1, 3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: RESM Min: 5 [%]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 300 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 140 [%]
p0389[0...n] VECTOR, VECTOR_AC	Excitation rated no-load current / Exc I_noload_rated Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, PMSM, REL, RESM Min: 0.00 [A]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 10000.00 [A]	Access level: 1 Function plan: 6727 Unit selection: - Expert list: 1 Default: 0.00 [A]
p0390[0...n] VECTOR, VECTOR_AC	Rated excitation current / Exc I_rated Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, PMSM, REL, RESM Min: 0.00 [A]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 10000.00 [A]	Access level: 1 Function plan: 6727 Unit selection: - Expert list: 1 Default: 0.00 [A]
p0391[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Current controller adaptation starting point Kp / I_adapt pt Kp Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: REL Min: 0.00 [Arms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 6000.00 [Arms]	Access level: 3 Function plan: 5714 Unit selection: - Expert list: 1 Default: 0.00 [Arms]

p0391[0...n] VECTOR, VECTOR_AC	Current controller adaptation starting point Kp / I_adapt pt Kp Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: REL Min: 0.00 [Arms]	Calculation: CALC_MOD_REG Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 6000.00 [Arms]	Access level: 3 Function plan: 6714 Unit selection: - Expert list: 1 Default: 0.00 [Arms]
p0392[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Current controller adaptation starting point Kp adapted / I_adapt pt Kp adap Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: REL Min: 0.00 [Arms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 6000.00 [Arms]	Access level: 3 Function plan: 5714 Unit selection: - Expert list: 1 Default: 0.00 [Arms]
p0392[0...n] VECTOR, VECTOR_AC	Current controller adaptation starting point Kp adapted / I_adapt pt Kp adap Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: REL Min: 0.00 [Arms]	Calculation: CALC_MOD_REG Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 6000.00 [Arms]	Access level: 3 Function plan: 6714 Unit selection: - Expert list: 1 Default: 0.00 [Arms]
p0393[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Current controller adaptation p gain adaptation / I_adapt Kp adapt Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: REL Min: 0.00 [%]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 1000.00 [%]	Access level: 3 Function plan: 5714 Unit selection: - Expert list: 1 Default: 100.00 [%]
p0393[0...n] VECTOR, VECTOR_AC	Current controller adaptation P gain scaling / I_adapt Kp scal Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: REL Min: 0.00 [%]	Calculation: CALC_MOD_REG Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 1000.00 [%]	Access level: 3 Function plan: 6714 Unit selection: - Expert list: 1 Default: 100.00 [%]
r0395[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Actual stator resistance / R_stator act Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: - [ohm]	Calculation: - Dynamic index: MDS, p0130 Unit group: 16_1 Scaling: - Max: - [ohm]	Access level: 3 Function plan: 6301, 6730, 6731, 6732 Unit selection: p0349 Expert list: 1 Default: - [ohm]

r0396[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Actual rotor resistance / R_rotor act Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: PMSM, SESM, REL, RESM Min: - [ohm]	Calculation: - Dynamic index: MDS, p0130 Unit group: 16_1 Scaling: - Max: - [ohm]	Access level: 3 Function plan: 6730 Unit selection: p0349 Expert list: 1 Default: - [ohm]
p0397[0...n] VECTOR, VECTOR_AC	Angle magnetic decoupling maximum angle / Magn decpl max_ang Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL Min: -90.0 [°]	Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 90.0 [°]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 90.0 [°]
p0398[0...n] VECTOR, VECTOR_AC	Angle magn decoupling (cross saturation) coeff 1 / Magn decoupl C1 Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: -10.000000	Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 10.000000	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0.000000
p0399[0...n] VECTOR, VECTOR_AC	Angle magn decoupling (cross saturation) coeff 3 / Magn decoupl C3 Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: -10.000000	Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 10.000000	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0.000000
p0400[0...n] ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Encoder type selection / Enc_typ sel Changeable: C2(1, 4) Data type: Integer16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 10100	Access level: 1 Function plan: 4700, 4704 Unit selection: - Expert list: 1 Default: 0
p0402[0...n] ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Gearbox type selection / Gearbox type sel Changeable: C2(1, 4) Data type: Integer16 P group: Encoder Not for motor type: - Min: 1	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 10100	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 9999

p0404[0...n] ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Encoder configuration effective / Enc_config eff Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4010, 4704 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
p0404[0...n] VECTOR, VECTOR_AC	Encoder configuration effective / Enc_config eff Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4010, 4704 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
p0405[0...n] ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Square-wave encoder track A/B / Sq-wave enc A/B Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4704 Unit selection: - Expert list: 1 Default: 0000 1111 bin
p0407[0...n] ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Linear encoder grid division / Enc grid div Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: 0 [nm]	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 250000000 [nm]	Access level: 3 Function plan: 4010, 4704 Unit selection: - Expert list: 1 Default: 16000 [nm]
p0408[0...n] ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Rotary encoder pulse number / Rot enc pulse No. Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 16777215	Access level: 3 Function plan: 4010, 4704 Unit selection: - Expert list: 1 Default: 2048
p0408 TM41	TM41 encoder emulation pulse number / Enc_emul puls No. Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: 32	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 16384	Access level: 3 Function plan: 9674, 9676 Unit selection: - Expert list: 1 Default: 2048

p0410[0...n] HLA, HLA_840, HLA_DBSI	Encoder inversion actual value / Enc inv act value Changeable: C2(4) Data type: Unsigned16 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 0000 bin
p0410[0...n] ENC, ENC_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Encoder inversion actual value / Enc inv act value Changeable: C2(4) Data type: Unsigned16 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4704, 4710, 4711, 4715 Unit selection: - Expert list: 1 Default: 0000 bin
p0410[0...n] ENC (Lin_enc), ENC_840 (Lin_enc), SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Encoder inversion actual value / Enc inv act value Changeable: C2(4) Data type: Unsigned16 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4704, 4710, 4711, 4715 Unit selection: - Expert list: 1 Default: 0000 bin
p0411[0...n] ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Measuring gear configuration / Meas gear config Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 4704 Unit selection: - Expert list: 1 Default: 0000 bin
p0412[0...n] ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Measuring gear absolute encoder rotary revolutions virtual / Abs rot rev Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 4194303	Access level: 1 Function plan: 4704 Unit selection: - Expert list: 1 Default: 0
p0413[0...n] ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Measuring gear position tracking tolerance window / Pos track window Changeable: C2(4) Data type: FloatingPoint32 P group: Encoder Not for motor type: - Min: 0.00	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 4294967300.00	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00

p0414[0...n]	Redundant coarse position value relevant bits (identified) / Relevant bits		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 16	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 16
p0415[0...n]	Gx_XIST1 Coarse position safe most significant bit (identified) / Gx_XIST1 safe MSB		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 31	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 14
p0416[0...n]	Non safety-relevant meas. steps position value POS1 (detected) / nsrPos1		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 22000
p0417[0...n]	Encoder safety comparison algorithm (detected) / Safety comp_algo		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Integer16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 255
p0418[0...n]	Fine resolution Gx_XIST1 (in bits) / Enc fine Gx_XIST1		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned8 P group: Encoder Not for motor type: - Min: 2	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 18	Access level: 3 Function plan: 4010, 4704 Unit selection: - Expert list: 1 Default: 11
p0418	TM41 encoder emulation fine resolution Gx_XIST1 (in bits) / Enc fine Gx_XIST1		
TM41	Changeable: C2(4) Data type: Unsigned8 P group: Encoder Not for motor type: - Min: 2	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 18	Access level: 3 Function plan: 9674, 9676 Unit selection: - Expert list: 1 Default: 11

p0419[0...n]	Fine resolution absolute value Gx_XIST2 (in bits) / Enc fine Gx_XIST2		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned8 P group: Encoder Not for motor type: - Min: 2	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 18	Access level: 3 Function plan: 4704, 4710 Unit selection: - Expert list: 1 Default: 9

p0420[0...n]	Encoder connection / Enc_connection		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned16 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin

p0421[0...n]	Absolute encoder rotary multiturn resolution / Enc abs multiturn		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: 4704 Unit selection: - Expert list: 1 Default: 4096

p0422[0...n]	Absolute encoder linear measuring step resolution / Enc abs meas step		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: 0 [nm]	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 4294967295 [nm]	Access level: 3 Function plan: 4704 Unit selection: - Expert list: 1 Default: 100 [nm]

p0423[0...n]	Absolute encoder rotary singleturn resolution / Enc abs singleturn		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 1073741823	Access level: 3 Function plan: 4704 Unit selection: - Expert list: 1 Default: 8192

p0424[0...n]	Encoder linear zero mark distance / Enc lin ZM_dist		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned16 P group: Encoder Not for motor type: - Min: 0 [mm]	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 65535 [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 20 [mm]

p0425[0...n]	Encoder rotary zero mark distance / Enc rot dist ZM		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 16777215	Access level: 3 Function plan: 4704, 8570 Unit selection: - Expert list: 1 Default: 2048
p0426[0...n]	Encoder zero mark differential distance / Enc ZM Dif_dist		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned16 P group: Encoder Not for motor type: - Min: 1	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
p0427[0...n]	Encoder SSI baud rate / Enc SSI baud rate		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: FloatingPoint32 P group: Encoder Not for motor type: - Min: 0 [kHz]	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 65535 [kHz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100 [kHz]
p0428[0...n]	Encoder SSI monoflop time / Enc SSI t_monoflop		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned16 P group: Encoder Not for motor type: - Min: 0 [µs]	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 65535 [µs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 30 [µs]
p0429[0...n]	Encoder SSI configuration / Enc SSI config		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned16 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 bin
p0430[0...n]	Sensor Module configuration / SM config		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1110 0000 0000 1000 0000 0000 0000 0000 bin

p0430[0...n] ENC (Lin_enc), ENC_840 (Lin_enc), SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Sensor Module configuration / SM config Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1110 0000 0000 1000 0000 0000 0000 0000 bin
p0431[0...n] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Angular commutation offset / Ang_com offset Changeable: C2(4) Data type: FloatingPoint32 P group: Encoder Not for motor type: - Min: -180.00 [°]	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 180.00 [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [°]
p0432[0...n] ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Gearbox factor encoder revolutions / Grbx_fact enc_rev Changeable: C2(4) Data type: Integer32 P group: Encoder Not for motor type: - Min: 1	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 1048576	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
p0433[0...n] ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Gearbox factor motor/load revolutions / Grbx_fact mot_rev Changeable: C2(4) Data type: Integer32 P group: Encoder Not for motor type: - Min: 1	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 1048576	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
p0434[0...n] ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Encoder SSI error bit / Enc SSI error bit Changeable: C2(4) Data type: Unsigned16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0435[0...n] ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Encoder SSI alarm bit / Enc SSI alarm bit Changeable: C2(4) Data type: Unsigned16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0436[0...n]	Encoder SSI parity bit / Enc SSI parity bit		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0437[0...n]	Sensor Module configuration extended / SM config ext		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0011 0000 0000 0000 0000 1000 0000 0000 bin
p0437[0...n]	Sensor Module configuration extended / SM config ext		
ENC (Lin_enc), ENC_840 (Lin_enc), SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0011 0000 0000 0000 0000 1000 0000 0000 bin
p0438[0...n]	Squarewave encoder filter time / Enc t_filt		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: FloatingPoint32 P group: Encoder Not for motor type: - Min: 0.00 [μs]	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 100.00 [μs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.64 [μs]
p0439[0...n]	Encoder ramp-up time / Enc ramp-up time		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned16 P group: Encoder Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 65535 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0 [ms]
p0440[0...n]	Copy encoder serial number / Copy enc ser_no		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Integer16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0441[0...n]	Encoder commissioning serial number part 1 / Enc comm ser_no 1		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: 0000 hex	Calculation: CALC_MOD_ALL Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0000 hex

p0442[0...n]	Encoder commissioning serial number part 2 / Enc comm ser_no 2		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: 0000 hex	Calculation: CALC_MOD_ALL Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0000 hex

p0443[0...n]	Encoder commissioning serial number part 3 / Enc comm ser_no 3		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: 0000 hex	Calculation: CALC_MOD_ALL Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0000 hex

p0444[0...n]	Encoder commissioning serial number part 4 / Enc comm ser_no 4		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: 0000 hex	Calculation: CALC_MOD_ALL Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0000 hex

p0445[0...n]	Encoder commissioning serial number part 5 / Enc comm ser_no 5		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: 0000 hex	Calculation: CALC_MOD_ALL Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0000 hex

p0446[0...n]	Encoder SSI number of bits before the absolute value / Enc SSI bit before		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0447[0...n]	Encoder SSI number of bits absolute value / Enc SSI bit val		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 25
p0448[0...n]	Encoder SSI number of bits after the absolute value / Enc SSI bit after		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0449[0...n]	Encoder SSI number of bits filler bits / Enc SSI fill bits		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
r0451[0...2]	Commutation angle factor / Enc commut_factor		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4710 Unit selection: - Expert list: 1 Default: -
r0452[0...2]	Squarewave encoder filter time display / Enc t_filt displ		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: Encoder Not for motor type: - Min: - [µs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [µs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [µs]
r0452	Squarewave encoder filter time display / Enc t_filt displ		
ENC, ENC_840	Changeable: - Data type: FloatingPoint32 P group: Encoder Not for motor type: - Min: - [µs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [µs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [µs]

p0453[0...n]	Pulse encoder evaluation zero speed measuring time / Enc_ev n_0 t_meas		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: FloatingPoint32 P group: Encoder Not for motor type: - Min: 0.10 [ms]	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 10000.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1000.00 [ms]

p0454[0...n]	Sensor Module configuration extended Part 2 / SM config ext 2		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin

p0454[0...n]	Sensor Module configuration extended Part 2 / SM config ext 2		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin

r0455[0...2]	Encoder configuration recognized / Enc_config recog		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r0455	Encoder configuration recognized / Enc_config recog		
ENC, ENC_840	Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r0456[0...2]	Encoder configuration supported / Enc_config supp		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r0456 ENC, ENC_840	Encoder configuration supported / Enc_config supp Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0457[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Sensor Module properties extended Part 2 / SM prop ext 2 Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0457 ENC, ENC_840	Sensor Module properties extended Part 2 / SM prop ext 2 Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0458[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Sensor Module properties / SM properties Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4704 Unit selection: - Expert list: 1 Default: -
r0458[0...2] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Sensor Module properties / SM properties Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4704 Unit selection: - Expert list: 1 Default: -
r0458 ENC, ENC_840	Sensor Module properties / SM properties Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4704 Unit selection: - Expert list: 1 Default: -

r0458 ENC (Lin_enc), ENC_840 (Lin_enc)	Sensor Module properties / SM properties Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4704 Unit selection: - Expert list: 1 Default: -
r0459[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Sensor Module properties extended / SM prop ext Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0459[0...2] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Sensor Module properties extended / SM prop ext Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0459 ENC, ENC_840	Sensor Module properties extended / SM prop ext Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0459 ENC (Lin_enc), ENC_840 (Lin_enc)	Sensor Module properties extended / SM prop ext Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0460[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Encoder serial number part 1 / Enc ser_no 1 Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r0460 ENC, ENC_840	Encoder serial number part 1 / Enc ser_no 1 Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0461[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Encoder serial number part 2 / Enc ser_no 2 Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0461 ENC, ENC_840	Encoder serial number part 2 / Enc ser_no 2 Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0462[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Encoder serial number part 3 / Enc ser_no 3 Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0462 ENC, ENC_840	Encoder serial number part 3 / Enc ser_no 3 Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0463[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Encoder serial number part 4 / Enc ser_no 4 Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r0463 ENC, ENC_840	Encoder serial number part 4 / Enc ser_no 4 Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0464[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Encoder serial number part 5 / Enc ser_no 5 Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0464 ENC, ENC_840	Encoder serial number part 5 / Enc ser_no 5 Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0465[0...27] ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Encoder 1 identification number/serial number / Enc1 ID_no/Ser_no Changeable: - Data type: Unsigned8 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0466[0...27] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Encoder 2 identification number/serial number / Enc2 ID_no/Ser_no Changeable: - Data type: Unsigned8 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0467[0...27] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Encoder 3 identification number/serial number / Enc3 ID_no/Ser_no Changeable: - Data type: Unsigned8 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r0469[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Absolute encoder linear measuring step / Enc lin meas step Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: - [nm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [nm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [nm]
r0469 ENC, ENC_840	Absolute encoder linear measuring step / Enc lin meas step Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: - [nm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [nm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [nm]
r0470[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Redundant coarse position value valid bits / Valid bits Changeable: - Data type: Unsigned16 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0470 ENC, ENC_840	Redundant coarse position value valid bits / Valid bits Changeable: - Data type: Unsigned16 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0471[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Redundant coarse position value fine resolution bits / Fine bit Changeable: - Data type: Integer16 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0471 ENC, ENC_840	Redundant coarse position value fine resolution bits / Fine bit Changeable: - Data type: Integer16 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r0472[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Redundant coarse position value relevant bits / Relevant bits Changeable: - Data type: Unsigned16 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0472 ENC, ENC_840	Redundant coarse position value relevant bits / Relevant bits Changeable: - Data type: Unsigned16 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0473[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Non safety-relevant measuring steps position value pos1 / nsrPos1 Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0473 ENC, ENC_840	Non safety-relevant measuring steps position value pos1 / nsrPos1 Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0474[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Redundant coarse position value configuration / Red pos config Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0474 ENC, ENC_840	Redundant coarse position value configuration / Red pos config Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r0475[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Gx_XIST1 coarse position safe most significant bit / Gx_XIST1 safe MSB Changeable: - Data type: Unsigned16 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0475 ENC, ENC_840	Gx_XIST1 coarse position safe most significant bit / Gx_XIST1 safe MSB Changeable: - Data type: Unsigned16 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p0476[0...n] HLA, HLA_840, HLA_DBSI	Piston zero point calibration value / Piston 0 pt calib Changeable: T Data type: Integer32 P group: Encoder Not for motor type: - Min: -2147483648	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 2147483647	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
r0477[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Measuring gear position difference / Meas gear pos diff Changeable: - Data type: Integer32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r0477 ENC, ENC_840	CO: Measuring gear position difference / Meas gear pos diff Changeable: - Data type: Integer32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r0479[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Diagnostics encoder position actual value Gn_XIST1 / Diag Gn_XIST1 Changeable: - Data type: Integer32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4704 Unit selection: - Expert list: 1 Default: -

r0479 TM41	CO: TM41 encoder emulation diagnostics Gn_XIST1 / Diag Gn_XIST1 Changeable: - Data type: Integer32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9674, 9676 Unit selection: - Expert list: 1 Default: -
r0479 ENC, ENC_840	CO: Diagnostics encoder position actual value Gn_XIST1 / Diag Gn_XIST1 Changeable: - Data type: Integer32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4704 Unit selection: - Expert list: 1 Default: -
p0480[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CI: Encoder control word Gn_STW signal source / Enc Gn_STW S_src Changeable: T Data type: Unsigned32 / Integer16 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4700, 4720, 4750 Unit selection: - Expert list: 1 Default: 0
p0480 ENC, ENC_840	CI: Encoder control word Gn_STW signal source / Enc Gn_STW S_src Changeable: T Data type: Unsigned32 / Integer16 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4700, 4720, 4750 Unit selection: - Expert list: 1 Default: 0
r0481[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Encoder status word Gn_ZSW / Enc Gn_ZSW Changeable: - Data type: Unsigned16 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4010, 4704, 4730, 4750 Unit selection: - Expert list: 1 Default: -
r0481 TM41	CO: TM41 encoder emulation status word Gn_ZSW / Enc Gn_ZSW Changeable: - Data type: Unsigned16 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9676 Unit selection: - Expert list: 1 Default: -

r0481 ENC, ENC_840	CO: Encoder status word Gn_ZSW / Enc Gn_ZSW Changeable: - Data type: Unsigned16 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4704, 4730, 4750 Unit selection: - Expert list: 1 Default: -
r0482[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Encoder actual position value Gn_XIST1 / Enc Gn_XIST1 Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4700, 4702, 4704, 4735, 4740, 4750 Unit selection: - Expert list: 1 Default: -
r0482 TM41	CO: TM41 encoder emulation position actual value Gn_XIST1 / Enc Gn_XIST1 Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0482 ENC, ENC_840	CO: Encoder actual position value Gn_XIST1 / Enc Gn_XIST1 Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4704, 4735, 4740, 4750 Unit selection: - Expert list: 1 Default: -
r0483[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Encoder actual position value Gn_XIST2 / Enc Gn_XIST2 Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4704, 4750 Unit selection: - Expert list: 1 Default: -
r0483 TM41	CO: TM41 encoder emulation position actual value Gn_XIST2 / Enc Gn_XIST2 Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r0483	CO: Encoder actual position value Gn_XIST2 / Enc Gn_XIST2		
ENC, ENC_840	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned32	Dynamic index: -	Function plan: 4704, 4750
	P group: Encoder	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-

r0484[0...2]	CO: Redundant coarse encoder position + CRC / Enc red pos+CRC		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned32	Dynamic index: -	Function plan: -
	P group: Encoder	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-

r0484	CO: Redundant coarse encoder position + CRC / Enc red pos+CRC		
ENC, ENC_840	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned32	Dynamic index: -	Function plan: -
	P group: Encoder	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-

r0485[0...2]	CO: Measuring gear encoder raw value incremental / Enc raw val incr		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: -	Calculation: -	Access level: 1
	Data type: Unsigned32	Dynamic index: -	Function plan: -
	P group: Encoder	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-

r0485	CO: Measuring gear encoder raw value incremental / Enc raw val incr		
ENC, ENC_840	Changeable: -	Calculation: -	Access level: 1
	Data type: Unsigned32	Dynamic index: -	Function plan: -
	P group: Encoder	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-

r0486[0...2]	CO: Measuring gear encoder raw value absolute / Enc raw val abs		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: -	Calculation: -	Access level: 1
	Data type: Unsigned32	Dynamic index: -	Function plan: -
	P group: Encoder	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-

r0486 ENC, ENC_840	CO: Measuring gear encoder raw value absolute / Enc raw val abs Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r0487[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Diagnostic encoder control word Gn_STW / Enc Gn_STW Changeable: - Data type: Unsigned16 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4700, 4704, 4720, 4740 Unit selection: - Expert list: 1 Default: -
r0487 ENC, ENC_840	Diagnostic encoder control word Gn_STW / Enc Gn_STW Changeable: - Data type: Unsigned16 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4700, 4704, 4720, 4740 Unit selection: - Expert list: 1 Default: -
p0488[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Measuring probe 1 input terminal / Meas probe 1 inp Changeable: T, U Data type: Integer16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8	Access level: 3 Function plan: 4740 Unit selection: - Expert list: 1 Default: 0
p0488[0...2] SERVO (Dig IO), SERVO_840 (Dig IO), SERVO_DBSI (Dig IO)	Measuring probe 1 input terminal / Meas probe 1 inp Changeable: T, U Data type: Integer16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 51	Access level: 3 Function plan: 4740 Unit selection: - Expert list: 1 Default: 0
p0488 ENC, ENC_840	Measuring probe 1 input terminal / Meas probe 1 inp Changeable: T, U Data type: Integer16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8	Access level: 3 Function plan: 4740 Unit selection: - Expert list: 1 Default: 0

p0489[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Measuring probe 2 input terminal / Meas probe 2 inp Changeable: T, U Data type: Integer16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8	Access level: 3 Function plan: 4740 Unit selection: - Expert list: 1 Default: 0
p0489[0...2] SERVO (Dig IO), SERVO_840 (Dig IO), SERVO_DBSI (Dig IO)	Measuring probe 2 input terminal / Meas probe 2 inp Changeable: T, U Data type: Integer16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 51	Access level: 3 Function plan: 4740 Unit selection: - Expert list: 1 Default: 0
p0489 ENC, ENC_840	Measuring probe 2 input terminal / Meas probe 2 inp Changeable: T, U Data type: Integer16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8	Access level: 3 Function plan: 4740 Unit selection: - Expert list: 1 Default: 0
p0490 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Invert measuring probe or equivalent zero mark / Pr or ZM_equiv inv Changeable: T, U Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4740 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
p0491 HLA, HLA_840, HLA_DBSI, TM41	Motor encoder fault response ENCODER / Fault resp ENCODER Changeable: T Data type: Integer16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 5	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0491 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor encoder fault response ENCODER / Fault resp ENCODER Changeable: T Data type: Integer16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 5	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0491 VECTOR, VECTOR_AC	Motor encoder fault response ENCODER / Fault resp ENCODER Changeable: T Data type: Integer16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 5	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0492 HLA, HLA_840, HLA_DBSI	Square-wave encoder max. velocity difference per sampling cycle / v_dif max/samp_cyc Changeable: T, U Data type: FloatingPoint32 P group: Encoder Not for motor type: - Min: 0.00 [m/min]	Calculation: CALC_MOD_REG Dynamic index: - Unit group: - Scaling: - Max: 210000.00 [m/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [m/min]
p0492 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Square-wave encoder maximum speed difference per sampling cycle / n_dif max/samp_cyc Changeable: T, U Data type: FloatingPoint32 P group: Encoder Not for motor type: - Min: 0.00 [rpm]	Calculation: CALC_MOD_REG Dynamic index: - Unit group: - Scaling: - Max: 210000.00 [rpm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [rpm]
p0492 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Square-wave encoder max. velocity difference per sampling cycle / v_dif max/samp_cyc Changeable: T, U Data type: FloatingPoint32 P group: Encoder Not for motor type: - Min: 0.00 [m/min]	Calculation: CALC_MOD_REG Dynamic index: - Unit group: - Scaling: - Max: 1000.00 [m/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [m/min]
p0492 VECTOR, VECTOR_AC	Maximum speed difference per sampling cycle / n_dif max/samp_cyc Changeable: T, U Data type: FloatingPoint32 P group: Encoder Not for motor type: - Min: 0.00 [rpm]	Calculation: CALC_MOD_REG Dynamic index: - Unit group: - Scaling: - Max: 210000.00 [rpm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [rpm]
p0492 ENC, ENC_840	Square-wave encoder maximum speed difference per sampling cycle / n_dif max/samp_cyc Changeable: T, U Data type: FloatingPoint32 P group: Encoder Not for motor type: - Min: 0.00 [rpm]	Calculation: CALC_MOD_REG Dynamic index: - Unit group: - Scaling: - Max: 210000.00 [rpm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [rpm]

p0492	Square-wave encoder max. velocity difference per sampling cycle / v_dif max/samp_cyc		
ENC (Lin_enc), ENC_840 (Lin_enc)	Changeable: T, U	Calculation: CALC_MOD_REG	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Encoder	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [m/min]	1000.00 [m/min]	0.00 [m/min]

p0493[0...n]	Zero mark selection input terminal / ZM_sel inp_term		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: EDS, p0140	Function plan: -
	P group: Encoder	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	8	0

p0493[0...n]	Zero mark selection input terminal / ZM_sel inp_term		
SERVO (Dig IO), SERVO_840 (Dig IO), SERVO_DBSI (Dig IO)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: EDS, p0140	Function plan: -
	P group: Encoder	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	51	0

p0493	Zero mark selection input terminal / ZM_sel inp_term		
ENC, ENC_840	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Encoder	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	211	0

p0494[0...n]	Equivalent zero mark input terminal / ZM_equiv inp_term		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: EDS, p0140	Function plan: -
	P group: Encoder	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	8	0

p0494[0...n]	Equivalent zero mark input terminal / ZM_equiv inp_term		
SERVO (Dig IO), SERVO_840 (Dig IO), SERVO_DBSI (Dig IO)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: EDS, p0140	Function plan: -
	P group: Encoder	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	51	0

p0495[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Equivalent zero mark input terminal / ZM_equiv input Changeable: T, U Data type: Integer16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8	Access level: 3 Function plan: 4735 Unit selection: - Expert list: 1 Default: 0
p0495[0...2] SERVO (Dig IO), SERVO_840 (Dig IO), SERVO_DBSI (Dig IO)	Equivalent zero mark input terminal / ZM_equiv input Changeable: T, U Data type: Integer16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 51	Access level: 3 Function plan: 4735 Unit selection: - Expert list: 1 Default: 0
p0495 ENC, ENC_840	Equivalent zero mark input terminal / ZM_equiv input Changeable: T, U Data type: Integer16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8	Access level: 3 Function plan: 4735 Unit selection: - Expert list: 1 Default: 0
p0496[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Encoder diagnostic signal selection / Enc diag select Changeable: T, U Data type: Integer16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 86	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0496 ENC, ENC_840	Encoder diagnostic signal selection / Enc diag select Changeable: T, U Data type: Integer16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 86	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0
r0497[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Encoder diagnostic signal double word / Enc diag DW Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -

r0497 ENC, ENC_840	Encoder diagnostic signal double word / Enc diag DW Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r0498[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Encoder diagnostic signal low word / Enc diag low word Changeable: - Data type: Integer16 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r0498 ENC, ENC_840	Encoder diagnostic signal low word / Enc diag low word Changeable: - Data type: Integer16 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r0499[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Encoder diagnostic signal high word / Enc diag high word Changeable: - Data type: Integer16 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r0499 ENC, ENC_840	Encoder diagnostic signal high word / Enc diag high word Changeable: - Data type: Integer16 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p0500 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Technology application / Tec application Changeable: C2(1, 5), T Data type: Integer16 P group: Applications Not for motor type: - Min: 100	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 102	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 100

p0500 VECTOR, VECTOR_AC	Technology application / Tec application Changeable: C2(1, 5), T Data type: Integer16 P group: Applications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 1
p0505 A_INF, B_INF, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Selecting the system of units / Unit sys select Changeable: C2(5) Data type: Integer16 P group: Applications Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 1
p0514[0...9] A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Scaling-specific reference values / Scal spec ref val Changeable: T Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 0.000001	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 10000000.000000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1.000000
p0515[0...19] A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Scaling specific parameters referred to p0514[0] / Scal spec p514[0] Changeable: T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0516[0...19] A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Scaling specific parameters referred to p0514[1] / Scal spec p514[1] Changeable: T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0517[0...19]	Scaling specific parameters referred to p0514[2] / Scal spec p514[2]		
A_INF, A_INF_840,	Changeable: T	Calculation: CALC_MOD_ALL	Access level: 3
B_INF, B_INF_840,	Data type: Unsigned32	Dynamic index: -	Function plan: -
HLA, HLA_840,	P group: Communications	Unit group: -	Unit selection: -
HLA_DBSI, R_INF,	Not for motor type: -	Scaling: -	Expert list: 1
S_INF, S_INF_840,	Min:	Max:	Default:
SERVO, SERVO_840,	0	4294967295	0
SERVO_AC,			
SERVO_DBSI,			
VECTOR,			
VECTOR_AC			

p0518[0...19]	Scaling specific parameters referred to p0514[3] / Scal spec p514[3]		
A_INF, A_INF_840,	Changeable: T	Calculation: CALC_MOD_ALL	Access level: 3
B_INF, B_INF_840,	Data type: Unsigned32	Dynamic index: -	Function plan: -
HLA, HLA_840,	P group: Communications	Unit group: -	Unit selection: -
HLA_DBSI, R_INF,	Not for motor type: -	Scaling: -	Expert list: 1
S_INF, S_INF_840,	Min:	Max:	Default:
SERVO, SERVO_840,	0	4294967295	0
SERVO_AC,			
SERVO_DBSI,			
VECTOR,			
VECTOR_AC			

p0519[0...19]	Scaling specific parameters referred to p0514[4] / Scal spec p514[4]		
A_INF, A_INF_840,	Changeable: T	Calculation: CALC_MOD_ALL	Access level: 3
B_INF, B_INF_840,	Data type: Unsigned32	Dynamic index: -	Function plan: -
HLA, HLA_840,	P group: Communications	Unit group: -	Unit selection: -
HLA_DBSI, R_INF,	Not for motor type: -	Scaling: -	Expert list: 1
S_INF, S_INF_840,	Min:	Max:	Default:
SERVO, SERVO_840,	0	4294967295	0
SERVO_AC,			
SERVO_DBSI,			
VECTOR,			
VECTOR_AC			

p0520[0...19]	Scaling specific parameters referred to p0514[5] / Scal spec p514[5]		
A_INF, A_INF_840,	Changeable: T	Calculation: CALC_MOD_ALL	Access level: 3
B_INF, B_INF_840,	Data type: Unsigned32	Dynamic index: -	Function plan: -
HLA, HLA_840,	P group: Communications	Unit group: -	Unit selection: -
HLA_DBSI, R_INF,	Not for motor type: -	Scaling: -	Expert list: 1
S_INF, S_INF_840,	Min:	Max:	Default:
SERVO, SERVO_840,	0	4294967295	0
SERVO_AC,			
SERVO_DBSI,			
VECTOR,			
VECTOR_AC			

p0521[0...19]	Scaling specific parameters referred to p0514[6] / Scal spec p514[6]		
A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0522[0...19]	Scaling specific parameters referred to p0514[7] / Scal spec p514[7]		
A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0523[0...19]	Scaling specific parameters referred to p0514[8] / Scal spec p514[8]		
A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0524[0...19]	Scaling specific parameters referred to p0514[9] / Scal spec p514[9]		
A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0528	Controller gain system of units / Ctrl_gain unit_sys		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41	Changeable: C2(5) Data type: Integer16 P group: Applications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0528 VECTOR, VECTOR_AC	Controller gain system of units / Ctrl_gain unit_sys Changeable: C2(5) Data type: Integer16 P group: Applications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 1
p0530[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Bearing version selection / Bearing vers sel Changeable: C2(1, 3) Data type: Unsigned16 P group: Motor Not for motor type: SESM Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 104	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0531[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Bearing code number selection / Bearing codeNo sel Changeable: C2(3) Data type: Unsigned16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 65535	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0532[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Bearing maximum speed / Bearing n_max Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [rpm]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 210000.0 [rpm]	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [rpm]
p0532[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Bearing maximum velocity / Bearing v_max Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [m/min]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 1300.0 [m/min]	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [m/min]
p0532[0...n] VECTOR, VECTOR_AC	Bearing maximum speed / Bearing n_max Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [rpm]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 210000.0 [rpm]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [rpm]

p0541[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Load gearbox code number / Load grbx CodeNo Changeable: C2(1, 3) Data type: Unsigned32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 4294967295	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 1
p0542[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Load gearbox maximum speed / Load grbx n_max Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: 0.0 [rpm]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 210000.0 [rpm]	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [rpm]
p0543[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Load gearbox maximum torque / Load grbx M_max Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: 0.00 [Nm]	Calculation: - Dynamic index: MDS, p0130 Unit group: 7_4 Scaling: - Max: 1000000.00 [Nm]	Access level: 2 Function plan: - Unit selection: p0100 Expert list: 1 Default: 0.00 [Nm]
p0544[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Load gearbox overall ratio numerator / Load grbx ratio N Changeable: C2(1, 3) Data type: Integer32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 2147483647	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0545[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Load gearbox overall ratio denominator / Load grbx ratio D Changeable: C2(1, 3) Data type: Integer32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 2147483647	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0546[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Load gearbox direction of rotation inversion / Load grbx dir inv Changeable: C2(1, 3) Data type: Integer32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 2147483647	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0547[0...n]	Load gearbox moment of inertia / Load gbx M_inertia		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: 0.000000 [kgm²]	Calculation: - Dynamic index: MDS, p0130 Unit group: 25_1 Scaling: - Max: 100000.000000 [kgm²]	Access level: 3 Function plan: - Unit selection: p0100 Expert list: 1 Default: 0.000000 [kgm²]
p0550[0...n]	Brake version / Brake version		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: C2(1, 3) Data type: Integer16 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0551[0...n]	Brake code number / Brake code no.		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: C2(1, 3) Data type: Unsigned32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 4294967295	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 1
p0552[0...n]	Maximum brake speed / Brake n_max		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: 0.0 [rpm]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 210000.0 [rpm]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [rpm]
p0553[0...n]	Brake holding torque / Brake M_hold		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: 0.00 [Nm]	Calculation: - Dynamic index: MDS, p0130 Unit group: 7_4 Scaling: - Max: 1000000.00 [Nm]	Access level: 2 Function plan: - Unit selection: p0100 Expert list: 1 Default: 0.00 [Nm]
p0554[0...n]	Brake moment of inertia / Brake M_inertia		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: C2(1, 3) Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL, RESM Min: 0.000000 [kgm²]	Calculation: - Dynamic index: MDS, p0130 Unit group: 25_1 Scaling: - Max: 100000.000000 [kgm²]	Access level: 2 Function plan: - Unit selection: p0100 Expert list: 1 Default: 0.000000 [kgm²]

r0565[0...15] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	CO: Probe time stamp / Probe t_stamp Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0566[0...3] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	CO: Probe time stamp reference / Probe t_stamp name Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0567 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	CO: Probe diagnostics word / Probe diag_word Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p0570 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Inhibit list values effective number / Inhib list no Changeable: T, U Data type: Unsigned8 P group: Applications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 50	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0571[0...49] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Inhibit list motor/closed-loop control parameter calculation / Inhib list calc Changeable: T, U Data type: Integer16 P group: Applications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2142	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0571[0...49] VECTOR, VECTOR_AC	Inhibit list motor/closed-loop control parameter calculation / Inhib list calc Changeable: T, U Data type: Integer16 P group: Applications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2142	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0572[0...n]	Activate/deactivate inhibit list / Inh_list act/deact		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: Integer16 P group: Applications Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0573	Inhibit automatic reference value calculation / Inhibit calc		
A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: T, U Data type: Integer16 P group: Applications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0578[0...n]	Calculate technology-dependent parameters / Calc tec par		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(5), T Data type: Integer16 P group: Applications Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0580	Measuring probe input terminal / MT input terminal		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: Integer16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0581	Measuring probe edge / MT edge		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: Integer16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0582 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Measuring probe pulses per revolution / MT pulses per rev Changeable: T, U Data type: Unsigned16 P group: Encoder Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 12	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
p0583 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Measuring probe maximum measuring time / MT t_meas max Changeable: T, U Data type: FloatingPoint32 P group: Encoder Not for motor type: - Min: 0.040 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10.000 [s]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 10.000 [s]
r0586 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Measuring probe speed actual value / MT n_act Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [rpm]
r0586 HLA, HLA_840, HLA_DBSI, SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Measuring probe velocity actual value / MT v_act Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [m/min]
r0587 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Measuring probe measuring time measured / MT t_meas measured Changeable: - Data type: Unsigned32 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0588 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Measuring probe pulse counter / MT pulse counter Changeable: - Data type: Unsigned32 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r0589 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Measuring probe delay time / MT t_delay Changeable: - Data type: Unsigned32 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p0595 SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Technological unit selection / Tech unit select Changeable: C2(5) Data type: Integer16 P group: Applications Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 32	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 1
p0596 SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Technological unit reference quantity / Tech unit ref qty Changeable: T Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.01	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 340.28235E36	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 1.00
p0600[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor temperature sensor for monitoring / Mot temp_sensor Changeable: C2(3), T, U Data type: Integer16 P group: Motor Not for motor type: - Min: 0	Calculation: CALC_MOD_ALL Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 21	Access level: 2 Function plan: 8016 Unit selection: - Expert list: 1 Default: 1
p0600[0...n] VECTOR, VECTOR_AC	Motor temperature sensor for monitoring / Mot temp_sensor Changeable: C2(3), T, U Data type: Integer16 P group: Motor Not for motor type: - Min: 0	Calculation: CALC_MOD_ALL Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 21	Access level: 2 Function plan: 8016 Unit selection: - Expert list: 1 Default: 0

p0601[0...n]	Motor temperature sensor type / Mot_temp_sens type		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(3), T, U Data type: Integer16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 11	Access level: 2 Function plan: 8016 Unit selection: - Expert list: 1 Default: 2
p0601	Temperature sensor, sensor type / Temp_sens type		
A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	Changeable: C2(3), T, U Data type: Integer16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0602	Par_connection power unit number, temperature sensor / PU_no temp_sensor		
VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: C2(3), T, U Data type: Unsigned16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0603	CI: Motor temperature signal source / Mot temp S_src		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(3), T Data type: Unsigned32 / FloatingPoint32 P group: Motor Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2006 Max: -	Access level: 2 Function plan: 8016 Unit selection: - Expert list: 1 Default: 0
p0604[0...n]	Mot_temp_mod 2: sensor alarm threshold / Mod 2: sens A_thr		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [°C]	Calculation: - Dynamic index: MDS, p0130 Unit group: 21_1 Scaling: - Max: 200.0 [°C]	Access level: 2 Function plan: 8016 Unit selection: p0505 Expert list: 1 Default: 120.0 [°C]
p0604[0...n]	Mot_temp_mod 2: sensor alarm threshold / Mod 2: sens A_thr		
VECTOR, VECTOR_AC	Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [°C]	Calculation: - Dynamic index: MDS, p0130 Unit group: 21_1 Scaling: - Max: 200.0 [°C]	Access level: 2 Function plan: 8016 Unit selection: p0505 Expert list: 1 Default: 130.0 [°C]

p0605[0...n]	Mot_temp_mod 1/2 sensor threshold and temperature value / Mod 1/2 sens thr_T		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [°C]	Calculation: - Dynamic index: MDS, p0130 Unit group: 21_1 Scaling: - Max: 240.0 [°C]	Access level: 2 Function plan: 8016, 8017 Unit selection: p0505 Expert list: 1 Default: 145.0 [°C]

p0606[0...n]	Mot_temp_mod 2: sensor timer / Mod 2:sens timer		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 600.000 [s]	Access level: 2 Function plan: 8016 Unit selection: - Expert list: 1 Default: 240.000 [s]

p0606[0...n]	Mot_temp_mod 2: sensor timer / Mod 2:sens timer		
VECTOR, VECTOR_AC	Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 600.000 [s]	Access level: 2 Function plan: 8016 Unit selection: - Expert list: 1 Default: 0.000 [s]

p0607[0...n]	Temperature sensor fault timer / Sensor fault time		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 600.000 [s]	Access level: 2 Function plan: 8016 Unit selection: - Expert list: 1 Default: 0.100 [s]

p0608[0...3]	CI: Motor temperature signal source 2 / Mot_temp S_src 2		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(3), T Data type: Unsigned32 / FloatingPoint32 P group: Motor Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2006 Max: -	Access level: 2 Function plan: 8016 Unit selection: - Expert list: 1 Default: 0

p0609[0...3]	CI: Motor temperature signal source 3 / Mot_temp S_src 3		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(3), T Data type: Unsigned32 / FloatingPoint32 P group: Motor Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2006 Max: -	Access level: 2 Function plan: 8016 Unit selection: - Expert list: 1 Default: 0

p0610[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor overtemperature response / Mot temp response Changeable: C2(3), T Data type: Integer16 P group: Motor Not for motor type: - Min: 2	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 12	Access level: 2 Function plan: 8017, 8018, 8019 Unit selection: - Expert list: 1 Default: 12
p0610[0...n] VECTOR, VECTOR_AC	Motor overtemperature response / Mot temp response Changeable: C2(3), T Data type: Integer16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 12	Access level: 2 Function plan: 8016, 8017, 8018, 8019 Unit selection: - Expert list: 1 Default: 12
p0611[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	I2t motor model thermal time constant / I2t mot_mod T Changeable: C2(1, 3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL Min: 0 [s]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 20000 [s]	Access level: 3 Function plan: 8017 Unit selection: - Expert list: 1 Default: 0 [s]
p0612[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Mot_temp_mod activation / Mot_temp_mod act Changeable: T, U Data type: Unsigned16 P group: - Not for motor type: SESM, REL Min: -	Calculation: CALC_MOD_ALL Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 8017, 8018, 8019 Unit selection: - Expert list: 1 Default: 0000 0010 0000 0010 bin
p0613[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Mot_temp_mod 1/3 ambient temperature / Mod 1/3 amb_temp Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL Min: -40 [°C]	Calculation: - Dynamic index: MDS, p0130 Unit group: 21_1 Scaling: - Max: 100 [°C]	Access level: 2 Function plan: 8017 Unit selection: p0505 Expert list: 1 Default: 20 [°C]
p0614[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Thermal resistance adaptation reduction factor / Therm R_adapt red Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0 [%]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 100 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 30 [%]

p0615[0...n]	Mot_temp_mod 1 (I2t) fault threshold / I2t F thresh		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL Min: 0.0 [°C]	Calculation: - Dynamic index: MDS, p0130 Unit group: 21_1 Scaling: - Max: 220.0 [°C]	Access level: 2 Function plan: 8017 Unit selection: p0505 Expert list: 1 Default: 180.0 [°C]

p0616[0...n]	Motor overtemperature alarm threshold 1 / Mot temp alarm 1		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [°C]	Calculation: - Dynamic index: MDS, p0130 Unit group: 21_1 Scaling: - Max: 200.0 [°C]	Access level: 2 Function plan: 8016 Unit selection: p0505 Expert list: 1 Default: 195.0 [°C]

p0616[0...n]	Motor overtemperature alarm threshold 1 / Mot temp alarm 1		
VECTOR, VECTOR_AC	Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [°C]	Calculation: - Dynamic index: MDS, p0130 Unit group: 21_1 Scaling: - Max: 200.0 [°C]	Access level: 2 Function plan: 8016 Unit selection: p0505 Expert list: 1 Default: 130.0 [°C]

p0617[0...n]	Stator thermally relevant iron component / Stat therm iron		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T Data type: FloatingPoint32 P group: Motor Not for motor type: PMSM, SESM, REL, RESM Min: 0.0 [%]	Calculation: CALC_MOD_ALL Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 100.0 [%]	Access level: 3 Function plan: 8018 Unit selection: - Expert list: 1 Default: 40.0 [%]

p0618[0...n]	Stator thermally relevant copper component / Stat therm copper		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T Data type: FloatingPoint32 P group: Motor Not for motor type: PMSM, SESM, REL, RESM Min: 0.0 [%]	Calculation: CALC_MOD_ALL Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 100.0 [%]	Access level: 3 Function plan: 8018 Unit selection: - Expert list: 1 Default: 15.0 [%]

p0619[0...n]	Rotor thermally relevant weight / Rotor therm weight		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T Data type: FloatingPoint32 P group: Motor Not for motor type: PMSM, SESM, REL, RESM Min: 0.0 [%]	Calculation: CALC_MOD_ALL Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 100.0 [%]	Access level: 3 Function plan: 8018 Unit selection: - Expert list: 1 Default: 20.0 [%]

p0620[0...n]	Thermal adaptation, stator and rotor resistance / Mot therm_adapt R		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: C2(3), T, U Data type: Integer16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 2	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 2

p0620[0...n]	Thermal adaptation, stator and rotor resistance / Mot therm_adapt R		
VECTOR, VECTOR_AC	Changeable: C2(3), T, U Data type: Integer16 P group: Motor Not for motor type: - Min: 0	Calculation: CALC_MOD_ALL Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 2	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 1

p0621[0...n]	Identification stator resistance after restart / Rst_ident Restart		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: C2(3), T Data type: Integer16 P group: Motor Not for motor type: PMSM, SESM, REL, RESM Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 2	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0622[0...n]	Motor excitation time for Rs_ident after switching on again / t_excit Rs_id		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: PMSM, SESM, REL, RESM Min: 0.000 [s]	Calculation: CALC_MOD_REG Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 20.000 [s]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [s]

r0623	Rs identification stator resistance after switch on again / Rs-id Rs aft sw-on		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: PMSM, SESM, REL, RESM Min: - [ohm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [ohm]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [ohm]

p0624[0...n]	Motor temperature offset PT100 / Mot T_offset PT100		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: -100.0 [K]	Calculation: - Dynamic index: MDS, p0130 Unit group: 21_2 Scaling: - Max: 100.0 [K]	Access level: 3 Function plan: 8016 Unit selection: p0505 Expert list: 1 Default: 0.0 [K]

p0625[0...n]	Motor ambient temperature during commissioning / Mot T_ambient		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: -40 [°C]	Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: 21_1 Scaling: - Max: 80 [°C]	Access level: 3 Function plan: 8017, 8018 Unit selection: p0505 Expert list: 1 Default: 20 [°C]
p0626[0...n]	Motor overtemperature, stator core / Mot T_over core		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: PMSM, SESM, REL, RESM Min: 10 [K]	Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: 21_2 Scaling: - Max: 200 [K]	Access level: 3 Function plan: 8018 Unit selection: p0505 Expert list: 1 Default: 50 [K]
p0627[0...n]	Motor overtemperature, stator winding / Mot T_over stator		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: SESM, REL Min: 15 [K]	Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: 21_2 Scaling: - Max: 200 [K]	Access level: 2 Function plan: 8017, 8018 Unit selection: p0505 Expert list: 1 Default: 80 [K]
p0628[0...n]	Motor overtemperature rotor / Mot T_over rotor		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: PMSM, SESM, REL, RESM Min: 20 [K]	Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: 21_2 Scaling: - Max: 200 [K]	Access level: 3 Function plan: 8018 Unit selection: p0505 Expert list: 1 Default: 100 [K]
p0629[0...n]	Stator resistance reference / R_stator ref		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: PMSM, SESM, REL, RESM Min: 0.00000 [ohm]	Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: 16_1 Scaling: - Max: 2000.00000 [ohm]	Access level: 4 Function plan: - Unit selection: p0349 Expert list: 1 Default: 0.00000 [ohm]
r0630[0...n]	Mot_temp_mod ambient temperature / Mod T_ambient		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: SESM, REL Min: - [°C]	Calculation: - Dynamic index: MDS, p0130 Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 4 Function plan: 8018 Unit selection: p0505 Expert list: 1 Default: - [°C]

r0631[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Mot_temp_mod stator iron temperature / Mod T_stator Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: SESM, REL Min: - [°C]	Calculation: - Dynamic index: MDS, p0130 Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 4 Function plan: 8018, 8019 Unit selection: p0505 Expert list: 1 Default: - [°C]
r0632[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Mot_temp_mod stator winding temperature / Mod T_winding Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: SESM, REL Min: - [°C]	Calculation: - Dynamic index: MDS, p0130 Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 2 Function plan: 8017, 8018, 8019 Unit selection: p0505 Expert list: 1 Default: - [°C]
r0633[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Mot_temp_mod rotor temperature / Mod rotor temp Changeable: - Data type: FloatingPoint32 P group: Motor Not for motor type: SESM, REL Min: - [°C]	Calculation: - Dynamic index: MDS, p0130 Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 4 Function plan: 8018, 8019 Unit selection: p0505 Expert list: 1 Default: - [°C]
p0634[0...n] VECTOR, VECTOR_AC	Q flux flux constant unsaturated / PSIQ KPSI UNSAT Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, RESM Min: 0.000 [Vsrms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 100.000 [Vsrms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [Vsrms]
p0635[0...n] VECTOR, VECTOR_AC	Q flux quadrature axis current constant unsaturated / PSIQ KIQ UNSAT Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, RESM Min: 0.00 [Arms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 10000.00 [Arms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [Arms]
p0636[0...n] VECTOR, VECTOR_AC	Q flux direct axis current constant unsaturated / PSIQ KID UNSAT Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, RESM Min: 0.00 [Arms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 10000.00 [Arms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [Arms]

p0637[0...n] VECTOR, VECTOR_AC	Q flux flux gradient saturated / PSIQ Grad SAT Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, RESM Min: 0.00 [mH]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 10000.00 [mH]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [mH]
p0640[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Current limit / Current limit Changeable: C2(1, 3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.00 [Arms]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.00 [Arms]	Access level: 2 Function plan: 5722, 6640 Unit selection: - Expert list: 1 Default: 0.00 [Arms]
p0641[0...n] VECTOR, VECTOR_AC	CI: Current limit scaling signal source / I_lim scal s_src Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 6300, 6640 Unit selection: - Expert list: 1 Default: 1
p0642[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Encoderless operation current reduction / Encoderl op I_red Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00 [%]	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 100.00 [%]
p0643[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Overvoltage protection for synchronous motors / Overvolt_protect Changeable: T Data type: Integer16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0643[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Overvoltage protection for synchronous motors / Overvolt_protect Changeable: C2(3) Data type: Integer16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0644[0...n]	Current limit excitation induction motor / I_{max} excit ASM		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: C2, T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	50.0 [%]	300.0 [%]	300.0 [%]

p0645[0...n]	Motor kT characteristic kT1 / Mot kT char kT1		
SERVO (Ext M_ctrl, Lin), SERVO_840 (Ext M_ctrl, Lin), SERVO_AC (Ext M_ctrl, Lin), SERVO_DBSI (Ext M_ctrl, Lin)	Changeable: C2(3), T, U	Calculation: -	Access level: 1
	Data type: FloatingPoint32	Dynamic index: MDS, p0130	Function plan: -
	P group: Motor	Unit group: -	Unit selection: -
	Not for motor type: ASM, SESM, REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.000 [N/Arms]	200.000 [N/Arms]	0.000 [N/Arms]

p0645[0...n]	Motor kT characteristic kT1 / Mot kT char kT1		
SERVO (Ext M_ctrl), SERVO_840 (Ext M_ctrl), SERVO_AC (Ext M_ctrl), SERVO_DBSI (Ext M_ctrl)	Changeable: C2(3), T, U	Calculation: -	Access level: 1
	Data type: FloatingPoint32	Dynamic index: MDS, p0130	Function plan: -
	P group: Motor	Unit group: -	Unit selection: -
	Not for motor type: ASM, SESM, REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.000 [Nm/A]	200.000 [Nm/A]	0.000 [Nm/A]

p0646[0...n]	Motor kT characteristic kT3 / Mot kT char kT3		
SERVO (Ext M_ctrl), SERVO_840 (Ext M_ctrl), SERVO_AC (Ext M_ctrl), SERVO_DBSI (Ext M_ctrl)	Changeable: C2(3), T, U	Calculation: -	Access level: 1
	Data type: FloatingPoint32	Dynamic index: MDS, p0130	Function plan: -
	P group: Motor	Unit group: -	Unit selection: -
	Not for motor type: ASM, SESM, REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-

p0647[0...n]	Motor kT characteristic kT5 / Mot kT char kT5		
SERVO (Ext M_ctrl), SERVO_840 (Ext M_ctrl), SERVO_AC (Ext M_ctrl), SERVO_DBSI (Ext M_ctrl)	Changeable: C2(3), T, U	Calculation: -	Access level: 1
	Data type: FloatingPoint32	Dynamic index: MDS, p0130	Function plan: -
	P group: Motor	Unit group: -	Unit selection: -
	Not for motor type: ASM, SESM, REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-

p0648[0...n]	Motor kT characteristic kT7 / Mot kT char kT7		
SERVO (Ext M_ctrl), SERVO_840 (Ext M_ctrl), SERVO_AC (Ext M_ctrl), SERVO_DBSI (Ext M_ctrl)	Changeable: C2(3), T, U	Calculation: -	Access level: 1
	Data type: FloatingPoint32	Dynamic index: MDS, p0130	Function plan: -
	P group: Motor	Unit group: -	Unit selection: -
	Not for motor type: ASM, SESM, REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-

p0650[0...n] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Actual motor operating hours / Mot t_oper act Changeable: T Data type: Unsigned32 P group: Motor Not for motor type: - Min: 0 [h] Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 4294967295 [h] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0 [h]
p0651[0...n] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Motor operating hours maintenance interval / Mot t_op maint Changeable: T Data type: Unsigned32 P group: Motor Not for motor type: - Min: 0 [h] Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 150000 [h] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0 [h]
p0652[0...n] VECTOR, VECTOR_AC	Motor stator resistance scaling / Mot R_stator scal Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, PMSM, REL, RESM Min: 10.0 [%] Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 300.0 [%] Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 100.0 [%]
p0653[0...n] VECTOR, VECTOR_AC	Motor stator leakage inductance scaling / Mot L_S_leak scal Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, PMSM, REL, RESM Min: 10.0 [%] Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 300.0 [%] Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 100.0 [%]
p0655[0...n] VECTOR, VECTOR_AC	Motor magnetizing inductance d axis saturated scaling / Mot L_m d sat scal Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, PMSM, REL, RESM Min: 10.0 [%] Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 300.0 [%] Access level: 4 Function plan: 6727 Unit selection: - Expert list: 1 Default: 100.0 [%]
p0656[0...n] VECTOR, VECTOR_AC	Motor magnetizing inductance q axis saturated scaling / Mot L_m q sat scal Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, PMSM, REL, RESM Min: 10.0 [%] Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 300.0 [%] Access level: 4 Function plan: 6727 Unit selection: - Expert list: 1 Default: 100.0 [%]

p0657[0...n] VECTOR, VECTOR_AC	Motor damping inductance d axis scaling / Mot L_damp d scal Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, PMSM, REL, RESM Min: 10.0 [%]	Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 300.0 [%]	Access level: 4 Function plan: 6727 Unit selection: - Expert list: 1 Default: 100.0 [%]
p0658[0...n] VECTOR, VECTOR_AC	Motor damping inductance q axis scaling / Mot L_damp q scal Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, PMSM, REL, RESM Min: 10.0 [%]	Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 300.0 [%]	Access level: 4 Function plan: 6727 Unit selection: - Expert list: 1 Default: 100.0 [%]
p0659[0...n] VECTOR, VECTOR_AC	Motor damping resistance d axis scaling / Mot R_damp d scal Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, PMSM, REL, RESM Min: 10.0 [%]	Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 300.0 [%]	Access level: 4 Function plan: 6727 Unit selection: - Expert list: 1 Default: 100.0 [%]
p0660[0...n] VECTOR, VECTOR_AC	Motor damping resistance q axis scaling / Mot R_damp q scal Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, PMSM, REL, RESM Min: 10.0 [%]	Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 300.0 [%]	Access level: 4 Function plan: 6727 Unit selection: - Expert list: 1 Default: 100.0 [%]
p0680[0...7] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Central measuring probe input terminal / Cen meas inp Changeable: T, U Data type: Integer16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0681 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	BI: Central measuring probe synchronizing signal signal source / Cen meas sync_sig Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0682	CI: Central measuring probe control word signal source / Cen meas STW S_src		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: T	Calculation: -	Access level: 3
	Data type: Unsigned32 / Integer16	Dynamic index: -	Function plan: -
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0

p0684	Central measuring probe evaluation technique / Cen meas eval_tech		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Encoder	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	16	0

r0685	Central measuring probe control word display / Cen meas STW disp		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: Commands	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-

r0686[0...7]	CO: Central measuring probe measuring time rising edge / CenMeas t_meas 0/1		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-

r0687[0...7]	CO: Central measuring probe measuring time falling edge / CenMeas t_meas 1/0		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-

r0688	CO: Central measuring probe status word display / Cen meas ZSW disp		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-

p0690[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Brushless excitation rated current / BLE I_{rated} Changeable: C2(3), T Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, PMSM, REL, RESM Min: 0.00 [A]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 100.00 [A]	Access level: 4 Function plan: 6727 Unit selection: - Expert list: 1 Default: 0.00 [A]
p0693[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Brushless excitation inductance d-axis saturated / BLE L_d sat Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, PMSM, REL, RESM Min: -1000.00000 [mH]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 1000.00000 [mH]	Access level: 4 Function plan: 6727 Unit selection: - Expert list: 1 Default: 0.00000 [mH]
p0696[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Brushless excitation ratio / BLE ratio Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, PMSM, REL, RESM Min: 0.000	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 1000.000	Access level: 4 Function plan: 6727 Unit selection: - Expert list: 1 Default: 0.000
p0697[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Brushless excitation number of pole pairs / BLE PolePairNo Changeable: C2(3), T Data type: Unsigned32 P group: Motor Not for motor type: ASM, PMSM, REL, RESM Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 20	Access level: 4 Function plan: 6727 Unit selection: - Expert list: 1 Default: 0
p0698[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Brushless excitation excitation resistance / BLE exc_{resist} Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, PMSM, REL, RESM Min: -10.00000 [ohm]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 10.00000 [ohm]	Access level: 4 Function plan: 6727 Unit selection: - Expert list: 1 Default: 0.00000 [ohm]
p0700 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, TB30, TM15DI_DO, TM31	Macro Binector Input (BI) for TMs / Macro BI TM Changeable: C2(1), T Data type: Unsigned32 P group: Commands Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999999	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0700[0...n] A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Macro Binector Input (BI) / Macro BI Changeable: C2(1), T Data type: Unsigned32 P group: Commands Not for motor type: - Min: 0	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: 999999	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
r0721 CU_I_840, CU_S120_DP, CU_S120_PN	CU digital inputs terminal actual value / CU DI term act val Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2119, 2120, 2121, 2130, 2131, 2132, 2133 Unit selection: - Expert list: 1 Default: -
r0721 CU_NX_840	CX digital inputs terminal actual value / CX DI actual value Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2179, 2180, 2190, 2191 Unit selection: - Expert list: 1 Default: -
r0721 CU_S_AC_DP, CU_S_AC_PN	CU digital inputs terminal actual value / CU DI term act val Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2019, 2020, 2021, 2030, 2031, 2032, 2033 Unit selection: - Expert list: 1 Default: -
r0722.0...21 CU_I_840, CU_S120_DP, CU_S120_PN	CO/BO: CU digital inputs status / CU DI status Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2119, 2120, 2121, 2130, 2131, 2132, 2133 Unit selection: - Expert list: 1 Default: -

r0722.0...17 CU_NX_840	CO/BO: CX digital inputs status / CX DI status Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2179, 2180, 2190, 2191 Unit selection: - Expert list: 1 Default: -
r0722.0...22 CU_S_AC_DP, CU_S_AC_PN	CO/BO: CU digital inputs status / CU DI status Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2019, 2020, 2021, 2030, 2031, 2032, 2033 Unit selection: - Expert list: 1 Default: -
r0723.0...21 CU_I_840, CU_S120_DP, CU_S120_PN	CO/BO: CU digital inputs status inverted / CU DI status inv Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2119, 2120, 2121, 2130, 2131, 2132, 2133 Unit selection: - Expert list: 1 Default: -
r0723.0...17 CU_NX_840	CO/BO: CX digital inputs status inverted / CX DI status inv Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2179, 2180, 2190, 2191 Unit selection: - Expert list: 1 Default: -
r0723.0...22 CU_S_AC_DP, CU_S_AC_PN	CO/BO: CU digital inputs status inverted / CU DI status inv Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2019, 2020, 2021, 2030, 2031, 2032, 2033 Unit selection: - Expert list: 1 Default: -

p0728	CU set input or output / CU DI or DO	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2119, 2030, 2031, 2130, 2131, 2132, 2133 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
CU_I_840, CU_S120_DP, CU_S120_PN	Changeable: T Data type: Unsigned32 P group: Commands Not for motor type: - Min: -		
p0728	CX set input or output / CX DI or DO	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2179, 2190, 2191 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
CU_NX_840	Changeable: T Data type: Unsigned32 P group: Commands Not for motor type: - Min: -		
p0728	CU set input or output / CU DI or DO	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2019, 2030, 2031, 2032, 2033 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
CU_S_AC_DP, CU_S_AC_PN	Changeable: T Data type: Unsigned32 P group: Commands Not for motor type: - Min: -		
r0729	CU digital outputs access authority / CU DO acc_auth	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2030, 2031, 2130, 2131, 2132, 2133 Unit selection: - Expert list: 1 Default: -
CU_I_840, CU_S120_DP, CU_S120_PN	Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -		
r0729	CX digital outputs access authority / CX DO acc_auth	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2030, 2031, 2130, 2131, 2132, 2133 Unit selection: - Expert list: 1 Default: -
CU_NX_840	Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -		

r0729 CU_S_AC_DP, CU_S_AC_PN	CU digital outputs access authority / CU DO acc_auth Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2030, 2031, 2032, 2033 Unit selection: - Expert list: 1 Default: -
p0738 CU_I_840, CU_S120_DP, CU_S120_PN	BI: CU signal source for terminal DI/DO 8 / CU S_src DI/DO 8 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2119, 2130 Unit selection: - Expert list: 1 Default: 0
p0738 CU_NX_840	BI: CX signal source for terminal DI/DO 8 / CX S_src DI/DO 8 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2179, 2190 Unit selection: - Expert list: 1 Default: 0
p0738 CU_S_AC_DP, CU_S_AC_PN	BI: CU signal source for terminal DI/DO 8 / CU S_src DI/DO 8 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2019, 2030 Unit selection: - Expert list: 1 Default: 0
p0739 CU_I_840, CU_S120_DP, CU_S120_PN	BI: CU signal source for terminal DI/DO 9 / CU S_src DI/DO 9 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2130 Unit selection: - Expert list: 1 Default: 0
p0739 CU_NX_840	BI: CX signal source for terminal DI/DO 9 / CX S_src DI/DO 9 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2190 Unit selection: - Expert list: 1 Default: 0

p0739 CU_S_AC_DP, CU_S_AC_PN	BI: CU signal source for terminal DI/DO 9 / CU S_src DI/DO 9		
	Changeable: T, U	Calculation: -	Access level: 1
	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: 2030
	P group: Commands	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0
p0740 CU_I_840, CU_S120_DP, CU_S120_PN	BI: CU signal source for terminal DI/DO 10 / CU S_src DI/DO 10		
	Changeable: T, U	Calculation: -	Access level: 1
	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: 2131
	P group: Commands	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0
p0740 CU_NX_840	BI: CX signal source for terminal DI/DO 10 / CX S_src DI/DO 10		
	Changeable: T, U	Calculation: -	Access level: 1
	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: 2191
	P group: Commands	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0
p0740 CU_S_AC_DP, CU_S_AC_PN	BI: CU signal source for terminal DI/DO 10 / CU S_src DI/DO 10		
	Changeable: T, U	Calculation: -	Access level: 1
	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: 2031
	P group: Commands	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0
p0741 CU_I_840, CU_S120_DP, CU_S120_PN	BI: CU signal source for terminal DI/DO 11 / CU S_src DI/DO 11		
	Changeable: T, U	Calculation: -	Access level: 1
	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: 2119, 2131
	P group: Commands	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0
p0741 CU_NX_840	BI: CX signal source for terminal DI/DO 11 / CX S_src DI/DO 11		
	Changeable: T, U	Calculation: -	Access level: 1
	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: 2179, 2191
	P group: Commands	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0

p0741 CU_S_AC_DP, CU_S_AC_PN	BI: CU signal source for terminal DI/DO 11 / CU S_src DI/DO 11 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2019, 2031 Unit selection: - Expert list: 1 Default: 0
p0742 CU_I_840, CU_S120_DP, CU_S120_PN	BI: CU signal source for terminal DI/DO 12 / CU S_src DI/DO 12 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2119, 2132 Unit selection: - Expert list: 1 Default: 0
p0742 CU_S_AC_DP, CU_S_AC_PN	BI: CU signal source for terminal DI/DO 12 / CU S_src DI/DO 12 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2019, 2032 Unit selection: - Expert list: 1 Default: 0
p0743 CU_I_840, CU_S120_DP, CU_S120_PN	BI: CU signal source for terminal DI/DO 13 / CU S_src DI/DO 13 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2132 Unit selection: - Expert list: 1 Default: 0
p0743 CU_S_AC_DP, CU_S_AC_PN	BI: CU signal source for terminal DI/DO 13 / CU S_src DI/DO 13 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2032 Unit selection: - Expert list: 1 Default: 0
p0744 CU_I_840, CU_S120_DP, CU_S120_PN	BI: CU signal source for terminal DI/DO 14 / CU S_src DI/DO 14 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2133 Unit selection: - Expert list: 1 Default: 0

p0744 CU_S_AC_DP, CU_S_AC_PN	BI: CU signal source for terminal DI/DO 14 / CU S_src DI/DO 14 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2033 Unit selection: - Expert list: 1 Default: 0
p0745 CU_I_840, CU_S120_DP, CU_S120_PN	BI: CU signal source for terminal DI/DO 15 / CU S_src DI/DO 15 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2119, 2133 Unit selection: - Expert list: 1 Default: 0
p0745 CU_S_AC_DP, CU_S_AC_PN	BI: CU signal source for terminal DI/DO 15 / CU S_src DI/DO 15 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2019, 2033 Unit selection: - Expert list: 1 Default: 0
p0746 CU_S_AC_DP, CU_S_AC_PN	BI: CU signal source for terminal DO 16 / CU S_src DO 16 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2019, 2038 Unit selection: - Expert list: 1 Default: 0
r0747 CU_I_840, CU_S120_DP, CU_S120_PN	CU digital outputs status / CU DO status Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2130, 2131, 2132, 2133 Unit selection: - Expert list: 1 Default: -
r0747 CU_NX_840	CX digital outputs status / CX DO status Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2190, 2191 Unit selection: - Expert list: 1 Default: -

r0747 CU_S_AC_DP, CU_S_AC_PN	CU digital outputs status / CU DO status Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2030, 2031, 2032, 2033, 2038 Unit selection: - Expert list: 1 Default: -
p0748 CU_I_840, CU_S120_DP, CU_S120_PN	CU invert digital outputs / CU DO inv Changeable: T, U Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2030, 2031, 2130, 2131, 2132, 2133 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
p0748 CU_NX_840	CX invert digital outputs / CX DO inv Changeable: T, U Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2190, 2191 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
p0748 CU_S_AC_DP, CU_S_AC_PN	CU invert digital outputs / CU DO inv Changeable: T, U Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2030, 2031, 2032, 2033, 2038 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
r0752[0] CU_S_AC_DP, CU_S_AC_PN	CO: CU analog input input voltage/current actual / CU AI U_input act Changeable: - Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p0514 Max: -	Access level: 1 Function plan: 2040 Unit selection: - Expert list: 1 Default: -

p0753[0] CU_S_AC_DP, CU_S_AC_PN	CU analog input smoothing time constant / CU AI T_smooth Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: 0.0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.0 [ms]	Access level: 1 Function plan: 2040 Unit selection: - Expert list: 1 Default: 0.0 [ms]
r0755[0] CU_S_AC_DP, CU_S_AC_PN	CO: CU analog input actual value in percent / CU AI value in % Changeable: - Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 1 Function plan: 2019, 2040 Unit selection: - Expert list: 1 Default: - [%]
p0756[0] CU_S_AC_DP, CU_S_AC_PN	CU analog input type / CU AI type Changeable: T, U Data type: Integer16 P group: Terminals Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 5	Access level: 1 Function plan: 2040 Unit selection: - Expert list: 1 Default: 4
p0757[0] CU_S_AC_DP, CU_S_AC_PN	CU analog input characteristic value x1 / CU AI char x1 Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -20.000	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20.000	Access level: 2 Function plan: 2040 Unit selection: - Expert list: 1 Default: 0.000
p0758[0] CU_S_AC_DP, CU_S_AC_PN	CU analog input characteristic value y1 / CU AI char y1 Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -1000.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.00 [%]	Access level: 2 Function plan: 2040 Unit selection: - Expert list: 1 Default: 0.00 [%]
p0759[0] CU_S_AC_DP, CU_S_AC_PN	CU analog input characteristic value x2 / CU AI char x2 Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -20.000	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20.000	Access level: 2 Function plan: 2040 Unit selection: - Expert list: 1 Default: 10.000

p0760[0] CU_S_AC_DP, CU_S_AC_PN	CU analog input characteristic value y2 / CU AI char y2 Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -1000.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.00 [%]	Access level: 2 Function plan: 2040 Unit selection: - Expert list: 1 Default: 100.00 [%]
p0761[0] CU_S_AC_DP, CU_S_AC_PN	CU analog input wire breakage monitoring response threshold / CU WireBrkThresh Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: 0.00 [mA]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20.00 [mA]	Access level: 2 Function plan: 2040 Unit selection: - Expert list: 1 Default: 2.00 [mA]
p0762[0] CU_S_AC_DP, CU_S_AC_PN	CU analog input wire breakage monitoring delay time / CU wire brk t_del Changeable: T, U Data type: Unsigned16 P group: Terminals Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000 [ms]	Access level: 2 Function plan: 2040 Unit selection: - Expert list: 1 Default: 100 [ms]
p0763[0] CU_S_AC_DP, CU_S_AC_PN	CU analog input offset / CU AI offset Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -20.000	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20.000	Access level: 2 Function plan: 2040 Unit selection: - Expert list: 1 Default: 0.000
p0766[0] CU_S_AC_DP, CU_S_AC_PN	CU analog input activate absolute value generation / CU AI absVal act Changeable: T, U Data type: Integer16 P group: Terminals Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: 2040 Unit selection: - Expert list: 1 Default: 0
p0767[0] CU_S_AC_DP, CU_S_AC_PN	BI: CU analog input signal source for inversion / CU AI inv S_src Changeable: T, U Data type: Unsigned32 / Binary P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2040 Unit selection: - Expert list: 1 Default: 0

p0768[0] CU_S_AC_DP, CU_S_AC_PN	CU analog input window to suppress noise / CU AI window Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20.00 [%]	Access level: 3 Function plan: 2040 Unit selection: - Expert list: 1 Default: 0.00 [%]
p0769[0] CU_S_AC_DP, CU_S_AC_PN	BI: CU analog input enable signal source / CU AI enab S_src Changeable: T, U Data type: Unsigned32 / Binary P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2040 Unit selection: - Expert list: 1 Default: 1
p0771[0...2] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	CI: Test sockets signal source / Test skt S_src Changeable: T, U Data type: Unsigned32 / Integer16 P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: -	Access level: 2 Function plan: 8134 Unit selection: - Expert list: 1 Default: 0
r0772[0...2] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Test sockets output signal / TestSktSignalVal Changeable: - Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%]	Access level: 2 Function plan: 8134 Unit selection: - Expert list: 1 Default: - [%]
r0774[0...2] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Test sockets output voltage / TestSkt U_output Changeable: - Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [V]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: - [V]
p0776[0...2] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Test socket mode / Test skt mode Changeable: T, U Data type: Integer16 P group: Terminals Not for motor type: - Min: 96	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 99	Access level: 4 Function plan: 8134 Unit selection: - Expert list: 1 Default: 99

p0777[0...2] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Test socket characteristic value x1 / Test skt char x1 Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -100000.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100000.00 [%]	Access level: 2 Function plan: 8134 Unit selection: - Expert list: 1 Default: 0.00 [%]
p0778[0...2] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Test socket characteristic value y1 / Test skt char y1 Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: 0.00 [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4.98 [V]	Access level: 2 Function plan: 8134 Unit selection: - Expert list: 1 Default: 2.49 [V]
p0779[0...2] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Test socket characteristic value x2 / Test skt char x2 Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -100000.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 427.9E9 [%]	Access level: 2 Function plan: 8134 Unit selection: - Expert list: 1 Default: 100.00 [%]
p0780[0...2] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Test socket characteristic value y2 / Test skt char y2 Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: 0.00 [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4.98 [V]	Access level: 2 Function plan: 8134 Unit selection: - Expert list: 1 Default: 4.98 [V]
p0783[0...2] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Test sockets offset / Test skt offset Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -4.98 [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4.98 [V]	Access level: 2 Function plan: 8134 Unit selection: - Expert list: 1 Default: 0.00 [V]
p0784[0...2] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Test socket limit on/off / TestSktLim on/off Changeable: T, U Data type: Integer16 P group: Terminals Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: 8134 Unit selection: - Expert list: 1 Default: 0

r0786[0...2] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Test socket scaling per volt / TestSktScale/Volt Changeable: - Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 8134 Unit selection: - Expert list: 1 Default: -
p0788[0...2] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Test sockets physical address / Test skt PhyAddr Changeable: T, U Data type: Unsigned32 P group: Terminals Not for motor type: - Min: 0000 bin	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1111 1111 1111 1111 1111 1111 1111 1111 bin	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
p0789[0...2] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Test sockets physical address gain / TestSktPhyAddrGain Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -340.28235E36	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 340.28235E36	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 1.00000
r0790[0...2] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Test sockets physical address signal value / TestSktPhyAddrVal Changeable: - Data type: Unsigned32 P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p0795 CU_I_840, CU_S120_DP, CU_S120_PN	CU digital inputs simulation mode / CU DI simulation Changeable: T, U Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2020, 2030, 2031, 2100, 2119, 2120, 2130, 2131, 2132, 2133 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin

p0795 CU_NX_840	CX digital inputs simulation mode / CX DI simulation Changeable: T, U Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2180, 2190, 2191 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
p0795 CU_S_AC_DP, CU_S_AC_PN	CU digital inputs simulation mode / CU DI simulation Changeable: T, U Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2019, 2020, 2021, 2030, 2031, 2032, 2033 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
p0796 CU_I_840, CU_S120_DP, CU_S120_PN	CU digital inputs simulation mode setpoint / CU DI simul setp Changeable: T, U Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2020, 2030, 2031, 2100, 2119, 2120, 2130, 2131, 2132, 2133 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
p0796 CU_NX_840	CX digital inputs simulation mode, setpoint / CX DI simul setp Changeable: T, U Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2020, 2030, 2031 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
p0796 CU_S_AC_DP, CU_S_AC_PN	CU digital inputs simulation mode setpoint / CU DI simul setp Changeable: T, U Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2019, 2020, 2021, 2030, 2031, 2032, 2033 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin

p0797[0] CU_S_AC_DP, CU_S_AC_PN	CU analog input simulation mode / CU AI sim_mode Changeable: T, U Data type: Integer16 P group: Terminals Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: 2040 Unit selection: - Expert list: 1 Default: 0
p0798[0] CU_S_AC_DP, CU_S_AC_PN	CU analog input simulation mode setpoint / CU AI sim setp Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -20.000	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20.000	Access level: 2 Function plan: 2040 Unit selection: - Expert list: 1 Default: 0.000
p0799[0...2] CU_I_840	CU inputs/outputs sampling time / CU I/O t_sampl Changeable: C1(3) Data type: FloatingPoint32 P group: Commands Not for motor type: - Min: 0.00 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 5000.00 [μs]	Access level: 3 Function plan: 2020, 2030, 2031 Unit selection: - Expert list: 1 Default: 4000.00 [μs]
p0799[0...2] CU_NX_840	CX inputs/outputs sampling time / CX I/O t_sampl Changeable: C1(3) Data type: FloatingPoint32 P group: Commands Not for motor type: - Min: 0.00 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 5000.00 [μs]	Access level: 3 Function plan: 2020, 2030, 2031 Unit selection: - Expert list: 1 Default: 4000.00 [μs]
p0799[0...2] CU_S_AC_DP, CU_S_AC_PN	CU inputs/outputs sampling time / CU I/O t_sampl Changeable: C1(3) Data type: FloatingPoint32 P group: Commands Not for motor type: - Min: 0.00 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 5000.00 [μs]	Access level: 3 Function plan: 2020, 2030, 2031 Unit selection: - Expert list: 1 Default: 4000.00 [μs]
p0799[0...2] CU_S120_DP, CU_S120_PN	CU inputs/outputs sampling time / CU I/O t_sampl Changeable: C1(3) Data type: FloatingPoint32 P group: Commands Not for motor type: - Min: 0.00 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 5000.00 [μs]	Access level: 3 Function plan: 2020, 2030, 2031 Unit selection: - Expert list: 1 Default: 4000.00 [μs]

p0806 A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BI: Inhibit master control / PcCtrl inhibit Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
r0807.0 A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BO: Master control active / PcCtrl active Changeable: - Data type: Unsigned8 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
p0809[0...2] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Copy Command Data Set CDS / Copy CDS Changeable: T Data type: Unsigned8 P group: Commands Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 15	Access level: 2 Function plan: 8560 Unit selection: - Expert list: 1 Default: 0
p0810 A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BI: Command data set selection CDS bit 0 / CDS select., bit 0 Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8560 Unit selection: - Expert list: 1 Default: 0
p0811 VECTOR, VECTOR_AC	BI: Command data set selection CDS bit 1 / CDS select., bit 1 Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8560 Unit selection: - Expert list: 1 Default: 0

p0819[0...2]	Copy Drive Data Set DDS / Copy DDS		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: C2(15) Data type: Unsigned8 P group: Data sets Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 31	Access level: 2 Function plan: 8565 Unit selection: - Expert list: 1 Default: 0
p0820[0...n]	BI: Drive Data Set selection DDS bit 0 / DDS select., bit 0		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: C2(15), T Data type: Unsigned32 / Binary P group: Data sets Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8565, 8575 Unit selection: - Expert list: 1 Default: 0
p0821[0...n]	BI: Drive Data Set selection DDS bit 1 / DDS select., bit 1		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: C2(15), T Data type: Unsigned32 / Binary P group: Data sets Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8565, 8570 Unit selection: - Expert list: 1 Default: 0
p0822[0...n]	BI: Drive Data Set selection DDS bit 2 / DDS select., bit 2		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: C2(15), T Data type: Unsigned32 / Binary P group: Data sets Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8565 Unit selection: - Expert list: 1 Default: 0
p0823[0...n]	BI: Drive Data Set selection DDS bit 3 / DDS select., bit 3		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: C2(15), T Data type: Unsigned32 / Binary P group: Data sets Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8565 Unit selection: - Expert list: 1 Default: 0
p0824[0...n]	BI: Drive Data Set selection DDS bit 4 / DDS select., bit 4		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: C2(15), T Data type: Unsigned32 / Binary P group: Data sets Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8565, 8575 Unit selection: - Expert list: 1 Default: 0

p0826[0...n]	Motor changeover motor number / Mot_chng mot No.		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: C2(3) Data type: Unsigned16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 15	Access level: 2 Function plan: 8575 Unit selection: - Expert list: 1 Default: 0

p0826[0...n]	Motor changeover motor number / Mot_chng mot No.		
VECTOR, VECTOR_AC	Changeable: C2(3) Data type: Unsigned16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 15	Access level: 2 Function plan: 8575 Unit selection: - Expert list: 1 Default: 0

p0827[0...n]	Motor changeover status word bit number / Mot_chg ZSW bitNo.		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(3) Data type: Unsigned16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 15	Access level: 2 Function plan: 8575 Unit selection: - Expert list: 1 Default: 0

p0828[0...n]	BI: Motor changeover feedback signal / Mot_chng fdbk sig		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(3), T Data type: Unsigned32 / Binary P group: Motor Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8575 Unit selection: - Expert list: 1 Default: 0

r0830.0...15	CO/BO: Motor changeover status word / Mot_chngov ZSW		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 8575 Unit selection: - Expert list: 1 Default: -

p0831[0...15]	BI: Motor changeover contactor feedback / Mot_chg cont fdbk		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned32 / Binary P group: Motor Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8575 Unit selection: - Expert list: 1 Default: 0

r0832.0...15	CO/BO: Mot. changeover contactor feedback sig. status word / Mot_chng fdbk ZSW		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned32 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 8575 Unit selection: - Expert list: 1 Default: -

p0833	Data set changeover configuration / DS_chng config		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: C2(15) Data type: Unsigned16 P group: Data sets Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 8575 Unit selection: - Expert list: 1 Default: 0000 bin

p0833	Data set changeover configuration / DS_chng config		
VECTOR, VECTOR_AC	Changeable: C2(15) Data type: Unsigned16 P group: Data sets Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 8575 Unit selection: - Expert list: 1 Default: 0010 bin

r0835.2	CO/BO: Data set changeover status word / Data set sw ZSW		
ENC, ENC_840, TM41	Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 8575 Unit selection: - Expert list: 1 Default: -

r0835.0...11	CO/BO: Data set changeover status word / Data set sw ZSW		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 8575 Unit selection: - Expert list: 1 Default: -

r0836.0...3	CO/BO: Command Data Set CDS selected / CDS selected		
A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned8 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 8560 Unit selection: - Expert list: 1 Default: -

r0837.0...4 ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	CO/BO: Drive Data Set DDS selected / DDS selected Changeable: - Data type: Unsigned8 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 8565 Unit selection: - Expert list: 1 Default: -
r0838[0...3] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Motor/Encoder Data Set selected / MDS/EDS selected Changeable: - Data type: Unsigned8 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 8565 Unit selection: - Expert list: 1 Default: -
p0839 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Motor changeover contactor control delay time / Mot_chg ctrl t_del Changeable: C2(3) Data type: Unsigned16 P group: Motor Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 500 [ms]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0 [ms]
p0840[0...n] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BI: ON / OFF (OFF1) / ON / OFF (OFF1) Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2501, 2610, 8720, 8820, 8920 Unit selection: - Expert list: 1 Default: 0
p0840[0...n] A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	BI: ON / OFF (OFF1) / ON / OFF (OFF1) Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8720, 8820, 8920 Unit selection: - Expert list: 1 Default: 0
p0840 TM41	BI: ON / OFF (OFF1) / ON / OFF (OFF1) Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9677 Unit selection: - Expert list: 1 Default: 0

p0844[0...n] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BI: No coast-down / coast-down (OFF2) signal source 1 / OFF2 S_src 1 Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2501, 8720, 8820, 8920 Unit selection: - Expert list: 1 Default: 1
p0844[0...n] A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	BI: No coast-down / coast-down (OFF2) signal source 1 / OFF2 S_src 1 Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8720, 8820, 8920 Unit selection: - Expert list: 1 Default: 1
p0844 TM41	BI: No coast-down / coast-down (OFF2) / OFF2 Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9677 Unit selection: - Expert list: 1 Default: 1
p0845[0...n] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BI: No coast-down / coast-down (OFF2) signal source 2 / OFF2 S_src 2 Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2501, 8720, 8820, 8920 Unit selection: - Expert list: 1 Default: 1
p0845[0...n] A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	BI: No coast-down / coast-down (OFF2) signal source 2 / OFF2 S_src 2 Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8720, 8820, 8920 Unit selection: - Expert list: 1 Default: 1
p0848[0...n] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BI: No Quick Stop / Quick Stop (OFF3) signal source 1 / OFF3 S_src 1 Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2501 Unit selection: - Expert list: 1 Default: 1

p0848 TM41	BI: No Quick Stop / Quick Stop (OFF3) / OFF3 Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9677 Unit selection: - Expert list: 1 Default: 1
p0849[0...n] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BI: No Quick Stop / Quick Stop (OFF3) signal source 2 / OFF3 S_src 2 Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2501 Unit selection: - Expert list: 1 Default: 1
p0852[0...n] A_INF, A_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BI: Enable operation/inhibit operation / Enable operation Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2501, 8820, 8920 Unit selection: - Expert list: 1 Default: 1
p0852 TM41	BI: Enable operation/inhibit operation / Enable operation Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9677 Unit selection: - Expert list: 1 Default: 1
p0854[0...n] A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BI: Control by PLC/no control by PLC / Master ctrl by PLC Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2501, 8720, 8820, 8920 Unit selection: - Expert list: 1 Default: 1

p0854 TM41	BI: Control by PLC/no control by PLC / Master ctrl by PLC Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9677, 9678 Unit selection: - Expert list: 1 Default: 1
p0854 ENC, ENC_840	BI: Control by PLC/no control by PLC / Master ctrl by PLC Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2501, 8720, 8820, 8920 Unit selection: - Expert list: 1 Default: 1
p0855[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BI: Unconditionally release holding brake / Uncond open brake Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2501, 2701, 2707 Unit selection: - Expert list: 1 Default: 0
p0856[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BI: Enable speed controller / n_ctrl enable Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2501, 2701, 2707 Unit selection: - Expert list: 1 Default: 1
p0856[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	BI: Enable velocity controller / v_ctrl enable Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2501, 2701, 2707 Unit selection: - Expert list: 1 Default: 1
p0857 HLA_840, HLA_DBSI, SERVO_840, SERVO_DBSI	Power unit monitoring time / PU t_monit Changeable: T Data type: FloatingPoint32 P group: Commands Not for motor type: - Min: 100.0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 60000.0 [ms]	Access level: 2 Function plan: 8760, 8864, 8964 Unit selection: - Expert list: 1 Default: 2000.0 [ms]

p0857 A_INF, A_INF_840, B_INF, B_INF_840, HLA, R_INF, S_INF, S_INF_840, SERVO, SERVO_AC, VECTOR, VECTOR_AC	Power unit monitoring time / PU t_monit Changeable: T Data type: FloatingPoint32 P group: Commands Not for motor type: - Min: 100.0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 60000.0 [ms]	Access level: 2 Function plan: 8760, 8864, 8964 Unit selection: - Expert list: 1 Default: 6000.0 [ms]
p0858[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	BI: Unconditionally close holding brake / Uncond close brake Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2501, 2701, 2707 Unit selection: - Expert list: 1 Default: 9719.13
p0858[0...n] VECTOR, VECTOR_AC	BI: Unconditionally close holding brake / Uncond close brake Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2501, 2701, 2707 Unit selection: - Expert list: 1 Default: 0
p0860 A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BI: Line contactor feedback signal / Line contact feedb Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2634, 8734, 8834, 8934 Unit selection: - Expert list: 1 Default: 863.1
p0861 A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Line contactor monitoring time / LineContact t_mon Changeable: T Data type: FloatingPoint32 P group: Commands Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 5000 [ms]	Access level: 2 Function plan: 2634, 8734, 8834, 8934 Unit selection: - Expert list: 1 Default: 100 [ms]

p0862 A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Power unit ON delay / PU t_{on} Changeable: T Data type: FloatingPoint32 P group: Commands Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65000 [ms]	Access level: 3 Function plan: 2610, 8732, 8832, 8932 Unit selection: - Expert list: 1 Default: 0 [ms]
r0863.0 HLA, HLA_840, HLA_DBSI	CO/BO: System pressure status word / p_{sys} ZSW Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0863.0...2 A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO/BO: Drive coupling status word/control word / CoupleZSW/STW Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
p0864 HLA, HLA_840, HLA_DBSI	BI: System pressure available / p_{sys} available Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 1
p0864 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BI: Infeed operation / INF operation Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2610, 8710, 8910 Unit selection: - Expert list: 1 Default: 0

p0865 HLA, HLA_840, HLA_DBSI	System pressure switch-on threshold / p_sys thresh Changeable: T Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.0 [bar]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000.0 [bar]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [bar]
p0866 HLA, HLA_840, HLA_DBSI	System pressure switch-on threshold hysteresis / p_sys hyst Changeable: T Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.0 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000.0 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 20.0 [%]
p0867 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Power unit main contactor holding time after OFF1 / PU t_MC after OFF1 Changeable: T Data type: FloatingPoint32 P group: Commands Not for motor type: - Min: 0.0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 500.0 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 50.0 [ms]
p0868 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Power unit debounce time/wait time / PU t_debounce/t_w Changeable: T Data type: FloatingPoint32 P group: Commands Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65000 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 65000 [ms]
p0869 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Sequence control configuration / Seq_ctrl config Changeable: T Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
p0869 A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	Sequence control configuration / Seq_ctrl config Changeable: T Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8732, 8832, 8932 Unit selection: - Expert list: 1 Default: 0000 bin

r0873 B_INF, B_INF_840, S_INF, S_INF_840	CO/BO: Infeed total operation / INF total oper Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 8732, 8832 Unit selection: - Expert list: 1 Default: -
p0874 B_INF, B_INF_840, S_INF, S_INF_840	BI: Smart/ Basic Line Module operation / SLM/BLM operation Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 8732, 8832 Unit selection: - Expert list: 1 Default: 0
r0887.0...13 HLA (ESR), HLA_840 (ESR), HLA_DBSI (ESR), SERVO (ESR), SERVO_840 (ESR), SERVO_AC (ESR), SERVO_DBSI (ESR)	BO: ESR status word / ESR ZSW Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
p0888 HLA (ESR), HLA_840 (ESR), HLA_DBSI (ESR), SERVO (ESR), SERVO_840 (ESR), SERVO_AC (ESR), SERVO_DBSI (ESR)	ESR configuration / ESR configuration Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4	Access level: 2 Function plan: 3082 Unit selection: - Expert list: 1 Default: 0
p0889 HLA (ESR), HLA_840 (ESR), HLA_DBSI (ESR), SERVO (ESR), SERVO_840 (ESR), SERVO_AC (ESR), SERVO_DBSI (ESR)	BI: ESR response enable / Response enab Changeable: T, U Data type: Unsigned32 / Binary P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 3082 Unit selection: - Expert list: 1 Default: 2090.9

p0890[0...4] HLA (ESR), HLA_840 (ESR), HLA_DBSI (ESR), SERVO (ESR), SERVO_840 (ESR), SERVO_AC (ESR), SERVO_DBSI (ESR)	BI: ESR trigger / ESR trigger Changeable: T, U Data type: Unsigned32 / Binary P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 3082 Unit selection: - Expert list: 1 Default: [0] 2090.2 [1] 9721.15 [2] 9723.1 [3] 9723.2 [4] 0
p0891 HLA (ESR), HLA_840 (ESR), HLA_DBSI (ESR), SERVO (ESR), SERVO_840 (ESR), SERVO_AC (ESR), SERVO_DBSI (ESR)	ESR OFF ramp / ESR OFF ramp Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: 3082 Unit selection: - Expert list: 1 Default: 0
p0892 HLA (ESR), HLA_840 (ESR), HLA_DBSI (ESR), SERVO (ESR), SERVO_840 (ESR), SERVO_AC (ESR), SERVO_DBSI (ESR)	ESR timer / ESR timer Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.00 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20.00 [s]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0.50 [s]
p0893 HLA (ESR), HLA_840 (ESR), HLA_DBSI (ESR), SERVO (ESR, Lin), SERVO_840 (ESR, Lin), SERVO_AC (ESR, Lin), SERVO_DBSI (ESR, Lin)	ESR velocity / ESR velocity Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: -340.28235E36 [m/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 340.28235E36 [m/min]	Access level: 2 Function plan: 3082 Unit selection: - Expert list: 1 Default: 0 [m/min]
p0893 SERVO (ESR), SERVO_840 (ESR), SERVO_AC (ESR), SERVO_DBSI (ESR)	ESR speed / ESR speed Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: -340.28235E36 [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 340.28235E36 [rpm]	Access level: 2 Function plan: 3082 Unit selection: - Expert list: 1 Default: 0 [rpm]

p0894 HLA_840, HLA_DBSI, SERVO_840, SERVO_DBSI	Parking pre-setting / Parking pre-set Changeable: T, U Data type: Unsigned32 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0001 bin
p0894 ENC, HLA, SERVO, SERVO_AC, VECTOR, VECTOR_AC	Parking pre-setting / Parking pre-set Changeable: T, U Data type: Unsigned32 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
p0894 ENC_840	Parking pre-setting / Parking pre-set Changeable: T, U Data type: Unsigned32 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0001 bin
p0895[0...n] A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BI: Activate/deactivate power unit components / PU_comp act/deact Changeable: T Data type: Unsigned32 / Binary P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 1
r0896.0 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BO: Parking axis, status word / Parking axis, ZSW Changeable: - Data type: Unsigned8 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -

p0897 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BI: Parking axis selection / Parking axis sel Changeable: T Data type: Unsigned32 / Binary P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
r0898.0...15 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	CO/BO: Control word drive object 1 / STW DO1 Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0898.0...14 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO/BO: Control word sequence control / STW seq_ctrl Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2501 Unit selection: - Expert list: 1 Default: -
r0898.0...14 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO/BO: Control word sequence control / STW seq_ctrl Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2501 Unit selection: - Expert list: 1 Default: -
r0898.0...10 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	CO/BO: Control word sequence control infeed / STW seq_ctrl INF Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 8820, 8920 Unit selection: - Expert list: 1 Default: -
r0898.0...10 B_INF, B_INF_840	CO/BO: Control word sequence control infeed / STW seq_ctrl INF Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 8720 Unit selection: - Expert list: 1 Default: -

r0898.0...13 TM41	CO/BO: Control word sequence control / STW seq_ctrl Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 9678 Unit selection: - Expert list: 1 Default: -
r0898.10 ENC, ENC_840	CO/BO: Control word sequence control encoder DO / STW seq_ctrl encDO Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0899.0...15 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	CO/BO: Status word drive object 1 / ZSW DO1 Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0899.0...13 HLA, HLA_840, HLA_DBSI	CO/BO: Status word sequence control / ZSW seq_ctrl Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0899.0...15 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO/BO: Status word sequence control / ZSW seq_ctrl Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2503 Unit selection: - Expert list: 1 Default: -
r0899.0...12 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	CO/BO: Status word sequence control infeed / ZSW seq_ctrl INF Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 8826, 8926 Unit selection: - Expert list: 1 Default: -

r0899.0...12 B_INF, B_INF_840	CO/BO: Status word sequence control infeed / ZSW seq_ctrl INF		
	Changeable: -	Calculation: -	Access level: 2
	Data type: Unsigned16	Dynamic index: -	Function plan: 8726
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-

r0899.0...15 TM41	CO/BO: Status word sequence control / ZSW seq_ctrl		
	Changeable: -	Calculation: -	Access level: 2
	Data type: Unsigned16	Dynamic index: -	Function plan: 9680
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-

r0899.7...9 ENC, ENC_840	CO/BO: Status word sequence control encoder DO / ZSW seq_ctrl encDO		
	Changeable: -	Calculation: -	Access level: 2
	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-

p0915[0...29] TM15	TM15 PROFIdrive PZD setpoint assignment / TM15 PD PZD setp		
	Changeable: T	Calculation: -	Access level: 2
	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: Communications	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	4273	[0] 4201
			[1] 4204
			[2] 4205
			[3] 4211
			[4] 4212
			[5] 4213
			[6...29] 0

p0915[0...35] TM17	TM17 PROFIdrive PZD setpoint assignment / TM17 PD PZD setp		
	Changeable: T	Calculation: -	Access level: 2
	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: Communications	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	4265	[0] 4201
			[1] 4204
			[2] 4211
			[3] 4212
			[4...35] 0

p0916[0...29]			
TM15 PROFIdrive PZD actual value assignment / TM15 PD PZD actVal			
TM15	Changeable: T	Calculation: -	Access level: 2
	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: Communications	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	4373	[0] 4301
			[1] 4304
			[2] 4305
			[3] 4311
			[4] 4312
			[5] 4313
			[6...29] 0
p0916[0...35]			
TM17 PROFIdrive PZD actual value assignment / TM17 PD PZD actVal			
TM17	Changeable: T	Calculation: -	Access level: 2
	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: Communications	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	4365	[0] 4301
			[1] 4304
			[2] 4311
			[3] 4312
			[4...35] 0
p0918			
PROFIBUS address / PB address			
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S120_DP	Changeable: T	Calculation: -	Access level: 2
	Data type: Unsigned16	Dynamic index: -	Function plan: 2401, 2410
	P group: Communications	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	1	126	126
p0922			
IF1 PROFIdrive PZD telegram selection / IF1 PZD telegr			
CU_I_840	Changeable: C2(1), T	Calculation: -	Access level: 1
	Data type: Unsigned16	Dynamic index: -	Function plan: 2401, 2420, 2423, 2481, 2483
	P group: Communications	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	390	999	391

p0922 CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	IF1 PROFIdrive PZD telegram selection / IF1 PZD telegr Changeable: C2(1), T Data type: Unsigned16 P group: Communications Not for motor type: - Min: 390	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999	Access level: 1 Function plan: 2401, 2420, 2423, 2481, 2483 Unit selection: - Expert list: 1 Default: 999
p0922 CU_NX_840	IF1 PROFIdrive PZD telegram selection / IF1 PZD telegr Changeable: C2(1), T Data type: Unsigned16 P group: Communications Not for motor type: - Min: 390	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999	Access level: 1 Function plan: 2401, 2420, 2423, 2481, 2483 Unit selection: - Expert list: 1 Default: 390
p0922 HLA, HLA_840, HLA_DBSI	IF1 PROFIdrive PZD telegram selection / IF1 PZD telegr Changeable: C2(1), T Data type: Unsigned16 P group: Communications Not for motor type: - Min: 166	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999	Access level: 1 Function plan: 2401, 2415, 2416, 2419, 2420, 2421, 2422, 2423 Unit selection: - Expert list: 1 Default: 999
p0922 SERVO_840, SERVO_DBSI	IF1 PROFIdrive PZD telegram selection / IF1 PZD telegr Changeable: C2(1), T Data type: Unsigned16 P group: Communications Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999	Access level: 1 Function plan: 2401, 2415, 2416, 2419, 2420, 2421, 2422, 2423 Unit selection: - Expert list: 1 Default: 136
p0922 SERVO, SERVO_AC	IF1 PROFIdrive PZD telegram selection / IF1 PZD telegr Changeable: C2(1), T Data type: Unsigned16 P group: Communications Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999	Access level: 1 Function plan: 2401, 2415, 2416, 2419, 2420, 2421, 2422, 2423 Unit selection: - Expert list: 1 Default: 999

p0922	IF1 PROFIdrive PZD telegram selection / IF1 PZD telegr		
SERVO (EPOS, EPOS, Position control, Position control, Spin_diag), SERVO_840 (EPOS, EPOS, Position control, Position control, Spin_diag), SERVO_AC (EPOS, EPOS, Position control, Position control, Spin_diag), SERVO_DBSI (EPOS, EPOS, Position control, Position control, Spin_diag)	Changeable: C2(1), T Data type: Unsigned16 P group: Communications Not for motor type: - Min: 7	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999	Access level: 1 Function plan: 2401, 2415, 2416, 2419, 2420, 2421, 2422, 2423 Unit selection: - Expert list: 1 Default: 999
p0922	IF1 PROFIdrive PZD telegram selection / IF1 PZD telegr		
SERVO (Position control, Position control, Spin_diag), SERVO_840 (Position control, Position control, Spin_diag), SERVO_AC (Position control, Position control, Spin_diag), SERVO_DBSI (Position control, Position control, Spin_diag)	Changeable: C2(1), T Data type: Unsigned16 P group: Communications Not for motor type: - Min: 999	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999	Access level: 1 Function plan: 2401, 2415, 2416, 2419, 2420, 2421, 2422, 2423 Unit selection: - Expert list: 1 Default: 999
p0922	IF1 PROFIdrive PZD telegram selection / IF1 PZD telegr		
SERVO (Spin_diag), SERVO_840 (Spin_diag), SERVO_AC (Spin_diag), SERVO_DBSI (Spin_diag)	Changeable: C2(1), T Data type: Unsigned16 P group: Communications Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999	Access level: 1 Function plan: 2401, 2415, 2416, 2419, 2420, 2421, 2422, 2423 Unit selection: - Expert list: 1 Default: 999
p0922	IF1 PROFIdrive PZD telegram selection / IF1 PZD telegr		
VECTOR, VECTOR_AC	Changeable: C2(1), T Data type: Unsigned16 P group: Communications Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999	Access level: 1 Function plan: 2401, 2415, 2416, 2419, 2420, 2421, 2422, 2423 Unit selection: - Expert list: 1 Default: 999

p0922 VECTOR (EPOS, EPOS, n/M, Position control, Position control), VECTOR_AC (EPOS, EPOS, n/M, Position control, Position control)	IF1 PROFIdrive PZD telegram selection / IF1 PZD telegr Changeable: C2(1), T Data type: Unsigned16 P group: Communications Not for motor type: - Min: 7	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999	Access level: 1 Function plan: 2401, 2415, 2416, 2419, 2420, 2421, 2422, 2423 Unit selection: - Expert list: 1 Default: 999
p0922 VECTOR (n/M, Position control, Position control), VECTOR_AC (n/M, Position control, Position control)	IF1 PROFIdrive PZD telegram selection / IF1 PZD telegr Changeable: C2(1), T Data type: Unsigned16 P group: Communications Not for motor type: - Min: 999	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999	Access level: 1 Function plan: 2401, 2415, 2416, 2419, 2420, 2421, 2422, 2423 Unit selection: - Expert list: 1 Default: 999
p0922 VECTOR (n/M), VECTOR_AC (n/M)	IF1 PROFIdrive PZD telegram selection / IF1 PZD telegr Changeable: C2(1), T Data type: Unsigned16 P group: Communications Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999	Access level: 1 Function plan: 2401, 2415, 2416, 2419, 2420, 2421, 2422, 2423 Unit selection: - Expert list: 1 Default: 999
p0922 A_INF_840, B_INF_840, S_INF_840	IF1 PROFIdrive PZD telegram selection / IF1 PZD telegr Changeable: C2(1), T Data type: Unsigned16 P group: Communications Not for motor type: - Min: 999	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999	Access level: 1 Function plan: 2401, 2420, 2423, 2447, 2457, 2481, 2483 Unit selection: - Expert list: 1 Default: 999
p0922 A_INF, B_INF, R_INF, S_INF	IF1 PROFIdrive PZD telegram selection / IF1 PZD telegr Changeable: C2(1), T Data type: Unsigned16 P group: Communications Not for motor type: - Min: 370	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999	Access level: 1 Function plan: 2401, 2420, 2423, 2447, 2457, 2481, 2483 Unit selection: - Expert list: 1 Default: 999

p0922 TM15, TM17	IF1 PROFIdrive PZD telegram selection / IF1 PZD telegr Changeable: C2(1), T Data type: Unsigned16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 0	Access level: 1 Function plan: 2481, 2483 Unit selection: - Expert list: 1 Default: 0
p0922 TM41	IF1 PROFIdrive PZD telegram selection / IF1 PZD telegr Changeable: C2(1), T Data type: Unsigned16 P group: Communications Not for motor type: - Min: 3	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999	Access level: 1 Function plan: 2401, 9677, 9679, 9681, 9683 Unit selection: - Expert list: 1 Default: 999
p0922 ENC, ENC_840	IF1 PROFIdrive PZD telegram selection / IF1 PZD telegr Changeable: C2(1), T Data type: Unsigned16 P group: Communications Not for motor type: - Min: 81	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999	Access level: 1 Function plan: 2401, 2415, 2416, 2419, 2420, 2421, 2422, 2423 Unit selection: - Expert list: 1 Default: 999
r0924[0...1] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	ZSW bit pulses enabled / ZSW pulse enab Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2454, 2456 Unit selection: - Expert list: 1 Default: -
p0925 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR (n/M), VECTOR_AC (n/M)	PROFIdrive clock synchronous sign-of-life tolerance / PD SoL_tol Changeable: T, U Data type: Unsigned16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: 2410 Unit selection: - Expert list: 1 Default: 1

r0930 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	PROFIdrive operating mode / PD operating mode Changeable: - Data type: Unsigned16 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0944 All objects	CO: Counter for fault buffer changes / Fault buff change Changeable: - Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 8060 Unit selection: - Expert list: 1 Default: -
r0945[0...63] All objects	Fault code / Fault code Changeable: - Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 8050, 8060 Unit selection: - Expert list: 1 Default: -
r0946[0...65534] All objects	Fault code list / Fault code list Changeable: - Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r0947[0...63] All objects	Fault number / Fault number Changeable: - Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8050, 8060 Unit selection: - Expert list: 1 Default: -
r0948[0...63] All objects	Fault time received in milliseconds / t_fault rcv ms Changeable: - Data type: Unsigned32 P group: Messages Not for motor type: - Min: - [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [ms]	Access level: 3 Function plan: 8050, 8060 Unit selection: - Expert list: 1 Default: - [ms]

r0949[0...63] All objects	Fault value / Fault value Changeable: - Data type: Integer32 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8050, 8060 Unit selection: - Expert list: 1 Default: -
p0952 All objects	Fault cases counter / Fault cases qty Changeable: T, U Data type: Unsigned16 P group: Messages Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: 6700, 8060 Unit selection: - Expert list: 1 Default: 0
r0963 CU_S_AC_DP, CU_S120_DP	PROFIBUS baud rate / PB baud rate Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r0964[0...6] CU_I_840	Device identification / Device ident Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0964[0...6] CU_NX_840	Device identification / Device ident Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r0964[0...6] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Device identification / Device ident Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -

r0965 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	PROFIdrive profile number / PD profile number Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p0969 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	System runtime relative / t_System relative Changeable: T Data type: Unsigned32 P group: Displays, signals Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4294967295 [ms]	Access level: 3 Function plan: 8050, 8060 Unit selection: - Expert list: 1 Default: 0 [ms]
p0970 CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Reset drive parameters / Drive par reset Changeable: C2(30) Data type: Unsigned16 P group: Factory settings Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0970 HLA, HLA_840, HLA_DBSI	Reset drive parameters / Drive par reset Changeable: C2(30) Data type: Unsigned16 P group: Factory settings Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0970 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Reset drive parameters / Drive par reset Changeable: C2(30) Data type: Unsigned16 P group: Factory settings Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0970 A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	Reset infeed parameter / INF par reset Changeable: C2(30) Data type: Unsigned16 P group: Factory settings Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0970 TM120	TM120 reset parameters / TM120 par reset Changeable: C2(30) Data type: Unsigned16 P group: Factory settings Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0970 TM15	TM15 reset parameter / TM15 par reset Changeable: C2(30) Data type: Unsigned16 P group: Factory settings Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0970 TM150	TM150 reset parameters / TM150 par reset Changeable: C2(30) Data type: Unsigned16 P group: Factory settings Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0970 TM15DI_DO	TM15DI/DO reset parameter / TM15D par reset Changeable: C2(30) Data type: Unsigned16 P group: Factory settings Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0970 TM17	TM17 reset parameter / TM17 par reset Changeable: C2(30) Data type: Unsigned16 P group: Factory settings Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0970 TM31	TM31 reset parameters / TM31 par reset Changeable: C2(30) Data type: Unsigned16 P group: Factory settings Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0970 TM41	TM41 reset parameters / TM41 par reset Changeable: C2(30) Data type: Unsigned16 P group: Factory settings Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0970 TB30	TB30 reset parameters / TB30 par reset Changeable: C2(30) Data type: Unsigned16 P group: Factory settings Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0970 TM54F_MA	TM54F reset parameters / TM54F par reset Changeable: C2(30) Data type: Unsigned16 P group: Factory settings Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0970 ENC, ENC_840	ENCODER reset parameters / ENC par reset Changeable: C2(30) Data type: Unsigned16 P group: Factory settings Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0971 All objects	Save drive object parameters / Drv_obj par save Changeable: T, U Data type: Unsigned16 P group: Factory settings Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0972 CU_I_840	Drive unit reset / Drv_unit reset Changeable: T, U Data type: Unsigned16 P group: All groups Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0972 CU_NX_840	Drive unit reset / Drv_unit reset Changeable: T, U Data type: Unsigned16 P group: All groups Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0972 CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Drive unit reset / Drv_unit reset Changeable: T, U Data type: Unsigned16 P group: All groups Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
r0975[0...10] All objects	Drive object identification / DO identification Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
p0976 CU_I_840, CU_NX_840	Reset and load all parameters / Reset load all par Changeable: C1(30) Data type: Unsigned16 P group: Factory settings Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1013	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0976 CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Reset and load all parameters / Reset load all par Changeable: C1(30) Data type: Unsigned16 P group: Factory settings Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1013	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p0977 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Save all parameters / Save all par Changeable: T, U Data type: Unsigned16 P group: Factory settings Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1013	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0

p0978[0...n] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	List of drive objects / List of the DO Changeable: C1(1) Data type: Unsigned8 P group: Topology Not for motor type: - Min: 0	Calculation: - Dynamic index: r0579 Unit group: - Scaling: - Max: 255	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: [0] 1 [1...24] 0
r0979[0...30] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	PROFIdrive encoder format / PD encoder format Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4704 Unit selection: - Expert list: 1 Default: -
r0979[0...30] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	PROFIdrive encoder format / PD encoder format Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4704 Unit selection: - Expert list: 1 Default: -
r0979[0...10] ENC, ENC_840, TM41	PROFIdrive encoder format / PD encoder format Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4704 Unit selection: - Expert list: 1 Default: -
r0979[0...10] ENC (Lin_enc), ENC_840 (Lin_enc)	PROFIdrive encoder format / PD encoder format Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4704 Unit selection: - Expert list: 1 Default: -
r0980[0...299] All objects	List of existing parameters 1 / List avail par 1 Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 0 Default: -

r0981[0...299]	List of existing parameters 2 / List avail par 2		
All objects	Changeable: -	Calculation: -	Access level: 4
	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 0
	Min:	Max:	Default:
	-	-	-
r0989[0...299]	List of existing parameters 10 / List avail par 10		
All objects	Changeable: -	Calculation: -	Access level: 4
	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 0
	Min:	Max:	Default:
	-	-	-
r0990[0...99]	List of modified parameters 1 / List chang par 1		
All objects	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 0
	Min:	Max:	Default:
	-	-	-
r0991[0...99]	List of modified parameters 2 / List chang par 2		
All objects	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 0
	Min:	Max:	Default:
	-	-	-
r0999[0...99]	List of modified parameters 10 / List chang par 10		
All objects	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 0
	Min:	Max:	Default:
	-	-	-
p1000[0...n]	Macro Connector Inputs (CI) for speed setpoints / Macro CI n_set		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(1), T	Calculation: -	Access level: 1
	Data type: Unsigned32	Dynamic index: CDS, p0170	Function plan: -
	P group: Commands	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	999999	0

p1000[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Macro Connector Inputs (CI) for velocity setpoints / Macro CI v_set Changeable: C2(1), T Data type: Unsigned32 P group: Commands Not for motor type: - Min: 0	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: 999999	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p1001[0...n] SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	CO: Fixed velocity setpoint 1 / v_set_fix 1 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -1000.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: p2000 Max: 1000.000 [m/min]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [m/min]
p1001[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	CO: Fixed speed setpoint 1 / n_set_fixed 1 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -210000.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: p2000 Max: 210000.000 [rpm]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [rpm]
p1002[0...n] SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	CO: Fixed velocity setpoint 2 / v_set_fix 2 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -1000.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: p2000 Max: 1000.000 [m/min]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [m/min]
p1002[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	CO: Fixed speed setpoint 2 / n_set_fixed 2 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -210000.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: p2000 Max: 210000.000 [rpm]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [rpm]
p1003[0...n] SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	CO: Fixed velocity setpoint 3 / v_set_fix 3 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -1000.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: p2000 Max: 1000.000 [m/min]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [m/min]

p1003[0...n]	CO: Fixed speed setpoint 3 / n_set_fixed 3		
SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -210000.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: p2000 Max: 210000.000 [rpm]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [rpm]
p1004[0...n]	CO: Fixed velocity setpoint 4 / v_set_fix 4		
SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -1000.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: p2000 Max: 1000.000 [m/min]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [m/min]
p1004[0...n]	CO: Fixed speed setpoint 4 / n_set_fixed 4		
SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -210000.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: p2000 Max: 210000.000 [rpm]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [rpm]
p1005[0...n]	CO: Fixed velocity setpoint 5 / v_set_fix 5		
SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -1000.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: p2000 Max: 1000.000 [m/min]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [m/min]
p1005[0...n]	CO: Fixed speed setpoint 5 / n_set_fixed 5		
SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -210000.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: p2000 Max: 210000.000 [rpm]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [rpm]
p1006[0...n]	CO: Fixed velocity setpoint 6 / v_set_fix 6		
SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -1000.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: p2000 Max: 1000.000 [m/min]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [m/min]

p1006[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	CO: Fixed speed setpoint 6 / n_set_fixed 6 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -210000.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: p2000 Max: 210000.000 [rpm]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [rpm]
p1007[0...n] SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	CO: Fixed velocity setpoint 7 / v_set_fix 7 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -1000.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: p2000 Max: 1000.000 [m/min]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [m/min]
p1007[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	CO: Fixed speed setpoint 7 / n_set_fixed 7 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -210000.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: p2000 Max: 210000.000 [rpm]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [rpm]
p1008[0...n] SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	CO: Fixed velocity setpoint 8 / v_set_fix 8 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -1000.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: p2000 Max: 1000.000 [m/min]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [m/min]
p1008[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	CO: Fixed speed setpoint 8 / n_set_fixed 8 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -210000.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: p2000 Max: 210000.000 [rpm]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [rpm]
p1009[0...n] SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	CO: Fixed velocity setpoint 9 / v_set_fix 9 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -1000.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: p2000 Max: 1000.000 [m/min]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [m/min]

p1009[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	CO: Fixed speed setpoint 9 / n_set_fixed 9 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -210000.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: p2000 Max: 210000.000 [rpm]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [rpm]
p1010[0...n] SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	CO: Fixed velocity setpoint 10 / v_set_fix 10 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -1000.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: p2000 Max: 1000.000 [m/min]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [m/min]
p1010[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	CO: Fixed speed setpoint 10 / n_set_fixed 10 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -210000.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: p2000 Max: 210000.000 [rpm]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [rpm]
p1011[0...n] SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	CO: Fixed velocity setpoint 11 / v_set_fix 11 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -1000.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: p2000 Max: 1000.000 [m/min]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [m/min]
p1011[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	CO: Fixed speed setpoint 11 / n_set_fixed 11 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -210000.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: p2000 Max: 210000.000 [rpm]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [rpm]
p1012[0...n] SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	CO: Fixed velocity setpoint 12 / v_set_fix 12 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -1000.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: p2000 Max: 1000.000 [m/min]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [m/min]

p1012[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	CO: Fixed speed setpoint 12 / n_set_fixed 12 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -210000.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: p2000 Max: 210000.000 [rpm]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [rpm]
p1013[0...n] SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	CO: Fixed velocity setpoint 13 / v_set_fix 13 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -1000.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: p2000 Max: 1000.000 [m/min]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [m/min]
p1013[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	CO: Fixed speed setpoint 13 / n_set_fixed 13 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -210000.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: p2000 Max: 210000.000 [rpm]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [rpm]
p1014[0...n] SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	CO: Fixed velocity setpoint 14 / v_set_fix 14 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -1000.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: p2000 Max: 1000.000 [m/min]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [m/min]
p1014[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	CO: Fixed speed setpoint 14 / n_set_fixed 14 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -210000.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: p2000 Max: 210000.000 [rpm]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [rpm]
p1015[0...n] SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	CO: Fixed velocity setpoint 15 / v_set_fix 15 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -1000.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: p2000 Max: 1000.000 [m/min]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [m/min]

p1015[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	CO: Fixed speed setpoint 15 / n_set_fixed 15 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -210000.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: p2000 Max: 210000.000 [rpm]	Access level: 2 Function plan: 3010 Unit selection: p0505 Expert list: 1 Default: 0.000 [rpm]
p1020[0...n] SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	BI: Fixed velocity setpoint selection Bit 0 / v_set_fixed Bit 0 Changeable: T Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2505, 3010 Unit selection: - Expert list: 1 Default: 0
p1020[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp)	BI: Fixed speed setpoint selection Bit 0 / n_set_fixed Bit 0 Changeable: T Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2505, 3010 Unit selection: - Expert list: 1 Default: 0
p1020[0...n] VECTOR, VECTOR_AC	BI: Fixed speed setpoint selection Bit 0 / n_set_fixed Bit 0 Changeable: T Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2505, 3010, 3011 Unit selection: - Expert list: 1 Default: 0
p1021[0...n] SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	BI: Fixed velocity setpoint selection Bit 1 / v_set_fixed Bit 1 Changeable: T Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2505, 3010 Unit selection: - Expert list: 1 Default: 0
p1021[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp)	BI: Fixed speed setpoint selection Bit 1 / n_set_fixed Bit 1 Changeable: T Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2505, 3010 Unit selection: - Expert list: 1 Default: 0

p1021[0...n] VECTOR, VECTOR_AC	BI: Fixed speed setpoint selection Bit 1 / n_set_fixed Bit 1 Changeable: T Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2505, 3010, 3011 Unit selection: - Expert list: 1 Default: 0
p1022[0...n] SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	BI: Fixed velocity setpoint selection Bit 2 / v_set_fixed Bit 2 Changeable: T Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2505, 3010 Unit selection: - Expert list: 1 Default: 0
p1022[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp)	BI: Fixed speed setpoint selection Bit 2 / n_set_fixed Bit 2 Changeable: T Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2505, 3010 Unit selection: - Expert list: 1 Default: 0
p1022[0...n] VECTOR, VECTOR_AC	BI: Fixed speed setpoint selection Bit 2 / n_set_fixed Bit 2 Changeable: T Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2505, 3010, 3011 Unit selection: - Expert list: 1 Default: 0
p1023[0...n] SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	BI: Fixed velocity setpoint selection Bit 3 / v_set_fixed Bit 3 Changeable: T Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2505, 3010 Unit selection: - Expert list: 1 Default: 0
p1023[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp)	BI: Fixed speed setpoint selection Bit 3 / n_set_fixed Bit 3 Changeable: T Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2505, 3010 Unit selection: - Expert list: 1 Default: 0

p1023[0...n] VECTOR, VECTOR_AC	BI: Fixed speed setpoint selection Bit 3 / n_set_fixed Bit 3 Changeable: T Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2505, 3010, 3011 Unit selection: - Expert list: 1 Default: 0
r1024 SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	CO: Fixed velocity setpoint effective / v_set_fixed eff Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 3001, 3010 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r1024 SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp)	CO: Fixed speed setpoint effective / n_set_fixed eff Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 3001, 3010 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r1024 VECTOR, VECTOR_AC	CO: Fixed speed setpoint effective / n_set_fixed eff Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 3001, 3010, 3011 Unit selection: p0505 Expert list: 1 Default: - [rpm]
p1030[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Motorized potentiometer configuration / Mop configuration Changeable: T, U Data type: Unsigned16 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 3020 Unit selection: - Expert list: 1 Default: 0000 0110 bin
p1035[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	BI: Motorized potentiometer setpoint raise / Mop raise Changeable: T Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2505, 3020 Unit selection: - Expert list: 1 Default: 0

p1035 TM41	BI: Zero marks enable / ZM enable Changeable: T Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9677 Unit selection: - Expert list: 1 Default: 0
p1036[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	BI: Motorized potentiometer lower setpoint / Mop lower Changeable: T Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2505, 3020 Unit selection: - Expert list: 1 Default: 0
p1037[0...n] SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	Motorized potentiometer maximum velocity / MotP n_max Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -1000.000 [m/min]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 1000.000 [m/min]	Access level: 2 Function plan: 3020 Unit selection: p0505 Expert list: 1 Default: 0.000 [m/min]
p1037[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Motorized potentiometer maximum speed / MotP n_max Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -210000.000 [rpm]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.000 [rpm]	Access level: 2 Function plan: 3020 Unit selection: p0505 Expert list: 1 Default: 0.000 [rpm]
p1038[0...n] SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	Motorized potentiometer minimum velocity / MotP n_min Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -1000.000 [m/min]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 1000.000 [m/min]	Access level: 2 Function plan: 3020 Unit selection: p0505 Expert list: 1 Default: 0.000 [m/min]

p1038[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Motorized potentiometer minimum speed / MotP n_min Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -210000.000 [rpm]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.000 [rpm]	Access level: 2 Function plan: 3020 Unit selection: p0505 Expert list: 1 Default: 0.000 [rpm]
p1039[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	BI: Motorized potentiometer inversion / MotP inv Changeable: T Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 3020 Unit selection: - Expert list: 1 Default: 0
p1040[0...n] SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	Motorized potentiometer starting value / Mop start value Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -1000.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 1000.000 [m/min]	Access level: 2 Function plan: 3020 Unit selection: p0505 Expert list: 1 Default: 0.000 [m/min]
p1040[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Motorized potentiometer starting value / Mop start value Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -210000.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.000 [rpm]	Access level: 2 Function plan: 3020 Unit selection: p0505 Expert list: 1 Default: 0.000 [rpm]
p1041[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	BI: Motorized potentiometer manual/automatic / Mop manual/auto Changeable: T Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 3020 Unit selection: - Expert list: 1 Default: 0
p1042[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	CI: Motorized potentiometer automatic setpoint / Mop auto setpoint Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 3020 Unit selection: - Expert list: 1 Default: 0

p1043[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	BI: Motorized potentiometer accept setting value / MotP acc set val Changeable: T Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 3020 Unit selection: - Expert list: 1 Default: 0
p1044[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	CI: Motorized potentiometer setting value / Mop set val Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 3020 Unit selection: - Expert list: 1 Default: 0
r1045 SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	CO: Mot. potentiom. velocity setp. in front of ramp-fct. gen. / Mop n_set bef RFG Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 3020 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r1045 SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	CO: Mot. potentiometer speed setp. in front of ramp-fct. gen. / Mop n_set bef RFG Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 3020 Unit selection: p0505 Expert list: 1 Default: - [rpm]
p1047[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Motorized potentiometer ramp-up time / Mop ramp-up time Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000.000 [s]	Access level: 2 Function plan: 3020 Unit selection: - Expert list: 1 Default: 10.000 [s]
p1048[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Motorized potentiometer ramp-down time / Mop ramp-down time Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000.000 [s]	Access level: 2 Function plan: 3020 Unit selection: - Expert list: 1 Default: 10.000 [s]

r1050 CO: Motorized potentiometer setpoint after ramp-function generator / Mop setp after RFG

SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 3001, 3020 Unit selection: p0505 Expert list: 1 Default: - [m/min]

r1050 CO: Motorized potentiometer setpoint after ramp-function generator / Mop setp after RFG

SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 3001, 3020 Unit selection: p0505 Expert list: 1 Default: - [rpm]

p1051[0...n] CI: Velocity limit RFG positive direction / v_limit RFG pos

SERVO (ESR, ESR, Ext setp, Ext setp, Lin, Lin, Lin), SERVO_840 (ESR, ESR, Ext setp, Ext setp, Lin, Lin, Lin), SERVO_AC (ESR, ESR, Ext setp, Ext setp, _ Lin, Lin, Lin), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp, Lin, Lin, Lin)	Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Setpoints Not for motor type: - Min:	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 3050 Unit selection: - Expert list: 1 Default: 1083[0]

p1051[0...n] CI: Speed limit RFG positive direction of rotation / n_limit RFG pos

HLA (ESR), HLA_840 (ESR), HLA_DBSI (ESR), SERVO (ESR, ESR, Ext setp, Ext setp), SERVO_840 (ESR, ESR, Ext setp, Ext setp), SERVO_AC (ESR, ESR, Ext setp, Ext setp), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp), VECTOR, VECTOR_AC	Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 3050 Unit selection: - Expert list: 1 Default: 1083[0]

p1052[0...n] SERVO (ESR, ESR, Ext setp, Ext setp, Lin, Lin, Lin), SERVO_840 (ESR, ESR, Ext setp, Ext setp, Lin, Lin, Lin), SERVO_AC (ESR, ESR, Ext setp, Ext setp, Lin, Lin, Lin), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp, Lin, Lin, Lin)	Cl: Velocity limit RFG negative direction / v_limit RFG neg Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Setpoints Not for motor type: - Min:	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 3050 Unit selection: - Expert list: 1 Default: 1086[0]
p1052[0...n] HLA (ESR), HLA_840 (ESR), HLA_DBSI (ESR), SERVO (ESR, ESR, Ext setp, Ext setp), SERVO_840 (ESR, ESR, Ext setp, Ext setp), SERVO_AC (ESR, ESR, Ext setp, Ext setp), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp), VECTOR, VECTOR_AC	Cl: Speed limit RFG negative direction of rotation / n_limit RFG neg Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 3050 Unit selection: - Expert list: 1 Default: 1086[0]
p1055[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Bl: Jog bit 0 / Jog bit 0 Changeable: T Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2501, 3030 Unit selection: - Expert list: 1 Default: 0
p1056[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Bl: Jog bit 1 / Jog bit 1 Changeable: T Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2501, 3030 Unit selection: - Expert list: 1 Default: 0
p1058[0...n] SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	Jog 1 velocity setpoint / Jog 1 v_set Changeable: T Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -1000.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 1000.000 [m/min]	Access level: 2 Function plan: 3001, 3030 Unit selection: p0505 Expert list: 1 Default: 0.000 [m/min]

p1058[0...n]	Jog 1 speed setpoint / Jog 1 n_set		
SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Changeable: T Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -210000.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.000 [rpm]	Access level: 2 Function plan: 3001, 3030 Unit selection: p0505 Expert list: 1 Default: 0.000 [rpm]

p1059[0...n]	Jog 2 velocity setpoint / Jog 2 v_set		
SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	Changeable: T Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -1000.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 1000.000 [m/min]	Access level: 2 Function plan: 3001, 3030 Unit selection: p0505 Expert list: 1 Default: 0.000 [m/min]

p1059[0...n]	Jog 2 speed setpoint / Jog 2 n_set		
SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Changeable: T Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -210000.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.000 [rpm]	Access level: 2 Function plan: 3001, 3030 Unit selection: p0505 Expert list: 1 Default: 0.000 [rpm]

p1063[0...n]	Setpoint channel velocity limit / Setp_chan v_lim		
SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 1000.000 [m/min]	Access level: 1 Function plan: 3040 Unit selection: p0505 Expert list: 1 Default: 1000.000 [m/min]

p1063[0...n]	Setpoint channel speed limit / Setp_chan n_lim		
SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp)	Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.000 [rpm]	Access level: 1 Function plan: 3040 Unit selection: p0505 Expert list: 1 Default: 210000.000 [rpm]

p1063[0...n]	Setpoint channel speed limit / Setp_chan n_lim		
VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.000 [rpm]	Access level: 1 Function plan: 3040 Unit selection: p0505 Expert list: 1 Default: 40000.000 [rpm]

p1070[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Cl: Main setpoint / Main setpoint Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 3001, 3030 Unit selection: - Expert list: 1 Default: 1024[0]
p1071[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Cl: Main setpoint scaling / Main setp scal Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 3001, 3030 Unit selection: - Expert list: 1 Default: 1
r1073 SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	CO: Main setpoint effective / Main setpoint eff Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 3030 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r1073 SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	CO: Main setpoint effective / Main setpoint eff Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 3030 Unit selection: p0505 Expert list: 1 Default: - [rpm]
p1075[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Cl: Supplementary setp / Suppl setp Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 3001, 3030 Unit selection: - Expert list: 1 Default: 0
p1076[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Cl: Supplementary setpoint scaling / Suppl setp scal Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 3001, 3030 Unit selection: - Expert list: 1 Default: 1

r1077	CO: Supplementary setpoint effective / Suppl setpoint eff		
SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 3030 Unit selection: p0505 Expert list: 1 Default: - [m/min]

r1077	CO: Supplementary setpoint effective / Suppl setpoint eff		
SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 3030 Unit selection: p0505 Expert list: 1 Default: - [rpm]

r1078	CO: Total setpoint effective / Total setpoint eff		
SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 3030 Unit selection: p0505 Expert list: 1 Default: - [m/min]

r1078	CO: Total setpoint effective / Total setpoint eff		
SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 3030 Unit selection: p0505 Expert list: 1 Default: - [rpm]

p1080[0...n]	Minimum velocity / v_min		
SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	Changeable: C2(1), T Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 1000.000 [m/min]	Access level: 1 Function plan: 3050 Unit selection: p0505 Expert list: 1 Default: 0.000 [m/min]

p1080[0...n]	Minimum speed / n_min		
SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Changeable: C2(1), T Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 19500.000 [rpm]	Access level: 1 Function plan: 3050 Unit selection: p0505 Expert list: 1 Default: 0.000 [rpm]

p1081 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Maximum speed scaling / n_max scal Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 100.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: 105.00 [%]	Access level: 2 Function plan: 3050, 3095 Unit selection: - Expert list: 1 Default: 100.00 [%]
p1081 HLA, HLA_840, HLA_DBSI, SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Maximum velocity scaling / v_max scal Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 100.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: 105.00 [%]	Access level: 2 Function plan: 3050, 3095 Unit selection: - Expert list: 1 Default: 100.00 [%]
p1082[0...n] HLA, HLA_840, HLA_DBSI	Maximum velocity / v_max Changeable: C2(1), T Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [m/min]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 1000.000 [m/min]	Access level: 1 Function plan: 4965 Unit selection: p0505 Expert list: 1 Default: 1000.000 [m/min]
p1082[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Maximum speed / n_max Changeable: C2(1), T Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [rpm]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.000 [rpm]	Access level: 1 Function plan: 2820, 3020, 3050, 3060, 3070, 3095 Unit selection: p0505 Expert list: 1 Default: 1500.000 [rpm]
p1082[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Maximum velocity / v_max Changeable: C2(1), T Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [m/min]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 1300.000 [m/min]	Access level: 1 Function plan: 2820, 3020, 3050, 3060, 3070, 3095 Unit selection: p0505 Expert list: 1 Default: 1000.000 [m/min]

p1082[0...n] VECTOR, VECTOR_AC	Maximum speed / n_max Changeable: C2(1), T Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [rpm]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.000 [rpm]	Access level: 1 Function plan: 2820, 3020, 3050, 3060, 3070, 3095 Unit selection: p0505 Expert list: 1 Default: 1500.000 [rpm]
r1082[0...n] TM41	Encoder emulation maximum speed / Enc_emul n_max Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: - [rpm]	Access level: 1 Function plan: 9674, 9676 Unit selection: p0505 Expert list: 1 Default: - [rpm]
p1083[0...n] HLA, HLA_840, HLA_DBSI	CO: Velocity limit positive direction / v_limit pos Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [m/min]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: p2000 Max: 1000.000 [m/min]	Access level: 2 Function plan: 4965 Unit selection: p0505 Expert list: 1 Default: 1000.000 [m/min]
p1083[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Speed limit in positive direction of rotation / n_limit pos Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: p2000 Max: 210000.000 [rpm]	Access level: 2 Function plan: 3050, 3095 Unit selection: p0505 Expert list: 1 Default: 210000.000 [rpm]
p1083[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Velocity limit positive direction / v_limit pos Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: p2000 Max: 1000.000 [m/min]	Access level: 2 Function plan: 3050, 3095 Unit selection: p0505 Expert list: 1 Default: 1000.000 [m/min]
p1083[0...n] VECTOR, VECTOR_AC	CO: Speed limit in positive direction of rotation / n_limit pos Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: p2000 Max: 210000.000 [rpm]	Access level: 2 Function plan: 3050, 6732 Unit selection: p0505 Expert list: 1 Default: 40000.000 [rpm]

r1084 HLA, HLA_840, HLA_DBSI	CO: Velocity limit positive effective / v_limit pos eff Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [m/min]
r1084 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Speed limit positive effective / n_limit pos eff Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 3050, 3095 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r1084 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Velocity limit positive effective / v_limit pos eff Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 3050, 3095 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r1084 VECTOR, VECTOR_AC	CO: Speed limit positive effective / n_limit pos eff Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 3050, 3095 Unit selection: p0505 Expert list: 1 Default: - [rpm]
p1085[0...n] SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	CI: Velocity limit positive direction / v_limit pos Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 3050 Unit selection: - Expert list: 1 Default: 1083[0]
p1085[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	CI: Speed limit in positive direction of rotation / n_limit pos Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 3050 Unit selection: - Expert list: 1 Default: 1083[0]

p1086[0...n] HLA, HLA_840, HLA_DBSI	CO: Velocity limit negative direction / v_limit neg Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -1000.000 [m/min]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: p2000 Max: 0.000 [m/min]	Access level: 2 Function plan: 4965 Unit selection: p0505 Expert list: 1 Default: -1000.000 [m/min]
p1086[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Speed limit in negative direction of rotation / n_limit neg Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -210000.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: p2000 Max: 0.000 [rpm]	Access level: 2 Function plan: 3050, 3095 Unit selection: p0505 Expert list: 1 Default: -210000.000 [rpm]
p1086[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Velocity limit negative direction / v_limit neg Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -1000.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: p2000 Max: 0.000 [m/min]	Access level: 2 Function plan: 3050, 3095 Unit selection: p0505 Expert list: 1 Default: -1000.000 [m/min]
p1086[0...n] VECTOR, VECTOR_AC	CO: Speed limit in negative direction of rotation / n_limit neg Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -210000.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: p2000 Max: 0.000 [rpm]	Access level: 2 Function plan: 3050 Unit selection: p0505 Expert list: 1 Default: -40000.000 [rpm]
r1087 HLA, HLA_840, HLA_DBSI	CO: Velocity limit negative effective / v_limit neg eff Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [m/min]
r1087 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Speed limit negative effective / n_limit neg eff Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 3050, 3095 Unit selection: p0505 Expert list: 1 Default: - [rpm]

r1087	CO: Velocity limit negative effective / v_limit neg eff		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 3050, 3095 Unit selection: p0505 Expert list: 1 Default: - [m/min]

r1087	CO: Speed limit negative effective / n_limit neg eff		
VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 3050, 3095 Unit selection: p0505 Expert list: 1 Default: - [rpm]

p1088[0...n]	CI: Velocity limit negative direction / n_limit neg		
SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 3050 Unit selection: - Expert list: 1 Default: 1086[0]

p1088[0...n]	CI: Speed limit in negative direction of rotation / n_limit neg		
SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 3050 Unit selection: - Expert list: 1 Default: 1086[0]

p1091[0...n]	Skip velocity 1 / v_skip 1		
SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: p2000 Max: 1000.000 [m/min]	Access level: 3 Function plan: 3050 Unit selection: p0505 Expert list: 1 Default: 0.000 [m/min]

p1091[0...n]	Skip speed 1 / n_skip 1		
SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: p2000 Max: 210000.000 [rpm]	Access level: 3 Function plan: 3050 Unit selection: p0505 Expert list: 1 Default: 0.000 [rpm]

p1092[0...n] SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	Skip velocity 2 / v_skip 2 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: p2000 Max: 1000.000 [m/min]	Access level: 3 Function plan: 3050 Unit selection: p0505 Expert list: 1 Default: 0.000 [m/min]
p1092[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Skip speed 2 / n_skip 2 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: p2000 Max: 210000.000 [rpm]	Access level: 3 Function plan: 3050 Unit selection: p0505 Expert list: 1 Default: 0.000 [rpm]
p1093[0...n] SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	Skip velocity 3 / v_skip 3 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: p2000 Max: 1000.000 [m/min]	Access level: 3 Function plan: 3050 Unit selection: p0505 Expert list: 1 Default: 0.000 [m/min]
p1093[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Skip speed 3 / n_skip 3 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: p2000 Max: 210000.000 [rpm]	Access level: 3 Function plan: 3050 Unit selection: p0505 Expert list: 1 Default: 0.000 [rpm]
p1094[0...n] SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	Skip velocity 4 / v_skip 4 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: p2000 Max: 1000.000 [m/min]	Access level: 3 Function plan: 3050 Unit selection: p0505 Expert list: 1 Default: 0.000 [m/min]
p1094[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Skip speed 4 / n_skip 4 Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: p2000 Max: 210000.000 [rpm]	Access level: 3 Function plan: 3050 Unit selection: p0505 Expert list: 1 Default: 0.000 [rpm]

p1098[0...n]	Cl: Skip velocity scaling / v_skip scal		
SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 3050 Unit selection: - Expert list: 1 Default: 1

p1098[0...n]	Cl: Skip speed scaling / n_skip scal		
SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 3050 Unit selection: - Expert list: 1 Default: 1

r1099.0	CO/BO: Skip band status word / Skip band ZSW		
SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned32 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

p1101[0...n]	Skip velocity bandwidth / v_skip bandwidth		
SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: p2000 Max: 1000.000 [m/min]	Access level: 3 Function plan: 3050 Unit selection: p0505 Expert list: 1 Default: 0.000 [m/min]

p1101[0...n]	Skip speed bandwidth / n_skip bandwidth		
SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: p2000 Max: 210000.000 [rpm]	Access level: 3 Function plan: 3050 Unit selection: p0505 Expert list: 1 Default: 0.000 [rpm]

p1106[0...n]	Cl: Minimum velocity signal source / v_min s_src		
SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 3050 Unit selection: - Expert list: 1 Default: 0

p1106[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	CI: Minimum speed signal source / n_min s_src Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 3050 Unit selection: - Expert list: 1 Default: 0
p1110[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	BI: Inhibit negative direction / Inhib neg dir Changeable: T Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2505, 3040 Unit selection: - Expert list: 1 Default: 0
p1111[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	BI: Inhibit positive direction / Inhib pos dir Changeable: T Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2505, 3040 Unit selection: - Expert list: 1 Default: 0
r1112 SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	CO: Velocity setpoint after minimum limiting / v_set aft min_lim Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 3050 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r1112 SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	CO: Speed setpoint after minimum limiting / n_set aft min_lim Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 3050 Unit selection: p0505 Expert list: 1 Default: - [rpm]
p1113[0...n] SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	BI: Setpoint inversion / Setp inv Changeable: T Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2441, 2442, 2505, 3040 Unit selection: - Expert list: 1 Default: 0

r1114	CO: Setpoint after the direction limiting / Setp after limit		
SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 3001, 3040, 3050 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r1114	CO: Setpoint after the direction limiting / Setp after limit		
SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 3001, 3040, 3050 Unit selection: p0505 Expert list: 1 Default: - [rpm]
p1115	Ramp-function generator selection / RFG selection		
HLA (ESR), HLA_840 (ESR), HLA_DBSI (ESR), SERVO (ESR, ESR, Ext setp, Ext setp), SERVO_840 (ESR, ESR, Ext setp, Ext setp), SERVO_AC (ESR, ESR, Ext setp, Ext setp), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp), VECTOR, VECTOR_AC	Changeable: T Data type: Integer16 P group: Setpoints Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: 3001, 3080 Unit selection: - Expert list: 1 Default: 0
r1119	CO: Ramp-function generator setpoint at the input / RFG setp at inp		
HLA (ESR), HLA_840 (ESR), HLA_DBSI (ESR)	Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [m/min]
r1119	CO: Ramp-function generator setpoint at the input / RFG setp at inp		
SERVO (ESR, ESR, Ext setp, Ext setp, Lin, Lin, Lin), SERVO_840 (ESR, ESR, Ext setp, Ext setp, Lin, Lin, Lin), SERVO_AC (ESR, ESR, Ext setp, Ext setp, Lin, Lin, Lin), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp, Lin, Lin, Lin)	Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 3001, 3050, 3060, 3070, 6300 Unit selection: p0505 Expert list: 1 Default: - [m/min]

r1119	CO: Ramp-function generator setpoint at the input / RFG setp at inp		
SERVO (ESR, ESR, Ext setp, Ext setp), SERVO_840 (ESR, ESR, Ext setp, Ext setp), SERVO_AC (ESR, ESR, Ext setp, Ext setp), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp), VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 3001, 3050, 3060, 3070, 6300 Unit selection: p0505 Expert list: 1 Default: - [rpm]
p1120[0...n]	Ramp-function generator ramp-up time / RFG ramp-up time		
HLA (ESR), HLA_840 (ESR), HLA_DBSI (ESR)	Changeable: C2(1), T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 999999.000 [s]	Access level: 1 Function plan: 3060, 3070 Unit selection: - Expert list: 1 Default: 10.000 [s]
p1120[0...n]	Ramp-function generator ramp-up time / RFG ramp-up time		
SERVO (ESR, ESR, Ext setp, Ext setp, Lin, Lin, Lin), SERVO_840 (ESR, ESR, Ext setp, Ext setp, Lin, Lin, Lin), SERVO_AC (ESR, ESR, Ext setp, Ext setp, Lin, Lin, Lin), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp, Lin, Lin, Lin)	Changeable: C2(1), T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 999999.000 [s]	Access level: 1 Function plan: 3060, 3070 Unit selection: - Expert list: 1 Default: 10.000 [s]
p1120[0...n]	Ramp-function generator ramp-up time / RFG ramp-up time		
SERVO (ESR, ESR, Ext setp, Ext setp), SERVO_840 (ESR, ESR, Ext setp, Ext setp), SERVO_AC (ESR, ESR, Ext setp, Ext setp), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp)	Changeable: C2(1), T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 999999.000 [s]	Access level: 1 Function plan: 3060, 3070 Unit selection: - Expert list: 1 Default: 10.000 [s]
p1120[0...n]	Ramp-function generator ramp-up time / RFG ramp-up time		
VECTOR, VECTOR_AC	Changeable: C2(1), T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 999999.000 [s]	Access level: 1 Function plan: 3060, 3070 Unit selection: - Expert list: 1 Default: 10.000 [s]

p1121[0...n] HLA	Ramp-function generator ramp-down time / RFG ramp-down time Changeable: C2(1), T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 999999.000 [s]	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [s]
p1121[0...n] SERVO_840, SERVO_DBSI	Ramp-function generator ramp-down time / RFG ramp-down time Changeable: C2(1), T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 999999.000 [s]	Access level: 1 Function plan: 3060, 3070 Unit selection: - Expert list: 1 Default: 0.000 [s]
p1121[0...n] SERVO, SERVO_AC	Ramp-function generator ramp-down time / RFG ramp-down time Changeable: C2(1), T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 999999.000 [s]	Access level: 1 Function plan: 3060, 3070 Unit selection: - Expert list: 1 Default: 10.000 [s]
p1121[0...n] HLA_840, HLA_DBSI, SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Ramp-function generator ramp-down time / RFG ramp-down time Changeable: C2(1), T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 999999.000 [s]	Access level: 1 Function plan: 3060, 3070 Unit selection: - Expert list: 1 Default: 0.000 [s]
p1121[0...n] VECTOR, VECTOR_AC	Ramp-function generator ramp-down time / RFG ramp-down time Changeable: C2(1), T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 999999.000 [s]	Access level: 1 Function plan: 3060, 3070 Unit selection: - Expert list: 1 Default: 10.000 [s]

p1122[0...n]			
BI: Bypass ramp-function generator / Bypass RFG			
HLA (ESR), HLA_840 (ESR), HLA_DBSI (ESR), SERVO (ESR, ESR, Ext setp, Ext setp), SERVO_840 (ESR, ESR, Ext setp, Ext setp), SERVO_AC (ESR, ESR, Ext setp, Ext setp), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp), VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2505 Unit selection: - Expert list: 1 Default: 0
p1130[0...n]			
Ramp-function generator initial rounding-off time / RFG t_start_round			
HLA (ESR), HLA_840 (ESR), HLA_DBSI (ESR), SERVO (ESR, ESR, Ext setp, Ext setp), SERVO_840 (ESR, ESR, Ext setp, Ext setp), SERVO_AC (ESR, ESR, Ext setp, Ext setp), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp), VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 30.000 [s]	Access level: 2 Function plan: 3070 Unit selection: - Expert list: 1 Default: 0.000 [s]
p1131[0...n]			
Ramp-function generator final rounding-off time / RFG t_end_delay			
HLA (ESR), HLA_840 (ESR), HLA_DBSI (ESR), SERVO (ESR, ESR, Ext setp, Ext setp), SERVO_840 (ESR, ESR, Ext setp, Ext setp), SERVO_AC (ESR, ESR, Ext setp, Ext setp), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp), VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 30.000 [s]	Access level: 2 Function plan: 3070 Unit selection: - Expert list: 1 Default: 0.000 [s]
p1134[0...n]			
Ramp-function generator rounding-off type / RFG round-off type			
HLA (ESR), HLA_840 (ESR), HLA_DBSI (ESR), SERVO (ESR, ESR, Ext setp, Ext setp), SERVO_840 (ESR, ESR, Ext setp, Ext setp), SERVO_AC (ESR, ESR, Ext setp, Ext setp), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp), VECTOR, VECTOR_AC	Changeable: T, U Data type: Integer16 P group: Setpoints Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: 3070 Unit selection: - Expert list: 1 Default: 0

p1135[0...n] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	OFF3 ramp-down time / OFF3 t_RD Changeable: C2(1), T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 600.000 [s]	Access level: 2 Function plan: 3060, 3070 Unit selection: - Expert list: 1 Default: 0.000 [s]
p1135[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	OFF3 ramp-down time / OFF3 t_RD Changeable: C2(1), T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 600.000 [s]	Access level: 2 Function plan: 3060, 3070 Unit selection: - Expert list: 1 Default: 0.000 [s]
p1135[0...n] VECTOR, VECTOR_AC	OFF3 ramp-down time / OFF3 t_RD Changeable: C2(1), T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 600.000 [s]	Access level: 2 Function plan: 3060, 3070 Unit selection: - Expert list: 1 Default: 3.000 [s]
p1136[0...n] HLA (ESR), HLA_840 (ESR), HLA_DBSI (ESR), SERVO (ESR, ESR, Ext setp, Ext setp), SERVO_840 (ESR, ESR, Ext setp, Ext setp), SERVO_AC (ESR, ESR, Ext setp, Ext setp), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp), VECTOR, VECTOR_AC	OFF3 initial rounding-off time / RFGOFF3 t_strt_rnd Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 30.000 [s]	Access level: 2 Function plan: 3070 Unit selection: - Expert list: 1 Default: 0.000 [s]
p1137[0...n] HLA (ESR), HLA_840 (ESR), HLA_DBSI (ESR), SERVO (ESR, ESR, Ext setp, Ext setp), SERVO_840 (ESR, ESR, Ext setp, Ext setp), SERVO_AC (ESR, ESR, Ext setp, Ext setp), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp), VECTOR, VECTOR_AC	OFF3 final rounding-off time / RFG OFF3 t_end_del Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 30.000 [s]	Access level: 2 Function plan: 3070 Unit selection: - Expert list: 1 Default: 0.000 [s]

p1138[0...n]	CI: Ramp-function generator ramp-up time scaling / RFG t_{RU} scal		
HLA (ESR), HLA_840 (ESR), HLA_DBSI (ESR), SERVO (ESR, ESR, Ext setp, Ext setp), SERVO_840 (ESR, ESR, Ext setp, Ext setp), SERVO_AC (ESR, ESR, Ext setp, Ext setp), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp), VECTOR, VECTOR_AC	Changeable: T	Calculation: -	Access level: 3
	Data type: Unsigned32 / FloatingPoint32	Dynamic index: CDS, p0170	Function plan: 3060, 3070
	P group: Setpoints	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: PERCENT	Expert list: 1
	Min: -	Max: -	Default: 1
p1139[0...n]	CI: Ramp-function generator ramp-down time scaling / RFG t_{RD} scal		
HLA (ESR), HLA_840 (ESR), HLA_DBSI (ESR), SERVO (ESR, ESR, Ext setp, Ext setp), SERVO_840 (ESR, ESR, Ext setp, Ext setp), SERVO_AC (ESR, ESR, Ext setp, Ext setp), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp), VECTOR, VECTOR_AC	Changeable: T	Calculation: -	Access level: 3
	Data type: Unsigned32 / FloatingPoint32	Dynamic index: CDS, p0170	Function plan: 3060, 3070
	P group: Setpoints	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: PERCENT	Expert list: 1
	Min: -	Max: -	Default: 1
p1140[0...n]	BI: Enable ramp-function generator/inhibit ramp-function generator / Enable RFG		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T	Calculation: -	Access level: 3
	Data type: Unsigned32 / Binary	Dynamic index: CDS, p0170	Function plan: 2501
	P group: Setpoints	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: -	Max: -	Default: 1
p1140	BI: Enable ramp-function generator/inhibit ramp-function generator / Enable RFG		
TM41	Changeable: T	Calculation: -	Access level: 3
	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: 9678
	P group: Setpoints	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: -	Max: -	Default: 1
p1141[0...n]	BI: Continue ramp-function generator/freeze ramp-function generator / Continue RFG		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T	Calculation: -	Access level: 3
	Data type: Unsigned32 / Binary	Dynamic index: CDS, p0170	Function plan: 2501
	P group: Setpoints	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: -	Max: -	Default: 1

p1141 TM41	BI: Continue ramp-function generator/freeze ramp-function generator / Continue RFG Changeable: T Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9678 Unit selection: - Expert list: 1 Default: 1
p1142[0...n] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BI: Enable setpoint/inhibit setpoint / Setpoint enable Changeable: T Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2501 Unit selection: - Expert list: 1 Default: 1
p1142 TM41	BI: Enable setpoint/inhibit setpoint / Setpoint enable Changeable: T Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9674, 9678 Unit selection: - Expert list: 1 Default: 1
p1143[0...n] HLA (ESR), HLA_840 (ESR), HLA_DBSI (ESR), SERVO (ESR, ESR, Ext setp, Ext setp), SERVO_840 (ESR, ESR, Ext setp, Ext setp), SERVO_AC (ESR, ESR, Ext setp, Ext setp), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp), VECTOR, VECTOR_AC	BI: Ramp-function generator, accept setting value / RFG accept set v Changeable: T Data type: Unsigned32 / Binary P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 3060, 3070 Unit selection: - Expert list: 1 Default: 0
p1144[0...n] HLA (ESR), HLA_840 (ESR), HLA_DBSI (ESR), SERVO (ESR, ESR, Ext setp, Ext setp), SERVO_840 (ESR, ESR, Ext setp, Ext setp), SERVO_AC (ESR, ESR, Ext setp, Ext setp), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp), VECTOR, VECTOR_AC	CI: Ramp-function generator setting value / RFG setting value Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 3060, 3070 Unit selection: - Expert list: 1 Default: 0

p1145[0...n] SERVO (ESR, ESR, Ext setp, Ext setp), SERVO_840 (ESR, ESR, Ext setp, Ext setp), SERVO_AC (ESR, ESR, Ext setp, Ext setp), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp)	Ramp-function generator tracking intensity. / RFG track intens Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 50.0	Access level: 3 Function plan: 3080 Unit selection: - Expert list: 1 Default: 1.3
p1145[0...n] VECTOR, VECTOR_AC	Ramp-function generator tracking intensity. / RFG track intens Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.0	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 50.0	Access level: 3 Function plan: 3080 Unit selection: - Expert list: 1 Default: 1.3
p1148[0...n] HLA (ESR), HLA_840 (ESR), HLA_DBSI (ESR), SERVO (ESR, ESR, Ext setp, Ext setp, Lin, Lin, Lin), SERVO_840 (ESR, ESR, Ext setp, Ext setp, Lin, Lin, Lin), SERVO_AC (ESR, ESR, Ext setp, Ext setp, Lin, Lin, Lin), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp, Lin, Lin, Lin)	Ramp-function gen. tolerance for ramp-up and ramp-down active / RFG tol HL/RL act Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 10.000 [m/min]	Access level: 3 Function plan: 3060, 3070 Unit selection: p0505 Expert list: 1 Default: 0.200 [m/min]
p1148[0...n] SERVO (ESR, ESR, Ext setp, Ext setp), SERVO_840 (ESR, ESR, Ext setp, Ext setp), SERVO_AC (ESR, ESR, Ext setp, Ext setp), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp), VECTOR, VECTOR_AC	Ramp-function gen. tolerance for ramp-up and ramp-down active / RFG tol HL/RL act Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: 0.000 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 1000.000 [rpm]	Access level: 3 Function plan: 3060, 3070 Unit selection: p0505 Expert list: 1 Default: 19.800 [rpm]

r1149	CO: Ramp-function generator acceleration / RFG acceleration		
SERVO (ESR, ESR, Ext setp, Ext setp, Lin, Lin, Lin), SERVO_840 (ESR, ESR, Ext setp, Ext setp, Lin, Lin, Lin), SERVO_AC (ESR, ESR, Ext setp, Ext setp, Lin, Lin, Lin), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp, Lin, Lin, Lin)	Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [m/s ²]	Calculation: - Dynamic index: - Unit group: 22_2 Scaling: p2007 Max: - [m/s ²]	Access level: 3 Function plan: 3060, 3070 Unit selection: p0505 Expert list: 1 Default: - [m/s ²]

r1149	CO: Ramp-function generator acceleration / RFG acceleration		
HLA (ESR), HLA_840 (ESR), HLA_DBSI (ESR), SERVO (ESR, ESR, Ext setp, Ext setp), SERVO_840 (ESR, ESR, Ext setp, Ext setp), SERVO_AC (ESR, ESR, Ext setp, Ext setp), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp), VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [rev/s ²]	Calculation: - Dynamic index: - Unit group: 39_1 Scaling: p2007 Max: - [rev/s ²]	Access level: 3 Function plan: 3060, 3070 Unit selection: p0505 Expert list: 1 Default: - [rev/s ²]

r1150	CO: Ramp-function generator velocity setpoint at the output / RFG v_set at outp		
HLA (ESR), HLA_840 (ESR), HLA_DBSI (ESR), SERVO (ESR, ESR, Ext setp, Ext setp, Lin, Lin, Lin), SERVO_840 (ESR, ESR, Ext setp, Ext setp, Lin, Lin, Lin), SERVO_AC (ESR, ESR, Ext setp, Ext setp, Lin, Lin, Lin), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp, Lin, Lin, Lin)	Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 3001, 3080 Unit selection: p0505 Expert list: 1 Default: - [m/min]

r1150	CO: Ramp-function generator speed setpoint at the output / RFG n_set at outp		
SERVO (ESR, ESR, Ext setp, Ext setp), SERVO_840 (ESR, ESR, Ext setp, Ext setp), SERVO_AC (ESR, ESR, Ext setp, Ext setp), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp), VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 3001, 3080 Unit selection: p0505 Expert list: 1 Default: - [rpm]

p1151[0...n] SERVO (ESR, ESR, Ext setp, Ext setp), SERVO_840 (ESR, ESR, Ext setp, Ext setp), SERVO_AC (ESR, ESR, Ext setp, Ext setp), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp), VECTOR, VECTOR_AC	Ramp-function generator configuration / RFG config Changeable: T, U Data type: Unsigned16 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
p1152 SERVO (Ext brake), SERVO_840 (Ext brake), SERVO_AC (Ext brake), SERVO_DBSI (Ext brake), VECTOR (Ext brake), VECTOR_AC (Ext brake)	BI: Setpoint 2 enable / Setp 2 enab Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2711, 4015 Unit selection: - Expert list: 1 Default: 899.15
p1155[0...n] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CI: Speed controller speed setpoint 1 / n_ctrl n_set 1 Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 3001, 3080, 5030, 6031 Unit selection: - Expert list: 1 Default: 0
p1155[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CI: Velocity controller velocity setpoint 1 / v_ctrl v_set 1 Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 3001, 3080, 5030, 6031 Unit selection: - Expert list: 1 Default: 0
p1155 TM41	CI: TM41 encoder emulation speed setpoint 1 / Enc_emulat n_set 1 Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 9674 Unit selection: - Expert list: 1 Default: 0

p1160[0...n] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CI: Speed controller speed setpoint 2 / n_ctrl n_set 2 Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 3001, 3080 Unit selection: - Expert list: 1 Default: 0
p1160[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CI: Velocity controller velocity setpoint 2 / v_ctrl v_set 2 Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 3001, 3080 Unit selection: - Expert list: 1 Default: 0
r1169 HLA, HLA_840, HLA_DBSI	CO: Velocity controller velocity setpoints 1 and 2 / v_ctrl v_set 1/2 Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [m/min]
r1169 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Speed controller speed setpoints 1 and 2 / n_ctrl n_set 1/2 Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 3080 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r1169 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Velocity controller velocity setpoints 1 and 2 / v_ctrl n_set 1/2 Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 3080 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r1170 HLA, HLA_840, HLA_DBSI	CO: Velocity controller setpoint sum / v_ctrl setp sum Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [m/min]

r1170 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Speed controller setpoint sum / n_ctrl setp sum Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 3001, 3050, 3080, 5019, 5020 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r1170 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Velocity controller setpoint sum / v_ctrl setp sum Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 3001, 3050, 3080, 5019, 5020 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r1170 VECTOR, VECTOR_AC	CO: Speed controller setpoint sum / n_ctrl setp sum Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 3001, 3080, 6300 Unit selection: p0505 Expert list: 1 Default: - [rpm]
p1189[0...n] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Speed setpoint configuration / n_ctrl config Changeable: T, U Data type: Unsigned16 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 3080 Unit selection: - Expert list: 1 Default: 0011 bin
p1189[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity setpoint configuration / v_ctrl config Changeable: T, U Data type: Unsigned16 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 3080 Unit selection: - Expert list: 1 Default: 0011 bin
p1189 TM41	TM41 encoder simulation configuration / Enc_emulat config Changeable: T, U Data type: Unsigned16 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 9674 Unit selection: - Expert list: 1 Default: 0010 bin

p1190 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Cl: DSC position deviation XERR / DSC XERR Changeable: T Data type: Unsigned32 / Integer32 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 3001, 3090 Unit selection: - Expert list: 1 Default: 0
p1191 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Cl: DSC position controller gain KPC / DSC KPC Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 3001, 3090 Unit selection: - Expert list: 1 Default: 0
p1192[0...n] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	DSC encoder selection / DSC enc selection Changeable: T, U Data type: Integer16 P group: Setpoints Not for motor type: - Min: 1	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 3	Access level: 3 Function plan: 3090 Unit selection: - Expert list: 1 Default: 1
p1193[0...n] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	DSC encoder adaptation factor / DSC encodAdaptFact Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -1000000.00000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000000.00000	Access level: 3 Function plan: 3090 Unit selection: - Expert list: 1 Default: 1.00000
p1194 SERVO (DSC spline, Lin), SERVO_840 (DSC spline, Lin), SERVO_AC (DSC spline, Lin), SERVO_DBSI (DSC spline, Lin)	Cl: DSC control word DSC_STW / DSC_STW Changeable: T Data type: Unsigned32 / Integer16 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 3001, 3090 Unit selection: - Expert list: 1 Default: 0
p1194 SERVO (DSC spline), SERVO_840 (DSC spline), SERVO_AC (DSC spline), SERVO_DBSI (DSC spline)	Cl: DSC control word DSC_STW / DSC_STW Changeable: T Data type: Unsigned32 / Integer16 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 3001, 3090 Unit selection: - Expert list: 1 Default: 0

p1195	CI: DSC symmetrizing time constant T_SYMM / DSC T_SYMM		
SERVO (DSC spline, Lin), SERVO_840 (DSC spline, Lin), SERVO_AC (DSC spline, Lin), SERVO_DBSI (DSC spline, Lin)	Changeable: T	Calculation: -	Access level: 3
	Data type: Unsigned32 / Integer16	Dynamic index: -	Function plan: 3001, 3090
	P group: Setpoints	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: -	Max: -	Default: 0

p1195	CI: DSC symmetrizing time constant T_SYMM / DSC T_SYMM		
SERVO (DSC spline), SERVO_840 (DSC spline), SERVO_AC (DSC spline), SERVO_DBSI (DSC spline)	Changeable: T	Calculation: -	Access level: 3
	Data type: Unsigned32 / Integer16	Dynamic index: -	Function plan: 3001, 3090
	P group: Setpoints	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: -	Max: -	Default: 0

r1196	CO: DSC position setpoint / DSC x_set		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: -	Calculation: -	Access level: 4
	Data type: Integer32	Dynamic index: -	Function plan: 3090
	P group: Encoder	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: -	Max: -	Default: -

r1197	Fixed velocity setpoint number actual / n_set_fixed No act		
SERVO (Ext setp, Lin), SERVO_840 (Ext setp, Lin), SERVO_AC (Ext setp, Lin), SERVO_DBSI (Ext setp, Lin)	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned32	Dynamic index: -	Function plan: 3010
	P group: Setpoints	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: -	Max: -	Default: -

r1197	Fixed speed setpoint number actual / n_set_fixed No act		
SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned32	Dynamic index: -	Function plan: 3010
	P group: Setpoints	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: -	Max: -	Default: -

r1198.0...15	CO/BO: Control word setpoint channel / STW setpoint chan		
SERVO (Ext setp), SERVO_840 (Ext setp), SERVO_AC (Ext setp), SERVO_DBSI (Ext setp), VECTOR, VECTOR_AC	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: 2505
	P group: Setpoints	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: -	Max: -	Default: -

r1199.0...8	CO/BO: Ramp-function generator status word / RFG ZSW		
HLA (ESR), HLA_840 (ESR), HLA_DBSI (ESR), SERVO (ESR, ESR, Ext setp, Ext setp), SERVO_840 (ESR, ESR, Ext setp, Ext setp), SERVO_AC (ESR, ESR, Ext setp, Ext setp), SERVO_DBSI (ESR, ESR, Ext setp, Ext setp), VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 3001, 3080 Unit selection: - Expert list: 1 Default: -
p1200	CI: Position offset incremental/absolute / x_off inc/abs		
HLA, HLA_840, HLA_DBSI	Changeable: T, U Data type: Unsigned32 / Integer32 P group: Setpoints Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p1200[0...n]	Flying restart operating mode / FlyRest op_mode		
VECTOR, VECTOR_AC	Changeable: T, U Data type: Integer16 P group: Functions Not for motor type: REL Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 6	Access level: 2 Function plan: 6300 Unit selection: - Expert list: 1 Default: 0
p1201[0...n]	CI: Position offset incremental/absolute valid / x_off valid		
HLA, HLA_840, HLA_DBSI	Changeable: T Data type: Unsigned32 / Integer16 P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p1201[0...n]	BI: Flying restart enable signal source / Fly_res enab S_src		
VECTOR, VECTOR_AC	Changeable: T Data type: Unsigned32 / Binary P group: Functions Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1

p1202[0...n] VECTOR, VECTOR_AC	Flying restart search current / FlyRest I_srch Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: PMSM, REL Min: 10 [%] Max: 400 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 400 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100 [%]
p1203[0...n] VECTOR, VECTOR_AC	Flying restart search rate factor / FlyRst v_Srch Fact Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: PMSM, REL Min: 10 [%] Max: 4000 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 4000 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100 [%]
r1204.0...15 VECTOR, VECTOR_AC	CO/BO: Flying restart U/f control status / FlyRest Uf st Changeable: - Data type: Unsigned16 P group: Functions Not for motor type: PMSM, REL Min: - Max: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r1205.0...21 VECTOR, VECTOR_AC	CO/BO: Flying restart vector control status / FlyRest vector st Changeable: - Data type: Unsigned32 P group: Functions Not for motor type: PMSM, REL Min: - Max: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p1206[0...9] A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Automatic restart faults not active / AR fault not act Changeable: T, U Data type: Unsigned16 P group: Functions Not for motor type: - Min: 0 Max: 65535	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p1207 A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	BI: AR connection following drive object / AR connection DO Changeable: T, U Data type: Unsigned32 / Binary P group: Functions Not for motor type: - Min: - Max: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p1208[0...1] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BI: AR modification infeed / AR modification Changeable: T, U Data type: Unsigned32 / Binary P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p1210 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Automatic restart mode / AR mode Changeable: T, U Data type: Integer16 P group: Functions Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 16	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p1210 VECTOR, VECTOR_AC	Automatic restart mode / AR mode Changeable: T, U Data type: Integer16 P group: Functions Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 16	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p1210 A_INF, A_INF_840, R_INF	Automatic restart mode / AR mode Changeable: T, U Data type: Integer16 P group: Functions Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p1210 B_INF, B_INF_840	Automatic restart mode / AR mode Changeable: T, U Data type: Integer16 P group: Functions Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p1210 S_INF, S_INF_840	Automatic restart mode / AR mode Changeable: T, U Data type: Integer16 P group: Functions Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0

p1211	Automatic restart start attempts / AR start attempts		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned16 P group: Functions Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 3

p1211	Automatic restart start attempts / AR start attempts		
A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	Changeable: T, U Data type: Unsigned16 P group: Functions Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 3

p1212	Automatic restart delay time start attempts / AR t_wait start		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: 0.1 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.0 [s]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1.0 [s]

p1212	Automatic restart delay time start attempts / AR t_wait start		
A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: 0.1 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.0 [s]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1.0 [s]

p1213[0...1]	Automatic restart monitoring time / AR t_monit		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: 0.0 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000.0 [s]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [s]

p1213[0...1]	Automatic restart monitoring time / AR t_monit		
A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: 0.0 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000.0 [s]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [s]

r1214.0...15	CO/BO: Automatic restart status / AR status		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r1214.0...15	CO/BO: Automatic restart status / AR status		
A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	Changeable: - Data type: Unsigned16 P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p1215	Motor holding brake configuration / Brake config		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T Data type: Integer16 P group: Functions Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 2 Function plan: 2701, 2707, 2711 Unit selection: - Expert list: 1 Default: 0
p1216	Motor holding brake opening time / Brake t_open		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000 [ms]	Access level: 2 Function plan: 2701, 2711 Unit selection: - Expert list: 1 Default: 100 [ms]
p1217	Motor holding brake closing time / Brake t_close		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000 [ms]	Access level: 2 Function plan: 2701, 2711 Unit selection: - Expert list: 1 Default: 100 [ms]
p1218[0...1]	BI: Open motor holding brake / Open brake		
SERVO (Ext brake), SERVO_840 (Ext brake), SERVO_AC (Ext brake), SERVO_DBSI (Ext brake), VECTOR (Ext brake), VECTOR_AC (Ext brake)	Changeable: T Data type: Unsigned32 / Binary P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2707 Unit selection: - Expert list: 1 Default: 1

p1219[0...3] SERVO (Ext brake), SERVO_840 (Ext brake), SERVO_AC (Ext brake), SERVO_DBSI (Ext brake), VECTOR (Ext brake), VECTOR_AC (Ext brake)	BI: Immediately close motor holding brake / Close brake Changeable: T Data type: Unsigned32 / Binary P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2707 Unit selection: - Expert list: 1 Default: [0] 0 [1] 0 [2] 0 [3] 1229.9
p1220 SERVO (Ext brake), SERVO_840 (Ext brake), SERVO_AC (Ext brake), SERVO_DBSI (Ext brake), VECTOR (Ext brake), VECTOR_AC (Ext brake)	CI: Open motor holding brake signal source threshold / Open brake thresh Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: -	Access level: 2 Function plan: 2707 Unit selection: - Expert list: 1 Default: 1
p1221 SERVO (Ext brake), SERVO_840 (Ext brake), SERVO_AC (Ext brake), SERVO_DBSI (Ext brake), VECTOR (Ext brake), VECTOR_AC (Ext brake)	Open motor holding brake threshold / Open brake thresh Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 200.00 [%]	Access level: 2 Function plan: 2707 Unit selection: - Expert list: 1 Default: 0.00 [%]
p1222 SERVO (Ext brake), SERVO_840 (Ext brake), SERVO_AC (Ext brake), SERVO_DBSI (Ext brake), VECTOR (Ext brake), VECTOR_AC (Ext brake)	BI: Motor holding brake feedback signal brake closed / Brake feedb closed Changeable: T Data type: Unsigned32 / Binary P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2711 Unit selection: - Expert list: 1 Default: 0
p1223 SERVO (Ext brake), SERVO_840 (Ext brake), SERVO_AC (Ext brake), SERVO_DBSI (Ext brake), VECTOR (Ext brake), VECTOR_AC (Ext brake)	BI: Motor holding brake feedback signal brake open / Brake feedb open Changeable: T Data type: Unsigned32 / Binary P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2711 Unit selection: - Expert list: 1 Default: 1

p1224[0...3] SERVO (Ext brake), SERVO_840 (Ext brake), SERVO_AC (Ext brake), SERVO_DBSI (Ext brake), VECTOR (Ext brake), VECTOR_AC (Ext brake)	BI: Close motor holding brake at standstill / Brk close standst Changeable: T Data type: Unsigned32 / Binary P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2704 Unit selection: - Expert list: 1 Default: 0
p1225 SERVO (Ext brake), SERVO_840 (Ext brake), SERVO_AC (Ext brake), SERVO_DBSI (Ext brake), VECTOR (Ext brake), VECTOR_AC (Ext brake)	CI: Standstill detection threshold value / Standstill thresh Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2000 Max: -	Access level: 2 Function plan: 2704 Unit selection: - Expert list: 1 Default: 63[0]
p1226[0...n] HLA, HLA_840, HLA_DBSI	Standstill detection velocity threshold / v_standst v_thresh Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: 0.00 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 1000.00 [m/min]	Access level: 2 Function plan: - Unit selection: p0505 Expert list: 1 Default: 0.20 [m/min]
p1226[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Threshold for zero speed detection / n_standst n_thresh Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: 0.00 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.00 [rpm]	Access level: 2 Function plan: 2701, 2704 Unit selection: p0505 Expert list: 1 Default: 20.00 [rpm]
p1226[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Standstill detection velocity threshold / v_standst v_thresh Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: 0.00 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 1000.00 [m/min]	Access level: 2 Function plan: 2701, 2704 Unit selection: p0505 Expert list: 1 Default: 0.20 [m/min]
p1227 HLA, HLA_840, HLA_DBSI	Zero speed detection monitoring time / Standst_id t_monit Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 300.000 [s]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 4.000 [s]

p1227	Zero speed detection monitoring time / n_standst t_monit		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 300.000 [s]	Access level: 2 Function plan: 2701, 2704 Unit selection: - Expert list: 1 Default: 4.000 [s]
p1228	Pulse suppression delay time / Pulse suppr t_del		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 299.000 [s]	Access level: 2 Function plan: 2701, 2704 Unit selection: - Expert list: 1 Default: 0.000 [s]
r1229.1...11	CO/BO: Motor holding brake status word / Brake ZSW		
SERVO (Ext brake), SERVO_840 (Ext brake), SERVO_AC (Ext brake), SERVO_DBSI (Ext brake), VECTOR (Ext brake), VECTOR_AC (Ext brake)	Changeable: - Data type: Unsigned32 P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
p1230[0...n]	BI: Armature short-circuit / DC braking activation / ASC/DCBRK act		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned32 / Binary P group: Functions Not for motor type: RESM Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 7014, 7016, 7017 Unit selection: - Expert list: 1 Default: 0
p1231[0...n]	Armature short-circuit / DC braking configuration / ASC/DCBRK config		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: Integer16 P group: Functions Not for motor type: RESM Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 14	Access level: 1 Function plan: 7014, 7016, 7017 Unit selection: - Expert list: 1 Default: 0
p1232[0...n]	DC braking braking current / DCBRK I_brake		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: PMSM, SESM, REL, RESM Min: 0.00 [Arms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 10000.00 [Arms]	Access level: 1 Function plan: 7017 Unit selection: - Expert list: 1 Default: 0.00 [Arms]

p1232[0...n] VECTOR, VECTOR_AC	DC braking braking current / DCBRK I_brake Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: PMSM, SESM, REL, RESM Min: 0.00 [Arms]	Calculation: CALC_MOD_ALL Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 10000.00 [Arms]	Access level: 1 Function plan: 7017 Unit selection: - Expert list: 1 Default: 0.00 [Arms]
p1233[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	DC braking time / DCBRK time Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: PMSM, SESM, REL, RESM Min: 0.0 [s]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 3600.0 [s]	Access level: 1 Function plan: 7017 Unit selection: - Expert list: 1 Default: 1.0 [s]
p1234[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Speed at the start of DC braking / DCBRK n_start Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: PMSM, SESM, REL, RESM Min: 0.00 [rpm]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 210000.00 [rpm]	Access level: 1 Function plan: 7017 Unit selection: - Expert list: 1 Default: 210000.00 [rpm]
p1234[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	DC braking starting velocity / DCBRK v_start Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: PMSM, SESM, REL, RESM Min: 0.00 [m/min]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 1300.00 [m/min]	Access level: 1 Function plan: 7017 Unit selection: - Expert list: 1 Default: 1000.00 [m/min]
p1234[0...n] VECTOR, VECTOR_AC	Speed at the start of DC braking / DCBRK n_start Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: PMSM, SESM, REL, RESM Min: 0.00 [rpm]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 210000.00 [rpm]	Access level: 1 Function plan: 7017 Unit selection: - Expert list: 1 Default: 40000.00 [rpm]
p1235[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BI: External armature short-circuit contactor feedback signal / ASC ext feedback Changeable: T Data type: Unsigned32 / Binary P group: Functions Not for motor type: ASM, RESM Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0

p1236[0...n]	Ext. armature short-cct. contactor feedback signal monit. time / ASC ext t_monit		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: ASM, RESM Min: 0 [ms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 1000 [ms]	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 200 [ms]
p1237[0...n]	External armature short-circuit delay time when opening / ASC ext t_wait		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: ASM, RESM Min: 0 [ms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 1000 [ms]	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 200 [ms]
r1238	CO: Armature short-circuit external state / EASC state		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Integer16 P group: Functions Not for motor type: ASM, SESM, RESM Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6	Access level: 1 Function plan: 2610 Unit selection: - Expert list: 1 Default: -
r1239.0...13	CO/BO: Armature short-circuit / DC braking status word / ASC/DCBRK ZSW		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned32 P group: Functions Not for motor type: RESM Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
p1240[0...n]	Vdc controller or Vdc monitoring configuration / Vdc ctrl config		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: Integer16 P group: Functions Not for motor type: REL Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 9	Access level: 3 Function plan: 3082, 5650 Unit selection: - Expert list: 1 Default: 0
p1240[0...n]	Vdc controller or Vdc monitoring configuration / Vdc ctrl config		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T, U Data type: Integer16 P group: Functions Not for motor type: REL Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 6	Access level: 3 Function plan: 6220 Unit selection: - Expert list: 1 Default: 1

p1241 A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Vdc_max controller switch-in level / Vdc_max on_level Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: 70.0 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.0 [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 100.0 [%]
r1242 VECTOR (n/M), VECTOR_AC (n/M)	Vdc_max controller switch-in level / Vdc_max on_level Changeable: - Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: - [V]	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: - [V]	Access level: 3 Function plan: 6220 Unit selection: - Expert list: 1 Default: - [V]
p1243[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Vdc_max controller dynamic factor / Vdc_max dyn_factor Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: 1 [%]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000 [%]	Access level: 3 Function plan: 6220 Unit selection: - Expert list: 1 Default: 100 [%]
p1244[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	DC link voltage threshold upper / Vdc upper thresh Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: 165 [V]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1200 [V]	Access level: 3 Function plan: 5650 Unit selection: - Expert list: 1 Default: 750 [V]
p1245[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Vdc_min controller switch-in level (kinetic buffering) / Vdc_min on_level Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: 65 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 150 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 76 [%]
p1245 A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Vdc_min controller switch-in level / Vdc_min on_level Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: 100.0 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 200.0 [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 100.0 [%]

r1246 VECTOR (n/M), VECTOR_AC (n/M)	Vdc_min controller switch-in level (kinetic buffering) / Vdc_min on_level Changeable: - Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: - [V]	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: - [V]	Access level: 3 Function plan: 6220 Unit selection: - Expert list: 1 Default: - [V]
p1247[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Vdc_min controller dynamic factor (kinetic buffering) / Vdc_min dyn_factor Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: 1 [%]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000 [%]	Access level: 3 Function plan: 6220 Unit selection: - Expert list: 1 Default: 100 [%]
p1248[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	DC link voltage threshold lower / Vdc lower thresh Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: 50 [V]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000 [V]	Access level: 3 Function plan: 5650 Unit selection: - Expert list: 1 Default: 285 [V]
p1249[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Vdc_max controller speed threshold / Vdc_max n_thresh Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: 0.00 [rpm]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.00 [rpm]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: 10.00 [rpm]
p1250[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Vdc controller proportional gain / Vdc_ctrl Kp Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: 0.00 [A/V]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: 19_1 Scaling: - Max: 100.00 [A/V]	Access level: 3 Function plan: 5650 Unit selection: p0505 Expert list: 1 Default: 1.00 [A/V]
p1250[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Vdc controller proportional gain / Vdc_ctrl Kp Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: 0.00	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1.00

p1250 A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Vdc controller proportional gain / Vdc_ctrl Kp Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.00	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.00	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0.00
p1251[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Vdc controller integral time / Vdc_ctrl Tn Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: 0 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000 [ms]	Access level: 3 Function plan: 6220 Unit selection: - Expert list: 1 Default: 0 [ms]
p1252[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Vdc controller rate time / Vdc_ctrl t_rate Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: 0 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000 [ms]	Access level: 3 Function plan: 6220 Unit selection: - Expert list: 1 Default: 0 [ms]
p1254 VECTOR (n/M), VECTOR_AC (n/M)	Vdc_max controller automatic ON level detection / Vdc_max SenseOnLev Changeable: T, U Data type: Integer16 P group: Functions Not for motor type: REL Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
p1255[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Vdc_min controller time threshold / Vdc_min t_thresh Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: 0.000 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.000 [s]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [s]
p1256[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Vdc_min controller response (kinetic buffering) / Vdc_min response Changeable: T, U Data type: Integer16 P group: Functions Not for motor type: REL Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p1257[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Vdc_min controller speed threshold / Vdc_min n_thresh Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: 0.00 [rpm]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.00 [rpm]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: 50.00 [rpm]
r1258 VECTOR (n/M), VECTOR_AC (n/M)	CO: Vdc controller output / Vdc_ctrl output Changeable: - Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 6220 Unit selection: p0505 Expert list: 1 Default: - [Arms]
p1260 VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Bypass configuration / Bypass config Changeable: T, U Data type: Integer16 P group: - Not for motor type: RESM Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
r1261.0...12 VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	CO/BO: Bypass control/status word / Bypass STW / ZSW Changeable: - Data type: Unsigned32 P group: - Not for motor type: RESM Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
p1262[0...n] VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Bypass dead time / Bypass t_dead Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: RESM Min: 0.000 [s]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 20.000 [s]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 1.000 [s]
p1263 VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Debypass delay time / Debypass t_del Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: RESM Min: 0.000 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 300.000 [s]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 1.000 [s]

p1264 VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Bypass delay time / Bypass t_del Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: RESM Min: 0.000 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 300.000 [s]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 1.000 [s]
p1265 VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Bypass speed threshold / Bypass n_thresh Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: REL, RESM Min: 0.00 [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: 210000.00 [rpm]	Access level: 2 Function plan: - Unit selection: p0505 Expert list: 1 Default: 1480.00 [rpm]
p1266 VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	BI: Bypass control command / Bypass command Changeable: T, U Data type: Unsigned32 / Binary P group: - Not for motor type: RESM Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p1267 VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Bypass changeover source configuration / Chngov_src config Changeable: T, U Data type: Unsigned8 P group: - Not for motor type: RESM Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
p1268 VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	BI: Bypass feedback synchronization completed / FS sync compl Changeable: T, U Data type: Unsigned32 / Binary P group: - Not for motor type: RESM Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 3819.2
p1269[0...1] VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	BI: Bypass switch feedback signal / Bypass FS Changeable: T, U Data type: Unsigned32 / Binary P group: - Not for motor type: RESM Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p1270[0...n] VECTOR, VECTOR_AC	Flying restart configuration / Fly restart config Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: PMSM, SESM, REL, RESM Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
p1271[0...n] VECTOR, VECTOR_AC	Flying restart maximum frequency for the inhibited direction / FlyRes f_max dir Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 650 [Hz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0 [Hz]
p1272 VECTOR, VECTOR_AC	Simulation mode / Simulation mode Changeable: T Data type: Integer16 P group: Functions Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p1274[0...1] VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Bypass switch monitoring time / Switch t_monit Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: RESM Min: 0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 5000 [ms]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 1000 [ms]
p1275 SERVO (Ext brake), SERVO_840 (Ext brake), SERVO_AC (Ext brake), SERVO_DBSI (Ext brake), VECTOR (Ext brake), VECTOR_AC (Ext brake)	Motor holding brake control word / Brake STW Changeable: T, U Data type: Unsigned32 P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 bin
p1276 SERVO (Ext brake), SERVO_840 (Ext brake), SERVO_AC (Ext brake), SERVO_DBSI (Ext brake), VECTOR (Ext brake), VECTOR_AC (Ext brake)	Motor holding brake standstill detection bypass / Brk standst bypass Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 300.000 [s]	Access level: 2 Function plan: 2704 Unit selection: - Expert list: 1 Default: 300.000 [s]

p1277 SERVO (Ext brake), SERVO_840 (Ext brake), SERVO_AC (Ext brake), SERVO_DBSI (Ext brake), VECTOR (Ext brake), VECTOR_AC (Ext brake)	Motor holding brake braking threshold delay exceeded / Del thresh exceed Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 300.000 [s]	Access level: 2 Function plan: 2707 Unit selection: - Expert list: 1 Default: 0.000 [s]
p1278 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Brake control diagnostics evaluation / Brake diagnostics Changeable: T, U Data type: Integer16 P group: Functions Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p1279[0...3] SERVO (Ext brake), SERVO_840 (Ext brake), SERVO_AC (Ext brake), SERVO_DBSI (Ext brake), VECTOR (Ext brake), VECTOR_AC (Ext brake)	BI: Motor holding brake OR/AND logic operation / Brake OR AND Changeable: T Data type: Unsigned32 / Binary P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2707 Unit selection: - Expert list: 1 Default: 0
p1280[0...n] VECTOR, VECTOR_AC	Vdc controller or Vdc monitoring configuration (U/f) / Vdc_ctr config U/f Changeable: T, U Data type: Integer16 P group: Functions Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 6	Access level: 3 Function plan: 6300, 6320 Unit selection: - Expert list: 1 Default: 1
p1281[0...n] VECTOR, VECTOR_AC	Vdc controller configuration / Vdc ctrl config Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
r1282 VECTOR, VECTOR_AC	Vdc_max controller switch-in level (U/f) / Vdc_max on_level Changeable: - Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: - [V]	Access level: 3 Function plan: 6320 Unit selection: - Expert list: 1 Default: - [V]

p1283[0...n]	Vdc_max controller dynamic factor (U/f) / Vdc_max dyn_factor		
VECTOR, VECTOR_AC	Changeable: T, U	Calculation: CALC_MOD_CON	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 6320
	P group: Functions	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	1 [%]	10000 [%]	100 [%]

p1284[0...n]	Vdc_max controller time threshold (U/f) / Vdc_max t_thresh		
VECTOR, VECTOR_AC	Changeable: T, U	Calculation: CALC_MOD_ALL	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: -
	P group: Functions	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.000 [s]	300.000 [s]	4.000 [s]

p1285[0...n]	Vdc_min controller switch-in level (kinetic buffering) (U/f) / Vdc_min on_level		
VECTOR, VECTOR_AC	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: -
	P group: Functions	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	65 [%]	150 [%]	76 [%]

r1286	Vdc_min controller switch-in level (kinetic buffering) (U/f) / Vdc_min on_level		
VECTOR, VECTOR_AC	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 6320
	P group: Functions	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: p2001	Expert list: 1
	Min:	Max:	Default:
	- [V]	- [V]	- [V]

p1287[0...n]	Vdc_min controller dynamic factor (kinetic buffering) (U/f) / Vdc_min dyn_factor		
VECTOR, VECTOR_AC	Changeable: T, U	Calculation: CALC_MOD_CON	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 6320
	P group: Functions	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	1 [%]	10000 [%]	100 [%]

p1288[0...n]	Vdc_max controller feedback coupling factor ramp-fct. gen. (U/f) / Vdc_max factor RFG		
VECTOR, VECTOR_AC	Changeable: T, U	Calculation: -	Access level: 4
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: -
	P group: Functions	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.000	100.000	0.500

p1289[0...n] VECTOR, VECTOR_AC	Vdc_max controller speed threshold (U/f) / Vdc_max n_thresh Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: 0.00 [rpm]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.00 [rpm]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: 10.00 [rpm]
p1290[0...n] VECTOR, VECTOR_AC	Vdc controller proportional gain (U/f) / Vdc_ctrl Kp Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: 0.00	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00	Access level: 3 Function plan: 6320 Unit selection: - Expert list: 1 Default: 1.00
p1291[0...n] VECTOR, VECTOR_AC	Vdc controller integral time (U/f) / Vdc_ctrl Tn Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000 [ms]	Access level: 3 Function plan: 6320 Unit selection: - Expert list: 1 Default: 40 [ms]
p1292[0...n] VECTOR, VECTOR_AC	Vdc controller rate time (U/f) / Vdc_ctrl t_rate Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: 0 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000 [ms]	Access level: 3 Function plan: 6320 Unit selection: - Expert list: 1 Default: 10 [ms]
p1293[0...n] VECTOR, VECTOR_AC	Vdc min controller output limit (U/f) / Vdc_min outp_lim Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: 0.00 [Hz]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 600.00 [Hz]	Access level: 3 Function plan: 6320 Unit selection: - Expert list: 1 Default: 10.00 [Hz]
p1294 VECTOR, VECTOR_AC	Vdc_max controller automatic detection ON signal level (U/f) / Vdc_max SenseOnLev Changeable: T, U Data type: Integer16 P group: Functions Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p1295[0...n] VECTOR, VECTOR_AC	Vdc_min controller time threshold (U/f) / Vdc_min t_thresh Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.000 [s]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [s]
p1296[0...n] VECTOR, VECTOR_AC	Vdc_min controller response (kinetic buffering) (U/f / Vdc_min response Changeable: T, U Data type: Integer16 P group: Functions Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p1297[0...n] VECTOR, VECTOR_AC	Vdc_min controller speed threshold (U/f) / Vdc_min n_thresh Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: 0.00 [rpm]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.00 [rpm]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: 50.00 [rpm]
r1298 VECTOR, VECTOR_AC	CO: Vdc controller output (U/f) / Vdc_ctrl output Changeable: - Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 6320 Unit selection: p0505 Expert list: 1 Default: - [rpm]
p1300[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Open-loop/closed-loop control operating mode / Op/cl-lp ctrl_mode Changeable: C2(1), T Data type: Integer16 P group: V/f open-loop control Not for motor type: - Min: 20	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 23	Access level: 2 Function plan: 5060, 8012 Unit selection: - Expert list: 1 Default: 21
p1300[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Open-loop/closed-loop control operating mode / Op/cl-lp ctrl_mode Changeable: C2(1), T Data type: Integer16 P group: V/f open-loop control Not for motor type: - Min: 20	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 23	Access level: 2 Function plan: 5060, 8012 Unit selection: - Expert list: 1 Default: 21

p1300[0...n] VECTOR, VECTOR_AC	Open-loop/closed-loop control operating mode / Op/cl-lp ctrl_mode Changeable: C2(1), T Data type: Integer16 P group: V/f open-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 19	Access level: 2 Function plan: 6300, 6301, 8012 Unit selection: - Expert list: 1 Default: 0
p1300[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Open-loop/closed-loop control operating mode / Op/cl-lp ctrl_mode Changeable: C2(1), T Data type: Integer16 P group: V/f open-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 23	Access level: 2 Function plan: 6300, 6301, 8012 Unit selection: - Expert list: 1 Default: 20
p1302[0...n] VECTOR, VECTOR_AC	U/f control configuration / U/f config Changeable: T Data type: Unsigned16 P group: V/f open-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 bin
p1310[0...n] VECTOR, VECTOR_AC	Starting current (voltage boost) permanent / I_start (Ua) perm Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.0 [%]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 250.0 [%]	Access level: 2 Function plan: 6300, 6301 Unit selection: - Expert list: 1 Default: 50.0 [%]
p1311[0...n] VECTOR, VECTOR_AC	Starting current (voltage boost) when accelerating / I_start accel Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 250.0 [%]	Access level: 2 Function plan: 6300, 6301 Unit selection: - Expert list: 1 Default: 0.0 [%]
p1312[0...n] VECTOR, VECTOR_AC	Starting current (voltage boost) when starting / I_start start Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 250.0 [%]	Access level: 2 Function plan: 6300, 6301 Unit selection: - Expert list: 1 Default: 0.0 [%]

r1315 VECTOR, VECTOR_AC	Voltage boost total / U_boost total Changeable: - Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: - [Vrms]	Access level: 3 Function plan: 6301 Unit selection: - Expert list: 1 Default: - [Vrms]
p1317[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	U/f control activation / Uf act Changeable: T Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: 5019, 5730 Unit selection: - Expert list: 1 Default: 0
p1318[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	U/f control ramp-up/ramp-down time / Uf t_rmp-up_rmp-dn Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 999999.000 [s]	Access level: 3 Function plan: 5300 Unit selection: - Expert list: 1 Default: 10.000 [s]
p1319[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	U/f control voltage at zero frequency / Uf U at f=0 Hz Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.0 [Vrms]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.0 [Vrms]	Access level: 3 Function plan: 5300 Unit selection: - Expert list: 1 Default: 0.0 [Vrms]
p1320[0...n] VECTOR, VECTOR_AC	U/f control programmable characteristic frequency 1 / Uf char f1 Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.00 [Hz]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 3000.00 [Hz]	Access level: 3 Function plan: 6301 Unit selection: - Expert list: 1 Default: 0.00 [Hz]
p1321[0...n] VECTOR, VECTOR_AC	U/f control programmable characteristic voltage 1 / Uf char U1 Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.0 [Vrms]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.0 [Vrms]	Access level: 3 Function plan: 6301 Unit selection: - Expert list: 1 Default: 0.0 [Vrms]

p1322[0...n] VECTOR, VECTOR_AC	U/f control programmable characteristic frequency 2 / Uf char f2 Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.00 [Hz]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 3000.00 [Hz]	Access level: 3 Function plan: 6301 Unit selection: - Expert list: 1 Default: 0.00 [Hz]
p1323[0...n] VECTOR, VECTOR_AC	U/f control programmable characteristic voltage 2 / Uf char U2 Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.0 [Vrms]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.0 [Vrms]	Access level: 3 Function plan: 6301 Unit selection: - Expert list: 1 Default: 0.0 [Vrms]
p1324[0...n] VECTOR, VECTOR_AC	U/f control programmable characteristic frequency 3 / Uf char f3 Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.00 [Hz]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 3000.00 [Hz]	Access level: 3 Function plan: 6301 Unit selection: - Expert list: 1 Default: 0.00 [Hz]
p1325[0...n] VECTOR, VECTOR_AC	U/f control programmable characteristic voltage 3 / Uf char U3 Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.0 [Vrms]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.0 [Vrms]	Access level: 3 Function plan: 6301 Unit selection: - Expert list: 1 Default: 0.0 [Vrms]
p1326[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	U/f control characteristic frequency / Uf char f Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.00 [Hz]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.00 [Hz]	Access level: 3 Function plan: 5300 Unit selection: - Expert list: 1 Default: 0.00 [Hz]
p1326[0...n] VECTOR, VECTOR_AC	U/f control programmable characteristic frequency 4 / Uf char f4 Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.00 [Hz]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.00 [Hz]	Access level: 3 Function plan: 6301 Unit selection: - Expert list: 1 Default: 0.00 [Hz]

p1327[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	U/f control characteristic voltage / Uf char U Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.0 [Vrms]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.0 [Vrms]	Access level: 3 Function plan: 5300 Unit selection: - Expert list: 1 Default: 0.0 [Vrms]
p1327[0...n] VECTOR, VECTOR_AC	U/f control programmable characteristic voltage 4 / Uf char U4 Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.0 [Vrms]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.0 [Vrms]	Access level: 3 Function plan: 6301 Unit selection: - Expert list: 1 Default: 0.0 [Vrms]
p1330[0...n] VECTOR, VECTOR_AC	CI: U/f control independent voltage setpoint / Uf U_set independ. Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2001 Max: -	Access level: 3 Function plan: 6301 Unit selection: - Expert list: 1 Default: 0
p1331[0...n] VECTOR, VECTOR_AC	Voltage limiting / U_lim Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: 50.00 [Vrms]	Calculation: - Dynamic index: DDS, p0180 Unit group: 5_1 Scaling: - Max: 2000.00 [Vrms]	Access level: 3 Function plan: 6300 Unit selection: p0505 Expert list: 1 Default: 1000.00 [Vrms]
p1333[0...n] VECTOR, VECTOR_AC	U/f control FCC starting frequency / U/f FCC f_start Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.00 [Hz]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 3000.00 [Hz]	Access level: 3 Function plan: 6301 Unit selection: - Expert list: 1 Default: 0.00 [Hz]
p1334[0...n] VECTOR, VECTOR_AC	U/f control slip compensation starting frequency / Slip comp start Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.00 [Hz]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 3000.00 [Hz]	Access level: 3 Function plan: 6310 Unit selection: - Expert list: 1 Default: 0.00 [Hz]

p1335[0...n] VECTOR, VECTOR_AC	Slip compensation scaling / Slip comp scal Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: PMSM, REL, RESM Min: 0.0 [%]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 600.0 [%]	Access level: 2 Function plan: 6300, 6310 Unit selection: - Expert list: 1 Default: 0.0 [%]
p1336[0...n] VECTOR, VECTOR_AC	Slip compensation limit value / Slip comp lim val Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: PMSM, REL, RESM Min: 0.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 600.00 [%]	Access level: 2 Function plan: 6310 Unit selection: - Expert list: 1 Default: 250.00 [%]
r1337 VECTOR, VECTOR_AC	CO: Actual slip compensation / Slip comp act val Changeable: - Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: PMSM, REL, RESM Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: 6310 Unit selection: - Expert list: 1 Default: - [%]
p1338[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	U/f mode resonance damping gain / Uf Res_damp gain Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.00	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00	Access level: 3 Function plan: 5300 Unit selection: - Expert list: 1 Default: 1.00
p1338[0...n] VECTOR, VECTOR_AC	U/f mode resonance damping gain / Uf Res_damp gain Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.00	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00	Access level: 3 Function plan: 6300, 6310 Unit selection: - Expert list: 1 Default: 0.00
p1339[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	U/f mode resonance damping filter time constant / Uf Res_damp T Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 1.00 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000.00 [ms]	Access level: 3 Function plan: 5300 Unit selection: - Expert list: 1 Default: 20.00 [ms]

p1339[0...n] VECTOR, VECTOR_AC	U/f mode resonance damping filter time constant / Uf Res_damp T Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 1.00 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000.00 [ms]	Access level: 3 Function plan: 6310 Unit selection: - Expert list: 1 Default: 20.00 [ms]
p1340[0...n] VECTOR, VECTOR_AC	I_max frequency controller proportional gain / I_max_ctrl Kp Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.000	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 0.500	Access level: 3 Function plan: 6300 Unit selection: - Expert list: 1 Default: 0.000
p1341[0...n] VECTOR, VECTOR_AC	I_max frequency controller integral time / I_max_ctrl Tn Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.000 [s]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 50.000 [s]	Access level: 3 Function plan: 6300 Unit selection: - Expert list: 1 Default: 0.300 [s]
r1343 VECTOR, VECTOR_AC	CO: I_max controller frequency output / I_max_ctrl f_outp Changeable: - Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 6300 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r1344 VECTOR, VECTOR_AC	I_max controller voltage output / I_max_ctrl U_outp Changeable: - Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: 5_1 Scaling: p2001 Max: - [Vrms]	Access level: 3 Function plan: 6300 Unit selection: p0505 Expert list: 1 Default: - [Vrms]
p1345[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	DC braking proportional gain / DCBRK Kp Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.000	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100000.000	Access level: 3 Function plan: 6300, 7017 Unit selection: - Expert list: 1 Default: 0.000

p1345[0...n]	I_max voltage controller proportional gain / I_max_U_ctrl Kp		
VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.000	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100000.000	Access level: 3 Function plan: 6300, 7017 Unit selection: - Expert list: 1 Default: 0.000

p1346[0...n]	DC braking integral time / DCBRK Tn		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.000 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 50.000 [ms]	Access level: 3 Function plan: 6300, 7017 Unit selection: - Expert list: 1 Default: 0.030 [ms]

p1346[0...n]	I_max voltage controller integral time / I_max_U_ctrl Tn		
VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.000 [s]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 50.000 [s]	Access level: 3 Function plan: 6300, 7017 Unit selection: - Expert list: 1 Default: 0.030 [s]

r1348	CO: U/f control Eco factor actual value / Uf Eco fac act v		
VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 4 Function plan: 6300, 6301 Unit selection: - Expert list: 1 Default: - [%]

p1349[0...n]	Maximum frequency / Uf res_damp f_max		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.00 [Hz]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 3000.00 [Hz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 3000.00 [Hz]

p1349[0...n]	Maximum frequency / Uf res_damp f_max		
VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.00 [Hz]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 3000.00 [Hz]	Access level: 3 Function plan: 6310 Unit selection: - Expert list: 1 Default: 0.00 [Hz]

p1350[0...n] VECTOR, VECTOR_AC	U/f control soft start / U/f soft start Changeable: T, U Data type: Integer16 P group: V/f open-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: 6300 Unit selection: - Expert list: 1 Default: 0
p1351[0...n] VECTOR, VECTOR_AC	CO: Motor holding brake starting frequency / Brake f_start Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: REL Min: -300.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: PERCENT Max: 300.00 [%]	Access level: 3 Function plan: 6310 Unit selection: - Expert list: 1 Default: 0.00 [%]
p1356[0...n] VECTOR, VECTOR_AC	CI: U/f control angular setpoint / Uf ang setpoint Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2005 Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p1358[0...n] VECTOR, VECTOR_AC	Angular difference symmetrizing actual angle / Sym act angle Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
r1359 VECTOR, VECTOR_AC	CO: Angular difference / Angular difference Changeable: - Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: - [°]	Calculation: - Dynamic index: - Unit group: - Scaling: p2005 Max: - [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [°]
p1360 VECTOR, VECTOR_AC	Braking chopper braking resistor cold / Br_chop R cold Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.000 [ohm]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 10.000 [ohm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [ohm]

p1362[0...1] VECTOR, VECTOR_AC	Braking chopper activation threshold / Br_chop thresh Changeable: T, U Data type: Unsigned16 P group: V/f open-loop control Not for motor type: - Min: 0 [V]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 1158 [V]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: [0] 0 [V] [1] 60 [V]
r1363 VECTOR, VECTOR_AC	CO: Braking chopper output voltage / Br_chop U_output Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: 5_1 Scaling: p2001 Max: - [Vrms]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [Vrms]
p1364 VECTOR, VECTOR_AC	Braking chopper resistor asymmetry / Br_chop R asym Changeable: T, U Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: 100.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 25.00 [%]
r1369[0] VECTOR, VECTOR_AC	CO: Phase current actual value filtered / I_ph act val filt Changeable: - Data type: FloatingPoint32 P group: V/f open-loop control Not for motor type: - Min: - [A]	Calculation: - Dynamic index: - Unit group: 6_5 Scaling: p2002 Max: - [A]	Access level: 3 Function plan: 6300 Unit selection: p0505 Expert list: 1 Default: - [A]
p1381[0...n] VECTOR, VECTOR_AC	U/f control modulation limit reduction / U/f mod_lim reduce Changeable: T, U Data type: FloatingPoint32 P group: Modulation Not for motor type: - Min: 0.0 [%]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 40.0 [%]	Access level: 3 Function plan: 6723 Unit selection: - Expert list: 1 Default: 0.0 [%]

p1400[0...n] HLA, HLA_840, HLA_DBSI	Closed-loop control configuration / Ctrl config	Changeable: T, U Data type: Unsigned32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 4965 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
p1400[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Speed control configuration / n_ctrl config	Changeable: T, U Data type: Unsigned32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 5019, 5490 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0011 1010 0000 bin
p1400[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity control configuration / v_ctrl config	Changeable: T, U Data type: Unsigned32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 5019, 5490 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0011 1010 0000 bin
p1400[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Speed control configuration / n_ctrl config	Changeable: T, U Data type: Unsigned32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 6490 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 1000 0000 0010 0001 bin
p1401[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Flux control configuration / Flux ctrl config	Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 6491 Unit selection: - Expert list: 1 Default: 0000 0000 0000 1110 bin

p1402[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Closed-loop current control and motor model configuration / I_ctrl config Changeable: T Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0100 bin
p1402[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Closed-loop current control and motor model configuration / I_ctrl config Changeable: T Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0100 bin
p1402[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Closed-loop current control and motor model configuration / I_ctrl config Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0001 bin
p1404[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Encoderless operation changeover speed / Encoderl op n_chg Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.00 [rpm]	Access level: 3 Function plan: 5019, 5060 Unit selection: p0505 Expert list: 1 Default: 210000.00 [rpm]
p1404[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Encoderless operation changeover velocity / Encoderl op v_chg Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 1000.00 [m/min]	Access level: 3 Function plan: 5019, 5060 Unit selection: p0505 Expert list: 1 Default: 1000.00 [m/min]
r1406.8...12 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO/BO: Control word speed controller / STW n_ctrl Changeable: - Data type: Unsigned16 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2520 Unit selection: - Expert list: 1 Default: -

r1406.8...12 HLA, HLA_840, HLA_DBSI, SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO/BO: Control word velocity controller / STW v_ctrl Changeable: - Data type: Unsigned16 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2520 Unit selection: - Expert list: 1 Default: -
r1406.4...15 VECTOR (n/M), VECTOR_AC (n/M)	CO/BO: Control word speed controller / STW n_ctrl Changeable: - Data type: Unsigned16 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2520 Unit selection: - Expert list: 1 Default: -
r1407.0...20 HLA, HLA_840, HLA_DBSI	CO/BO: Status word controller / ZSW ctrl Changeable: - Data type: Unsigned32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r1407.0...26 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO/BO: Status word speed controller / ZSW n_ctrl Changeable: - Data type: Unsigned32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2522 Unit selection: - Expert list: 1 Default: -
r1407.0...26 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO/BO: Status word velocity controller / ZSW v_ctrl Changeable: - Data type: Unsigned32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2522 Unit selection: - Expert list: 1 Default: -
r1407.0...27 VECTOR (n/M), VECTOR_AC (n/M)	CO/BO: Status word speed controller / ZSW n_ctrl Changeable: - Data type: Unsigned32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2522 Unit selection: - Expert list: 1 Default: -

r1408.0...9 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO/BO: Status word current controller / ZSW I_ctrl Changeable: - Data type: Unsigned16 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2530, 5040 Unit selection: - Expert list: 1 Default: -
r1408.0...15 VECTOR (n/M), VECTOR_AC (n/M)	CO/BO: Status word current controller / ZSW I_ctrl Changeable: - Data type: Unsigned16 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2530 Unit selection: - Expert list: 1 Default: -
p1409[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Speed control extended configuration / n_ctrl ext config Changeable: C1(3) Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
p1409[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity control extended configuration / v_ctrl ext config Changeable: C1(3) Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
p1412[0...n] TM41	TM41 increm. encoder emulation, speed setpoint filter deadtime / n_set dead time Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1.000 [ms]	Access level: 3 Function plan: 9674 Unit selection: - Expert list: 1 Default: 0.000 [ms]
p1413[0...n] HLA, HLA_840, HLA_DBSI	Velocity actual value filter activation / v_act_filt act Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 0000 bin

p1413[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Speed actual value filter activation / n_act_filt act Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 5040, 5042, 5210 Unit selection: - Expert list: 1 Default: 0000 bin
p1413[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity actual value filter activation / v_act_filt act Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 5040, 5042, 5210 Unit selection: - Expert list: 1 Default: 0000 bin
p1414[0...n] HLA, HLA_840, HLA_DBSI	Velocity setpoint filter activation / v_set_filt act Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 0000 bin
p1414[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Speed setpoint filter activation / n_set_filt act Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 5020 Unit selection: - Expert list: 1 Default: 0000 bin
p1414[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity setpoint filter activation / v_set_filt act Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 5020 Unit selection: - Expert list: 1 Default: 0000 bin
p1414[0...n] TM41	TM41 incr. encoder emulation speed setpoint filter activation / n_set_filt act Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9674 Unit selection: - Expert list: 1 Default: 0000 bin

p1415[0...n] HLA, HLA_840, HLA_DBSI	Velocity setpoint filter 1 type / v_setp_filt 1 type Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: REL Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 0
p1415[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Speed setpoint filter 1 type / n_set_filt 1 type Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: REL Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: 5020 Unit selection: - Expert list: 1 Default: 0
p1415[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity setpoint filter 1 type / v_setp_filt 1 type Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: REL Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: 5020 Unit selection: - Expert list: 1 Default: 0
p1416[0...n] HLA, HLA_840, HLA_DBSI	Velocity setpoint filter 1 time constant / v_set_filt 1 T Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5000.00 [ms]	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 0.00 [ms]
p1416[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Speed setpoint filter 1 time constant / n_set_filt 1 T Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5000.00 [ms]	Access level: 3 Function plan: 5020 Unit selection: - Expert list: 1 Default: 0.00 [ms]
p1416[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity setpoint filter 1 time constant / v_set_filt 1 T Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5000.00 [ms]	Access level: 3 Function plan: 5020 Unit selection: - Expert list: 1 Default: 0.00 [ms]

p1416[0...n]	Speed setpoint filter 1 time constant / n_set_filt 1 T		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 6020, 6030
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [ms]	5000.00 [ms]	0.00 [ms]

p1417[0...n]	Velocity setpoint filter 1 denominator natural frequency / v_set_filt1 fn_den		
HLA, HLA_840, HLA_DBSI	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 4965
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.5 [Hz]	16000.0 [Hz]	2000.0 [Hz]

p1417[0...n]	Speed setpoint filter 1 denominator natural frequency / n_set_filt1 fn_den		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5020
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.5 [Hz]	16000.0 [Hz]	2000.0 [Hz]

p1417[0...n]	Velocity setpoint filter 1 denominator natural frequency / v_set_filt1 fn_den		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5020
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.5 [Hz]	16000.0 [Hz]	2000.0 [Hz]

p1417[0...n]	TM41 Speed setpoint filter 1 denominator natural frequency / n_set_filt1 fn_den		
TM41	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 9674
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.5 [Hz]	16000.0 [Hz]	2000.0 [Hz]

p1418[0...n]	Velocity setpoint filter 1 denominator damping / v_set_filt 1 D_den		
HLA, HLA_840, HLA_DBSI	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 4965
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.001	10.000	0.700

p1418[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Speed setpoint filter 1 denominator damping / n_set_filt 1 D_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.001	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 5020 Unit selection: - Expert list: 1 Default: 0.700
p1418[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity setpoint filter 1 denominator damping / v_set_filt 1 D_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.001	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 5020 Unit selection: - Expert list: 1 Default: 0.700
p1418[0...n] TM41	TM41 Speed setpoint filter 1 denominator damping / n_set_filt 1 D_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.001	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1.000	Access level: 3 Function plan: 9674 Unit selection: - Expert list: 1 Default: 0.700
p1419[0...n] HLA, HLA_840, HLA_DBSI	Velocity setpoint filter 1 numerator natural frequency / v_set_filt1 fn_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 2000.0 [Hz]
p1419[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Speed setpoint filter 1 numerator natural frequency / n_set_filt1 fn_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 5020 Unit selection: - Expert list: 1 Default: 2000.0 [Hz]
p1419[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity setpoint filter 1 numerator natural frequency / v_set_filt1 fn_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 5020 Unit selection: - Expert list: 1 Default: 2000.0 [Hz]

p1420[0...n] HLA, HLA_840, HLA_DBSI	Velocity setpoint filter 1 numerator damping / v_set_filt 1 D_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 0.700
p1420[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Speed setpoint filter 1 numerator damping / n_set_filt 1 D_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 5020 Unit selection: - Expert list: 1 Default: 0.700
p1420[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity setpoint filter 1 numerator damping / v_set_filt 1 D_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 5020 Unit selection: - Expert list: 1 Default: 0.700
p1421[0...n] HLA, HLA_840, HLA_DBSI	Velocity setpoint filter 2 type / v_setp_filt 2 type Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: REL Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 0
p1421[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Speed setpoint filter 2 type / n_set_filt 2 type Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: REL Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: 5020 Unit selection: - Expert list: 1 Default: 0
p1421[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity setpoint filter 2 type / v_setp_filt 2 type Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: REL Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: 5020 Unit selection: - Expert list: 1 Default: 0

p1422[0...n] HLA, HLA_840, HLA_DBSI	Velocity setpoint filter 2 time constant / v_set_filt 2 T Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5000.00 [ms]	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 0.00 [ms]
p1422[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Speed setpoint filter 2 time constant / n_set_filt 2 T Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5000.00 [ms]	Access level: 3 Function plan: 5020 Unit selection: - Expert list: 1 Default: 0.00 [ms]
p1422[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity setpoint filter 2 time constant / v_set_filt 2 T Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5000.00 [ms]	Access level: 3 Function plan: 5020 Unit selection: - Expert list: 1 Default: 0.00 [ms]
p1423[0...n] HLA, HLA_840, HLA_DBSI	Velocity setpoint filter 2 denominator natural frequency / v_set_filt2 fn_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 2000.0 [Hz]
p1423[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Speed setpoint filter 2 denominator natural frequency / n_set_filt2 fn_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 5020 Unit selection: - Expert list: 1 Default: 2000.0 [Hz]
p1423[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity setpoint filter 2 denominator natural frequency / v_set_filt2 fn_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 5020 Unit selection: - Expert list: 1 Default: 2000.0 [Hz]

p1424[0...n]	Velocity setpoint filter 2 denominator damping / v_set_filt 2 D_den		
HLA, HLA_840, HLA_DBSI	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 4965
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.001	10.000	0.700

p1424[0...n]	Speed setpoint filter 2 denominator damping / n_set_filt 2 D_den		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5020
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.001	10.000	0.700

p1424[0...n]	Velocity setpoint filter 2 denominator damping / v_set_filt 2 D_den		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5020
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.001	10.000	0.700

p1425[0...n]	Velocity setpoint filter 2 numerator natural frequency / v_set_filt2 fn_num		
HLA, HLA_840, HLA_DBSI	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 4965
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.5 [Hz]	16000.0 [Hz]	2000.0 [Hz]

p1425[0...n]	Speed setpoint filter 2 numerator natural frequency / n_set_filt2 fn_num		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5020
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.5 [Hz]	16000.0 [Hz]	2000.0 [Hz]

p1425[0...n]	Velocity setpoint filter 2 numerator natural frequency / v_set_filt2 fn_num		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5020
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.5 [Hz]	16000.0 [Hz]	2000.0 [Hz]

p1426[0...n] HLA, HLA_840, HLA_DBSI	Velocity setpoint filter 2 numerator damping / v_set_filt 2 D_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 0.700
p1426[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Speed setpoint filter 2 numerator damping / n_set_filt 2 D_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 5020 Unit selection: - Expert list: 1 Default: 0.700
p1426[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity setpoint filter 2 numerator damping / v_set_filt 2 D_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 5020 Unit selection: - Expert list: 1 Default: 0.700
p1427[0...n] SERVO (DSC spline, Lin), SERVO_840 (DSC spline, Lin), SERVO_AC (DSC spline, Lin), SERVO_DBSI (DSC spline, Lin)	DSC symmetrizing time constant additive T_SYMM_ADD / DSC T_SYMM_ADD Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000.00 [ms]	Access level: 3 Function plan: 3090 Unit selection: - Expert list: 1 Default: 0.00 [ms]
p1427[0...n] SERVO (DSC spline), SERVO_840 (DSC spline), SERVO_AC (DSC spline), SERVO_DBSI (DSC spline)	DSC symmetrizing time constant additive T_SYMM_ADD / DSC T_SYMM_ADD Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000.00 [ms]	Access level: 3 Function plan: 3090 Unit selection: - Expert list: 1 Default: 0.00 [ms]
p1428[0...n] HLA, HLA_840, HLA_DBSI	Velocity pre-control balancing dead time / n_prectrBal t_dead Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 3.0	Access level: 3 Function plan: 5030, 5042, 5210 Unit selection: - Expert list: 1 Default: 0.0

p1428[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Speed pre-control balancing dead time / n_prectrBal t_dead Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2.0	Access level: 3 Function plan: 5030, 5042, 5210 Unit selection: - Expert list: 1 Default: 0.0
p1428[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity pre-control balancing dead time / n_prectrBal t_dead Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2.0	Access level: 3 Function plan: 5030, 5042, 5210 Unit selection: - Expert list: 1 Default: 0.0
p1428[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Speed pre-control balancing dead time / n_prectrBal t_dead Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 3.0	Access level: 3 Function plan: 6031 Unit selection: - Expert list: 1 Default: 0.0
p1429[0...n] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Speed pre-control balancing time constant / n_prectr bal T Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.00 [ms]	Access level: 3 Function plan: 5030, 5042, 5210, 6031 Unit selection: - Expert list: 1 Default: 0.00 [ms]
p1429[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity pre-control balancing time constant / n_prectr bal T Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.00 [ms]	Access level: 3 Function plan: 5030, 5042, 5210 Unit selection: - Expert list: 1 Default: 0.00 [ms]
p1430[0...n] HLA, HLA_840, HLA_DBSI	CI: Velocity precontrol / v_prectrl Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 3001, 5019, 5030 Unit selection: - Expert list: 1 Default: 0

p1430[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CI: Speed precontrol / n_prectrl Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 3001, 5019, 5030 Unit selection: - Expert list: 1 Default: 0
p1430[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CI: Velocity precontrol / v_prectrl Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 3001, 5019, 5030 Unit selection: - Expert list: 1 Default: 0
r1431 VECTOR (n/M), VECTOR_AC (n/M)	CO: Speed pre-control to motor model / n_prectrl mot_mod Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 4 Function plan: 6030 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r1432[0...1] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Speed precontrol / n_precontrol Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 5020, 5030 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r1432[0...1] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Velocity precontrol / v_precontrol Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 5020, 5030 Unit selection: p0505 Expert list: 1 Default: - [m/min]
p1433[0...n] HLA, HLA_840, HLA_DBSI	Velocity controller reference model natural frequency / v_ctrl RefMod fn Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 8000.0 [Hz]	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 0.0 [Hz]

p1433[0...n]	Speed controller reference model natural frequency / n_ctrl RefMod fn		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 8000.0 [Hz]	Access level: 3 Function plan: 5030 Unit selection: - Expert list: 1 Default: 0.0 [Hz]
p1433[0...n]	Velocity controller reference model natural frequency / v_ctrl RefMod fn		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 8000.0 [Hz]	Access level: 3 Function plan: 5030 Unit selection: - Expert list: 1 Default: 0.0 [Hz]
p1433[0...n]	Speed controller reference model natural frequency / n_ctrl RefMod fn		
VECTOR (J_estimator, J_estimator, n/M, n/M), VECTOR_AC (J_estimator, J_estimator, n/M, n/M)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 8000.0 [Hz]	Access level: 3 Function plan: 6031 Unit selection: - Expert list: 1 Default: 0.0 [Hz]
p1434[0...n]	Velocity controller reference model damping / v_ctrl RefMod D		
HLA, HLA_840, HLA_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5.000	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 1.000
p1434[0...n]	Speed controller reference model damping / n_ctrl RefMod D		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5.000	Access level: 3 Function plan: 5030, 6031 Unit selection: - Expert list: 1 Default: 1.000
p1434[0...n]	Velocity controller reference model damping / v_ctrl RefMod D		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5.000	Access level: 3 Function plan: 5030, 6031 Unit selection: - Expert list: 1 Default: 1.000

p1434[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Speed controller reference model damping / n_ctrl RefMod D Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5.000	Access level: 3 Function plan: 5030, 6031 Unit selection: - Expert list: 1 Default: 1.000
p1435[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Speed controller reference model dead time / n_ctrRefMod t_dead Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2.00	Access level: 2 Function plan: 5030, 6031 Unit selection: - Expert list: 1 Default: 0.00
p1435[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity controller reference model dead time / v_ctrRefMod t_dead Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2.00	Access level: 2 Function plan: 5030, 6031 Unit selection: - Expert list: 1 Default: 0.00
p1435[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Speed controller reference model dead time / n_ctrRefMod t_dead Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 3.00	Access level: 2 Function plan: 5030, 6031 Unit selection: - Expert list: 1 Default: 0.00
r1436 HLA, HLA_840, HLA_DBSI	CO: Velocity controller reference model velocity_setpoint output / RefMod v_set outp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 4965 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r1436 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Speed controller reference model speed setpoint output / RefMod n_set outp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 5030, 6031 Unit selection: p0505 Expert list: 1 Default: - [rpm]

r1436 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Velocity controller reference model velocity_setpoint output / RefMod v_set outp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 5030, 6031 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r1436 VECTOR (n/M), VECTOR_AC (n/M)	CO: Speed controller reference model speed setpoint output / RefMod n_set outp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 5030, 6031 Unit selection: p0505 Expert list: 1 Default: - [rpm]
p1437[0...n] VECTOR (n/M), VECTOR_AC (n/M)	CI: Speed controller reference model I component input / n_ctrRefMod I_comp Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 6031 Unit selection: - Expert list: 1 Default: 1436[0]
r1438 HLA, HLA_840, HLA_DBSI	CO: Velocity controller velocity setpoint / v_ctrl v_set Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 4965 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r1438 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Speed controller speed setpoint / n_ctrl n_set Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 3001, 5019, 5030, 5042, 5210 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r1438 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Velocity controller velocity setpoint / v_ctrl v_set Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 3001, 5019, 5030, 5042, 5210 Unit selection: p0505 Expert list: 1 Default: - [m/min]

r1438 VECTOR (n/M), VECTOR_AC (n/M)	CO: Speed controller speed setpoint / n_ctrl n_set Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 3001, 5019, 5030, 5042, 5210, 6020, 6031 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r1439 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Speed setpoint I component / n_set I_comp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 5030, 5040, 6031 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r1439 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity setpoint I component / v_set I_comp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 5030, 5040, 6031 Unit selection: p0505 Expert list: 1 Default: - [m/min]
p1440[0...n] VECTOR (n/M), VECTOR_AC (n/M)	CI: Speed controller speed actual value input / n_ctrl n_act Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 6040 Unit selection: - Expert list: 1 Default: 63[0]
p1441[0...n] HLA, HLA_840, HLA_DBSI	Actual velocity smoothing time / v_act t_smooth Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 50.00 [ms]	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 0.00 [ms]
p1441[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Actual speed smoothing time / n_act T_smooth Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 50.00 [ms]	Access level: 3 Function plan: 4710, 4715 Unit selection: - Expert list: 1 Default: 0.00 [ms]

p1441[0...n]	Actual velocity smoothing time / v_act t_smooth		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U	Calculation: CALC_MOD_CON	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 4710, 4715
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [ms]	50.00 [ms]	0.00 [ms]

p1441[0...n]	Actual speed smoothing time / n_act T_smooth		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 4710, 4715
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [ms]	1000.00 [ms]	0.00 [ms]

p1442[0...n]	Speed controller speed actual value smoothing time / n_ctr n_act T_smth		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T, U	Calculation: CALC_MOD_ALL	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 6020, 6040
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [ms]	32000.00 [ms]	4.00 [ms]

r1443	CO: Speed controller speed actual value at actual value input / n_ctrl n_act inp		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 6040
	P group: Closed-loop control	Unit group: 3_1	Unit selection: p0505
	Not for motor type: REL	Scaling: p2000	Expert list: 1
	Min:	Max:	Default:
	- [rpm]	- [rpm]	- [rpm]

r1444	Velocity controller velocity setpoint static / v_ctrl v_set stat		
HLA, HLA_840, HLA_DBSI	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Closed-loop control	Unit group: 4_1	Unit selection: p0505
	Not for motor type: REL	Scaling: p2000	Expert list: 1
	Min:	Max:	Default:
	- [m/min]	- [m/min]	- [m/min]

r1444	Speed controller speed setpoint steady-state (static) / n_ctrl n_set stat		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 5030
	P group: Closed-loop control	Unit group: 3_1	Unit selection: p0505
	Not for motor type: REL	Scaling: p2000	Expert list: 1
	Min:	Max:	Default:
	- [rpm]	- [rpm]	- [rpm]

r1444 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity controller velocity setpoint total / v_ctrl v_set stat Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 5030 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r1445 HLA, HLA_840, HLA_DBSI	CO: Actual velocity smoothed / v_act smooth Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 4965 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r1445 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Actual speed smoothed / n_act smooth Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 5040, 5210 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r1445 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Actual velocity smoothed / v_act smooth Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 5040, 5210 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r1445 VECTOR (n/M), VECTOR_AC (n/M)	CO: Actual speed smoothed / n_act smooth Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 4 Function plan: 6040 Unit selection: p0505 Expert list: 1 Default: - [rpm]
p1446[0...n] HLA, HLA_840, HLA_DBSI	Velocity actual value filter type / v_act_filt type Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: REL Min: 1	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 2

p1446[0...n]	Speed actual value filter type / n_act_filt type		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: DDS, p0180	Function plan: 5040, 5210
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	1	2	2

p1446[0...n]	Velocity actual value filter type / v_act_filt type		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: DDS, p0180	Function plan: 5040, 5210
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	1	2	2

p1447[0...n]	Velocity actual value filter denominator natural frequency / v_act_filt fn_den		
HLA, HLA_840, HLA_DBSI	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 4965
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.5 [Hz]	16000.0 [Hz]	2000.0 [Hz]

p1447[0...n]	Speed actual value filter denominator natural frequency / n_act_filt fn_den		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5040, 5210
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.5 [Hz]	16000.0 [Hz]	2000.0 [Hz]

p1447[0...n]	Velocity actual value filter denominator natural frequency / v_act_filt fn_den		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5040, 5210
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.5 [Hz]	16000.0 [Hz]	2000.0 [Hz]

p1448[0...n]	Velocity actual value filter denominator damping / v_act_filt D_den		
HLA, HLA_840, HLA_DBSI	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 4965
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.001	10.000	0.700

p1448[0...n]	Speed actual value filter denominator damping / n_act_filt D_den		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.001	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 5040, 5210 Unit selection: - Expert list: 1 Default: 0.700

p1448[0...n]	Velocity actual value filter denominator damping / v_act_filt D_den		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.001	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 5040, 5210 Unit selection: - Expert list: 1 Default: 0.700

p1449[0...n]	Velocity actual value filter numerator natural frequency / v_act_filt fn_num		
HLA, HLA_840, HLA_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 2000.0 [Hz]

p1449[0...n]	Speed actual value filter numerator natural frequency / n_act_filt fn_num		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 5040, 5210 Unit selection: - Expert list: 1 Default: 2000.0 [Hz]

p1449[0...n]	Velocity actual value filter numerator natural frequency / v_act_filt fn_num		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 5040, 5210 Unit selection: - Expert list: 1 Default: 2000.0 [Hz]

p1450[0...n]	Velocity actual value filter numerator damping / v_act_filt D_num		
HLA, HLA_840, HLA_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 0.700

p1450[0...n]	Speed actual value filter numerator damping / n_act_filt D_num		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5040, 5210
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.000	Max: 10.000	Default: 0.700

p1450[0...n]	Velocity actual value filter numerator damping / v_act_filt D_num		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5040, 5210
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.000	Max: 10.000	Default: 0.700

p1451[0...n]	Speed actual value smoothing time sensorless / n_act t_sm SL		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL, RESM	Scaling: -	Expert list: 1
	Min: 0 [ms]	Max: 1000 [ms]	Default: 0 [ms]

p1451[0...n]	Velocity actual value smoothing time sensorless / v_act t_sm SL		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL, RESM	Scaling: -	Expert list: 1
	Min: 0 [ms]	Max: 1000 [ms]	Default: 0 [ms]

p1451[0...n]	Motor model speed actual value smoothing time sensorless / Mot_mod n_act t_sm		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: ASM, PMSM, REL, RESM	Scaling: -	Expert list: 1
	Min: 0 [ms]	Max: 1000 [ms]	Default: 4 [ms]

p1452[0...n]	Speed controller speed actual value smoothing time (sensorless) / n_C n_act T_s SL		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T, U	Calculation: -	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 6020, 6040
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.00 [ms]	Max: 32000.00 [ms]	Default: 10.00 [ms]

r1454	CO: Velocity controller system deviation I component / v_ctrl sys dev Tn		
HLA, HLA_840, HLA_DBSI	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Closed-loop control	Unit group: 4_1	Unit selection: p0505
	Not for motor type: REL	Scaling: p2000	Expert list: 1
	Min:	Max:	Default:
	- [m/min]	- [m/min]	- [m/min]

r1454	CO: Speed controller system deviation I component / n_ctrl sys dev Tn		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 5040
	P group: Closed-loop control	Unit group: 3_1	Unit selection: p0505
	Not for motor type: REL	Scaling: p2000	Expert list: 1
	Min:	Max:	Default:
	- [rpm]	- [rpm]	- [rpm]

r1454	CO: Velocity controller system deviation I component / v_ctrl sys dev Tn		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 5040
	P group: Closed-loop control	Unit group: 4_1	Unit selection: p0505
	Not for motor type: REL	Scaling: p2000	Expert list: 1
	Min:	Max:	Default:
	- [m/min]	- [m/min]	- [m/min]

r1454	CO: Speed controller system deviation I component / n_ctrl sys dev Tn		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 6040
	P group: Closed-loop control	Unit group: 3_1	Unit selection: p0505
	Not for motor type: REL	Scaling: p2000	Expert list: 1
	Min:	Max:	Default:
	- [rpm]	- [rpm]	- [rpm]

p1455[0...n]	CI: Speed controller P gain adaptation signal / n_ctr adapt_sig Kp		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T	Calculation: -	Access level: 3
	Data type: Unsigned32 / FloatingPoint32	Dynamic index: CDS, p0170	Function plan: 5050
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: PERCENT	Expert list: 1
	Min:	Max:	Default:
	-	-	0

p1455[0...n]	CI: Velocity controller P gain adaptation signal / v_ctr adapt_sig Kp		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T	Calculation: -	Access level: 3
	Data type: Unsigned32 / FloatingPoint32	Dynamic index: CDS, p0170	Function plan: 5050
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: PERCENT	Expert list: 1
	Min:	Max:	Default:
	-	-	0

p1455[0...n]	CI: Speed controller P gain adaptation signal / n_ctrl adapt_sig Kp		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T	Calculation: -	Access level: 3
	Data type: Unsigned32 / FloatingPoint32	Dynamic index: CDS, p0170	Function plan: 6050
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: PERCENT	Expert list: 1
	Min:	Max:	Default:
	-	-	0

p1456[0...n]	Speed controller P gain adaptation lower starting point / n_ctrl AdaptKpLow		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5050
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [%]	400.00 [%]	0.00 [%]

p1456[0...n]	Velocity controller P gain adaptation lower starting point / v_ctrl AdaptKpLow		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5050
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [%]	400.00 [%]	0.00 [%]

p1456[0...n]	Speed controller P gain adaptation lower starting point / n_ctrl AdaptKpLow		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 6050
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [%]	400.00 [%]	0.00 [%]

p1457[0...n]	Speed controller P gain adaptation upper starting point / n_ctrl AdaptKp up		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5050
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [%]	400.00 [%]	0.00 [%]

p1457[0...n]	Velocity controller P gain adaptation upper starting point / v_ctrl AdaptKp up		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5050
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [%]	400.00 [%]	0.00 [%]

p1457[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Speed controller P gain adaptation upper starting point / n_ctrl AdaptKp up Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 400.00 [%]	Access level: 3 Function plan: 6050 Unit selection: - Expert list: 1 Default: 0.00 [%]
p1458[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Adaptation factor lower / Adapt_factor lower Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 200000.0 [%]	Access level: 3 Function plan: 5050 Unit selection: - Expert list: 1 Default: 100.0 [%]
p1458[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Adaptation factor lower / Adapt_factor lower Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 200000.0 [%]	Access level: 3 Function plan: 6050 Unit selection: - Expert list: 1 Default: 100.0 [%]
p1459[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Adaptation factor upper / Adapt_factor upper Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 200000.0 [%]	Access level: 3 Function plan: 5050 Unit selection: - Expert list: 1 Default: 100.0 [%]
p1459[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Adaptation factor upper / Adapt_factor upper Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 200000.0 [%]	Access level: 3 Function plan: 6050 Unit selection: - Expert list: 1 Default: 100.0 [%]
p1460[0...n] HLA, HLA_840, HLA_DBSI	Velocity controller P gain A / v_ctrl Kp A Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -100.000 [%]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000.000 [%]	Access level: 2 Function plan: 4965 Unit selection: - Expert list: 1 Default: 0.000 [%]

p1460[0...n]	Speed controller P gain adaptation speed lower / n_ctrl Kp n lower
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000 [Nms/rad]
	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: 17_1 Scaling: - Max: 500000000.000 [Nms/rad]
	Access level: 2 Function plan: 5040, 5042 Unit selection: p0505 Expert list: 1 Default: 0.300 [Nms/rad]

p1460[0...n]	Velocity controller P gain adaptation velocity lower / v_ctrl Kp n lower
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000 [Ns/m]
	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: 24_2 Scaling: - Max: 500000000.000 [Ns/m]
	Access level: 2 Function plan: 5040, 5042 Unit selection: p0505 Expert list: 1 Default: 10.000 [Ns/m]

p1460[0...n]	Speed controller P gain adaptation speed lower / n_ctrl Kp n lower
VECTOR (J_estimator, J_estimator, n/M, n/M), VECTOR_AC (J_estimator, J_estimator, n/M, n/M)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000
	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 999999.000
	Access level: 2 Function plan: 6020, 6040 Unit selection: - Expert list: 1 Default: 0.300

p1461[0...n]	Velocity controller P gain / v_ctr Kp
HLA, HLA_840, HLA_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -100.0 [%]
	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000.0 [%]
	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 0.0 [%]

p1461[0...n]	Speed controller Kp adaptation speed upper scaling / n_ctr Kp n up scal
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [%]
	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 200000.0 [%]
	Access level: 3 Function plan: 5050 Unit selection: - Expert list: 1 Default: 100.0 [%]

p1461[0...n]	Velocity controller Kp adaptation velocity upper scaling / v_ctr Kp n up scal
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [%]
	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 200000.0 [%]
	Access level: 3 Function plan: 5050 Unit selection: - Expert list: 1 Default: 100.0 [%]

p1461[0...n] VECTOR (J_estimator, J_estimator, n/M, n/M), VECTOR_AC (J_estimator, J_estimator, n/M, n/M)	Speed controller Kp adaptation speed upper scaling / n_ctr Kp n up scal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [%]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 200000.0 [%]	Access level: 3 Function plan: 6050 Unit selection: - Expert list: 1 Default: 100.0 [%]
p1462[0...n] HLA, HLA_840, HLA_DBSI	Velocity controller P gain B / v_ctrl Kp B Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -100.00 [%]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000.00 [%]	Access level: 2 Function plan: 4965 Unit selection: - Expert list: 1 Default: 0.00 [%]
p1462[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Speed controller integral time adaptation speed lower / n_ctrl Tn n lower Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100000.00 [ms]	Access level: 2 Function plan: 5040, 5042, 6020, 6040 Unit selection: - Expert list: 1 Default: 20.00 [ms]
p1462[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity contr. integral act. time adaptation velocity lower / v_ctrl Tn n lower Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100000.00 [ms]	Access level: 2 Function plan: 5040, 5042 Unit selection: - Expert list: 1 Default: 20.00 [ms]
p1462[0...n] VECTOR (J_estimator, J_estimator, n/M, n/M), VECTOR_AC (J_estimator, J_estimator, n/M, n/M)	Speed controller integral time adaptation speed lower / n_ctrl Tn n lower Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100000.00 [ms]	Access level: 2 Function plan: 5040, 5042, 6020, 6040 Unit selection: - Expert list: 1 Default: 20.00 [ms]
p1463[0...n] HLA, HLA_840, HLA_DBSI	Velocity controller integral time / v_ctr Tn Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.0 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2000.0 [ms]	Access level: 2 Function plan: 4965 Unit selection: - Expert list: 1 Default: 0.0 [ms]

p1463[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Speed controller Tn adaptation speed upper scaling / n_ctr Tn n up scal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [%]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 200000.0 [%]	Access level: 3 Function plan: 5050 Unit selection: - Expert list: 1 Default: 100.0 [%]
p1463[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity controller Tn adaptation velocity upper scaling / v_ctr Tn n up scal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [%]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 200000.0 [%]	Access level: 3 Function plan: 5050 Unit selection: - Expert list: 1 Default: 100.0 [%]
p1463[0...n] VECTOR (J_estimator, J_estimator, n/M, n/M), VECTOR_AC (J_estimator, J_estimator, n/M, n/M)	Speed controller Tn adaptation speed upper scaling / n_ctr Tn n up scal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [%]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 200000.0 [%]	Access level: 3 Function plan: 6050 Unit selection: - Expert list: 1 Default: 100.0 [%]
p1464[0...n] HLA, HLA_840, HLA_DBSI	Velocity controller D component smoothing time constant / v_ctr D comp T Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.25 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00 [ms]	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 0.25 [ms]
p1464[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Speed controller adaptation speed lower / n_ctrl n lower Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [rpm]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.00 [rpm]	Access level: 3 Function plan: 5050 Unit selection: p0505 Expert list: 1 Default: 0.00 [rpm]
p1464[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity controller adaptation velocity lower / v_ctrl n lower Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [m/min]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 1000.00 [m/min]	Access level: 3 Function plan: 5050 Unit selection: p0505 Expert list: 1 Default: 0.00 [m/min]

p1464[0...n]	Speed controller adaptation speed lower / n_ctrl n lower	
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [rpm]	Calculation: CALC_MOD_CON Access level: 3 Dynamic index: DDS, p0180 Function plan: 6050 Unit group: 3_1 Unit selection: p0505 Scaling: - Expert list: 1 Max: 210000.00 [rpm] Default: 0.00 [rpm]

p1465[0...n]	Velocity controller derivative-action time A / v_ctrl Tv A	
HLA, HLA_840, HLA_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -1000.00 [ms]	Calculation: CALC_MOD_CON Access level: 3 Dynamic index: DDS, p0180 Function plan: 4965 Unit group: - Unit selection: - Scaling: - Expert list: 1 Max: 1000.00 [ms] Default: 0.00 [ms]

p1465[0...n]	Speed controller adaptation speed upper / n_ctrl n upper	
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [rpm]	Calculation: CALC_MOD_CON Access level: 3 Dynamic index: DDS, p0180 Function plan: 5050 Unit group: 3_1 Unit selection: p0505 Scaling: - Expert list: 1 Max: 210000.00 [rpm] Default: 210000.00 [rpm]

p1465[0...n]	Velocity controller adaptation velocity upper / v_ctrl n upper	
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [m/min]	Calculation: CALC_MOD_CON Access level: 3 Dynamic index: DDS, p0180 Function plan: 5050 Unit group: 4_1 Unit selection: p0505 Scaling: - Expert list: 1 Max: 1000.00 [m/min] Default: 1000.00 [m/min]

p1465[0...n]	Speed controller adaptation speed upper / n_ctrl n upper	
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [rpm]	Calculation: CALC_MOD_CON Access level: 3 Dynamic index: DDS, p0180 Function plan: 6050 Unit group: 3_1 Unit selection: p0505 Scaling: - Expert list: 1 Max: 210000.00 [rpm] Default: 210000.00 [rpm]

p1466[0...n]	Velocity controller derivative-action time / v_ctrl Tv	
HLA, HLA_840, HLA_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -1000.00 [ms]	Calculation: CALC_MOD_CON Access level: 3 Dynamic index: DDS, p0180 Function plan: 4965 Unit group: - Unit selection: - Scaling: - Expert list: 1 Max: 1000.00 [ms] Default: 0.00 [ms]

p1466[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CI: Speed controller P-gain scaling / n_ctrl Kp scal Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 5050 Unit selection: - Expert list: 1 Default: 1
p1466[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CI: Velocity controller P gain scaling / v_ctrl Kp scal Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 5050 Unit selection: - Expert list: 1 Default: 1
p1466[0...n] VECTOR (n/M), VECTOR_AC (n/M)	CI: Speed controller P-gain scaling / n_ctrl Kp scal Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 6050 Unit selection: - Expert list: 1 Default: 1
p1467[0...n] HLA, HLA_840, HLA_DBSI	Velocity controller derivative-action time B / v_ctrl Tv B Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -1000.00 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000.00 [ms]	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 0.00 [ms]
r1468 HLA, HLA_840, HLA_DBSI	Velocity controller P gain effective / v_ctrl Kp eff Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [%]
r1468 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Speed controller P-gain effective / n_ctr Kp eff Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Nms/rad]	Calculation: - Dynamic index: - Unit group: 17_1 Scaling: - Max: - [Nms/rad]	Access level: 3 Function plan: 5040, 5042, 5210 Unit selection: p0505 Expert list: 1 Default: - [Nms/rad]

r1468 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity controller P gain effective / v_ctrl Kp eff Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Ns/m]	Calculation: - Dynamic index: - Unit group: 24_2 Scaling: - Max: - [Ns/m]	Access level: 3 Function plan: 5040, 5042, 5210 Unit selection: p0505 Expert list: 1 Default: - [Ns/m]
r1468 VECTOR (n/M), VECTOR_AC (n/M)	CO: Speed controller P-gain effective / n_ctr Kp eff Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 6040 Unit selection: - Expert list: 1 Default: -
r1469 HLA, HLA_840, HLA_DBSI	Velocity controller derivative-action time active / v_ctrl Tv act Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [ms]
r1469 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Speed controller integral time effective / n_ctr Tn eff Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [ms]	Access level: 3 Function plan: 5040, 5042, 6040 Unit selection: - Expert list: 1 Default: - [ms]
r1469 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity controller integral time effective / v_ctrl Tn eff Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [ms]	Access level: 3 Function plan: 5040, 5042 Unit selection: - Expert list: 1 Default: - [ms]
p1470[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Speed controller encoderless operation P-gain / n_ctrl SL Kp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000 [Nms/rad]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: 17_1 Scaling: - Max: 999999.000 [Nms/rad]	Access level: 2 Function plan: 5210 Unit selection: p0505 Expert list: 1 Default: 0.300 [Nms/rad]

p1470[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity controller encoderless operation P-gain / v_ctrl SLVC Kp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000 [Ns/m]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: 24_2 Scaling: - Max: 999999.000 [Ns/m]	Access level: 2 Function plan: 5210 Unit selection: p0505 Expert list: 1 Default: 10.000 [Ns/m]
p1470[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Speed controller encoderless operation P-gain / n_ctrl SL Kp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 999999.000	Access level: 2 Function plan: 6040, 6050 Unit selection: - Expert list: 1 Default: 0.300
p1472[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Speed controller encoderless operation integral time / n_ctrl SL Tn Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100000.0 [ms]	Access level: 2 Function plan: 5210 Unit selection: - Expert list: 1 Default: 20.0 [ms]
p1472[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity controller encoderless operation integral time / v_ctrl SLVC Tn Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100000.0 [ms]	Access level: 2 Function plan: 5210 Unit selection: - Expert list: 1 Default: 20.0 [ms]
p1472[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Speed controller encoderless operation integral time / n_ctrl SL Tn Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100000.0 [ms]	Access level: 2 Function plan: 6040, 6050 Unit selection: - Expert list: 1 Default: 20.0 [ms]
p1475[0...n] HLA, HLA_840, HLA_DBSI	Velocity controller loop gain / v_ctrl loop_gain Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.0 [mm/Vmin]	Calculation: CALC_MOD_EQU Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 20000.0 [mm/Vmin]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [mm/Vmin]

p1475[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Cl: Speed controller torque setting value for motor holding brake / n_ctrl M_sv MHB Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 3 Function plan: 6040 Unit selection: - Expert list: 1 Default: 0
p1476[0...n] HLA, HLA_840, HLA_DBSI	Bl: Velocity controller hold integrator / v_ctrl integ stop Changeable: T Data type: Unsigned32 / Binary P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p1476[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Bl: Speed controller hold integrator / n_ctrl integ stop Changeable: T Data type: Unsigned32 / Binary P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2520, 5040, 5042, 5210, 6040 Unit selection: - Expert list: 1 Default: 0
p1476[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Bl: Velocity controller hold integrator / v_ctrl integ stop Changeable: T Data type: Unsigned32 / Binary P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2520, 5040, 5042, 5210 Unit selection: - Expert list: 1 Default: 0
p1477[0...n] HLA, HLA_840, HLA_DBSI	Bl: Velocity controller set integrator value / v_ctrl integ set Changeable: T Data type: Unsigned32 / Binary P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p1477[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	BI: Speed controller set integrator value / n_ctrl integ set Changeable: T Data type: Unsigned32 / Binary P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2520, 5040, 5042, 5210, 6040 Unit selection: - Expert list: 1 Default: 0
p1477[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	BI: Velocity controller set integrator value / v_ctrl integ set Changeable: T Data type: Unsigned32 / Binary P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2520, 5040, 5042, 5210 Unit selection: - Expert list: 1 Default: 0
p1478[0...n] HLA, HLA_840, HLA_DBSI	CI: Velocity controller integrator value / v_ctr integ_setVal Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p1478[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CI: Speed controller integrator setting value / n_ctr integ_setVal Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 3 Function plan: 5040, 5042, 5210 Unit selection: - Expert list: 1 Default: 0
p1478[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CI: Velocity controller integrator value / v_ctr integ_setVal Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 3 Function plan: 5040, 5042, 5210 Unit selection: - Expert list: 1 Default: 0
p1478[0...n] VECTOR (n/M), VECTOR_AC (n/M)	CI: Speed controller integrator setting value / n_ctr integ_setVal Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 3 Function plan: 6040 Unit selection: - Expert list: 1 Default: 0

p1479[0...n] VECTOR (n/M), VECTOR_AC (n/M)	CI: Speed controller integrator setting value scaling / n_ctrl I_val scal Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 6040 Unit selection: - Expert list: 1 Default: 1
r1480 HLA, HLA_840, HLA_DBSI	CO: Velocity controller PID output / v_ctrl PID outp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [V]	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: - [V]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [V]
r1480 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	CO: Speed controller PI torque output / n_ctrl PI-M_outp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: p2003 Max: - [Nm]	Access level: 3 Function plan: 5019, 5040, 5042, 5060, 5210, 6060 Unit selection: p0505 Expert list: 1 Default: - [Nm]
r1480 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Velocity controller PI force output / v_ctrl PI-F_outp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [N]	Calculation: - Dynamic index: - Unit group: 8_1 Scaling: p2003 Max: - [N]	Access level: 3 Function plan: 5019, 5040, 5042, 5060, 5210 Unit selection: p0505 Expert list: 1 Default: - [N]
r1481 HLA, HLA_840, HLA_DBSI	CO: Velocity controller P component output / v_ctrl P outp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [V]	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: - [V]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [V]

r1481 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	CO: Speed controller P torque output / n_ctrl P-M_outp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: p2003 Max: - [Nm]	Access level: 3 Function plan: 5040, 5042, 5210, 6040 Unit selection: p0505 Expert list: 1 Default: - [Nm]
r1481 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Velocity controller P force output / v_ctrl P-F_outp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [N]	Calculation: - Dynamic index: - Unit group: 8_1 Scaling: p2003 Max: - [N]	Access level: 3 Function plan: 5040, 5042, 5210 Unit selection: p0505 Expert list: 1 Default: - [N]
r1482 HLA, HLA_840, HLA_DBSI	CO: Velocity controller I component output / v_ctrl I outp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [V]	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: - [V]	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: - [V]
r1482 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	CO: Speed controller I torque output / n_ctrl I-M_outp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: p2003 Max: - [Nm]	Access level: 3 Function plan: 5040, 5042, 5210, 6030, 6040 Unit selection: p0505 Expert list: 1 Default: - [Nm]
r1482 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Velocity controller I force output / v_ctrl I-F_outp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [N]	Calculation: - Dynamic index: - Unit group: 8_1 Scaling: p2003 Max: - [N]	Access level: 3 Function plan: 5040, 5042, 5210 Unit selection: p0505 Expert list: 1 Default: - [N]
r1483 HLA, HLA_840, HLA_DBSI	CO: Velocity controller D component output / v_ctrl D outp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [V]	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: - [V]	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: - [V]

r1484	CO: Speed controller Kp adaptation as percentage / n_ctrl Kp adap %		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: 5040, 5042, 5210 Unit selection: - Expert list: 1 Default: - [%]
r1484	CO: Velocity controller Kp adaptation as percentage / v_ctrl Kp adap %		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: 5040, 5042, 5210 Unit selection: - Expert list: 1 Default: - [%]
p1486[0...n]	CI: Droop compensation torque / Droop M_comp		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 3 Function plan: 6030 Unit selection: - Expert list: 1 Default: 0
p1487[0...n]	Droop compensation torque scaling / Droop M_comp scal		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -2000.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: PERCENT Max: 2000.0 [%]	Access level: 3 Function plan: 6030 Unit selection: - Expert list: 1 Default: 100.0 [%]
p1488[0...n]	Droop input source / Droop input source		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: REL Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 3	Access level: 3 Function plan: 6030 Unit selection: - Expert list: 1 Default: 0
p1489[0...n]	Droop feedback scaling / Droop scal		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 0.500	Access level: 3 Function plan: 6030 Unit selection: - Expert list: 1 Default: 0.050

r1490 VECTOR (n/M), VECTOR_AC (n/M)	CO: Droop feedback speed reduction / Droop n_reduction Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 6030 Unit selection: p0505 Expert list: 1 Default: - [rpm]
p1492[0...n] VECTOR (n/M), VECTOR_AC (n/M)	BI: Droop feedback enable / Droop enable Changeable: T, U Data type: Unsigned32 / Binary P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2520, 6030 Unit selection: - Expert list: 1 Default: 0
r1493 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Moment of inertia total / M_inertia total Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [kgm ²]	Calculation: - Dynamic index: - Unit group: 25_1 Scaling: - Max: - [kgm ²]	Access level: 3 Function plan: 5042, 5210 Unit selection: p0100 Expert list: 1 Default: - [kgm ²]
r1493 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Total mass / Total mass Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [kg]	Calculation: - Dynamic index: - Unit group: 27_1 Scaling: - Max: - [kg]	Access level: 3 Function plan: 5042, 5210 Unit selection: p0100 Expert list: 1 Default: - [kg]
r1493 VECTOR (n/M), VECTOR_AC (n/M)	CO: Moment of inertia total, scaled / M_inert tot scal Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [kgm ²]	Calculation: - Dynamic index: - Unit group: 25_1 Scaling: - Max: - [kgm ²]	Access level: 3 Function plan: 6031 Unit selection: p0100 Expert list: 1 Default: - [kgm ²]
p1494[0...n] HLA, HLA_840, HLA_DBSI	Velocity controller integrator feedback time constant / v_ctr integ_fdbk T Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000.00 [ms]	Access level: 2 Function plan: 4965 Unit selection: - Expert list: 1 Default: 0.00 [ms]

p1494[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Speed controller integrator feedback time constant / n_ctr integ_fdbk T Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000.00 [ms]	Access level: 2 Function plan: 5040, 5042, 5210 Unit selection: - Expert list: 1 Default: 0.00 [ms]
p1494[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity controller integrator feedback time constant / v_ctr integ_fdbk T Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000.00 [ms]	Access level: 2 Function plan: 5040, 5042, 5210 Unit selection: - Expert list: 1 Default: 0.00 [ms]
p1495[0...n] HLA, HLA_840, HLA_DBSI	Integrator feedback velocity threshold / Integ_fdbk v_thr Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 120000.000 [m/min]	Access level: 3 Function plan: 4965 Unit selection: p0505 Expert list: 1 Default: 0.010 [m/min]
p1495[0...n] VECTOR (n/M), VECTOR_AC (n/M)	CI: Acceleration pre-control / a_prectrl Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2007 Max: -	Access level: 3 Function plan: 6031 Unit selection: - Expert list: 1 Default: 0
p1496[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Acceleration pre-control scaling / a_prectrl scal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.0 [%]	Access level: 3 Function plan: 6020, 6031 Unit selection: - Expert list: 1 Default: 0.0 [%]
p1497[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CI: Moment of inertia scaling signal source / M_inert scal s_src Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 5042, 5210, 6030, 6031 Unit selection: - Expert list: 1 Default: 1

p1497[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CI: Mass scaling signal source / Mass scal s_src Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 5042, 5210 Unit selection: - Expert list: 1 Default: 1
p1497[0...n] VECTOR (n/M), VECTOR_AC (n/M)	CI: Moment of inertia scaling signal source / M_inert scal s_src Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 5042, 5210, 6030, 6031 Unit selection: - Expert list: 1 Default: 1
p1498[0...n] HLA, HLA_840, HLA_DBSI	Load mass / Load mass Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00000 [kg]	Calculation: - Dynamic index: DDS, p0180 Unit group: 27_1 Scaling: - Max: 100000.00000 [kg]	Access level: 3 Function plan: - Unit selection: p0100 Expert list: 1 Default: 0.00000 [kg]
p1498[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Load moment of inertia / Load M_inertia Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00000 [kgm ²]	Calculation: - Dynamic index: DDS, p0180 Unit group: 25_1 Scaling: - Max: 100000.00000 [kgm ²]	Access level: 3 Function plan: 5042, 5210 Unit selection: p0100 Expert list: 1 Default: 0.00000 [kgm ²]
p1498[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Load mass / Load mass Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00000 [kg]	Calculation: - Dynamic index: DDS, p0180 Unit group: 27_1 Scaling: - Max: 100000.00000 [kg]	Access level: 3 Function plan: 5042, 5210 Unit selection: p0100 Expert list: 1 Default: 0.00000 [kg]
p1498[0...n] VECTOR (J_estimator, J_estimator, n/M, n/M), VECTOR_AC (J_estimator, J_estimator, n/M, n/M)	Load moment of inertia / Load M_inertia Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00000 [kgm ²]	Calculation: - Dynamic index: DDS, p0180 Unit group: 25_1 Scaling: - Max: 100000.00000 [kgm ²]	Access level: 3 Function plan: 6031 Unit selection: p0100 Expert list: 1 Default: 0.00000 [kgm ²]

p1499[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Accelerating for torque control scaling / a for M_ctrl scal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 400.0 [%]	Access level: 3 Function plan: 6030 Unit selection: - Expert list: 1 Default: 100.0 [%]
p1500[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Macro Connector Inputs (CI) for torque setpoints / Macro CI M_set Changeable: C2(1), T Data type: Unsigned32 P group: Commands Not for motor type: REL Min: 0	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: 999999	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p1500[0...n] HLA, HLA_840, HLA_DBSI, SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Macro Connector Inputs (CI) for force setpoints / Macro CI F_set Changeable: C2(1), T Data type: Unsigned32 P group: Commands Not for motor type: REL Min: 0	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: 999999	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p1501[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	BI: Change over between closed-loop speed/torque control / Changeov n/M_ctrl Changeable: T, U Data type: Unsigned32 / Binary P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2520, 6020 Unit selection: - Expert list: 1 Default: 0
p1501[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	BI: Change over velocity/force control / Changeov n/F_ctrl Changeable: T, U Data type: Unsigned32 / Binary P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2520, 6020 Unit selection: - Expert list: 1 Default: 0
p1502[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	BI: Freeze moment of inertia estimator / J_estim freeze Changeable: T, U Data type: Unsigned32 / Binary P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p1502[0...n] VECTOR (n/M), VECTOR_AC (n/M)	BI: Freeze moment of inertia estimator / J_estim freeze Changeable: T, U Data type: Unsigned32 / Binary P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p1503[0...n] VECTOR (n/M), VECTOR_AC (n/M)	CI: Torque setpoint / M_set Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 3 Function plan: 6020, 6060 Unit selection: - Expert list: 1 Default: 0
r1508 VECTOR (n/M), VECTOR_AC (n/M)	CO: Torque setpoint before supplementary torque / M_set bef. M_suppl Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: p2003 Max: - [Nm]	Access level: 2 Function plan: 6030, 6060, 6722 Unit selection: p0505 Expert list: 1 Default: - [Nm]
r1509 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Torque setpoint before torque limiting / M_set before M_lim Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: p2003 Max: - [Nm]	Access level: 3 Function plan: 5019, 5060, 5610 Unit selection: p0505 Expert list: 1 Default: - [Nm]
r1509 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Force setpoint before force limiting / F_set before F_lim Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [N]	Calculation: - Dynamic index: - Unit group: 8_1 Scaling: p2003 Max: - [N]	Access level: 3 Function plan: 5019, 5060, 5610 Unit selection: p0505 Expert list: 1 Default: - [N]
p1511[0...n] HLA, HLA_840, HLA_DBSI	CI: Force setpoint / F_set Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 3 Function plan: 4970 Unit selection: - Expert list: 1 Default: 0

p1511[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Cl: Supplementary torque 1 / M_suppl 1 Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 3 Function plan: 5060 Unit selection: - Expert list: 1 Default: 0
p1511[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Cl: Supplementary force 1 / F_suppl 1 Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 3 Function plan: 5060 Unit selection: - Expert list: 1 Default: 0
p1511[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Cl: Supplementary torque 1 / M_suppl 1 Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 3 Function plan: 6020, 6060 Unit selection: - Expert list: 1 Default: 0
p1512[0...n] HLA, HLA_840, HLA_DBSI	Cl: Force setpoint scaling / F_set scal Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 4970 Unit selection: - Expert list: 1 Default: 0
p1512[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Cl: Supplementary torque 1 scaling / M_suppl 1 scal Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 5060, 6060 Unit selection: - Expert list: 1 Default: 0
p1512[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Cl: Supplementary force 1 scaling / F_suppl 1 scal Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 5060, 6060 Unit selection: - Expert list: 1 Default: 0

p1513[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CI: Supplementary torque 2 / M_suppl 2 Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 3 Function plan: 5060 Unit selection: - Expert list: 1 Default: 0
p1513[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CI: Supplementary force 2 / F_suppl 2 Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 3 Function plan: 5060 Unit selection: - Expert list: 1 Default: 0
p1513[0...n] VECTOR (n/M), VECTOR_AC (n/M)	CI: Supplementary torque 2 / M_suppl 2 Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 3 Function plan: 6020, 6060 Unit selection: - Expert list: 1 Default: 0
p1514[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Supplementary torque 2 scaling / M_suppl 2 scal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -2000.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: PERCENT Max: 2000.0 [%]	Access level: 3 Function plan: 6020, 6060 Unit selection: - Expert list: 1 Default: 100.0 [%]
r1515 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Supplementary torque total / M_suppl total Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: p2003 Max: - [Nm]	Access level: 2 Function plan: 5060 Unit selection: p0505 Expert list: 1 Default: - [Nm]
r1515 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Supplementary force total / F_suppl total Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [N]	Calculation: - Dynamic index: - Unit group: 8_1 Scaling: p2003 Max: - [N]	Access level: 2 Function plan: 5060 Unit selection: p0505 Expert list: 1 Default: - [N]

r1515 VECTOR (n/M), VECTOR_AC (n/M)	Supplementary torque total / M_suppl total Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: p2003 Max: - [Nm]	Access level: 2 Function plan: 6020, 6060 Unit selection: p0505 Expert list: 1 Default: - [Nm]
r1516 VECTOR (n/M), VECTOR_AC (n/M)	CO: Supplementary torque and acceleration torque / M_suppl + M_accel Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: p2003 Max: - [Nm]	Access level: 2 Function plan: 6060 Unit selection: p0505 Expert list: 1 Default: - [Nm]
p1517[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Accelerating torque smoothing time constant / M_accel T_smooth Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00 [ms]	Access level: 3 Function plan: 5042, 5210, 6060 Unit selection: - Expert list: 1 Default: 4.00 [ms]
p1517[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Acceleration force smoothing time constant / F_accel T_smooth Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00 [ms]	Access level: 3 Function plan: 5042, 5210 Unit selection: - Expert list: 1 Default: 4.00 [ms]
r1518[0...1] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Accelerating torque / M_accel Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: p2003 Max: - [Nm]	Access level: 3 Function plan: 5042, 5210 Unit selection: p0505 Expert list: 1 Default: - [Nm]
r1518[0...1] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Accelerating force / F_accel Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [N]	Calculation: - Dynamic index: - Unit group: 8_1 Scaling: p2003 Max: - [N]	Access level: 3 Function plan: 5042, 5210 Unit selection: p0505 Expert list: 1 Default: - [N]

r1518[0...1] VECTOR (n/M), VECTOR_AC (n/M)	CO: Accelerating torque / M_accel Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: p2003 Max: - [Nm]	Access level: 3 Function plan: 6060 Unit selection: p0505 Expert list: 1 Default: - [Nm]
p1520[0...n] HLA	CO: Force limit upper/motoring / F_max upper/mot Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -1000000.00 [N]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 8_1 Scaling: p2003 Max: 20000000.00 [N]	Access level: 2 Function plan: 4970 Unit selection: p0505 Expert list: 1 Default: 0.00 [N]
p1520[0...n] SERVO_840, SERVO_DBSI	CO: Torque limit upper/motoring / M_max upper/mot Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [Nm]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 7_1 Scaling: p2003 Max: 10000000.00 [Nm]	Access level: 2 Function plan: 5620, 5630 Unit selection: p0505 Expert list: 1 Default: 0.00 [Nm]
p1520[0...n] HLA_840, HLA_DBSI, SERVO_840 (Lin), SERVO_DBSI (Lin)	CO: Force limit upper/motoring / F_max upper/mot Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [N]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 8_1 Scaling: p2003 Max: 10000000.00 [N]	Access level: 2 Function plan: 5620, 5630 Unit selection: p0505 Expert list: 1 Default: 0.00 [N]
p1520[0...n] SERVO, SERVO_AC	CO: Torque limit upper/motoring / M_max upper/mot Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -1000000.00 [Nm]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 7_1 Scaling: p2003 Max: 20000000.00 [Nm]	Access level: 2 Function plan: 5620, 5630 Unit selection: p0505 Expert list: 1 Default: 0.00 [Nm]

p1520[0...n] SERVO (Lin), SERVO_AC (Lin)	CO: Force limit upper/motoring / F_max upper/mot Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -1000000.00 [N]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 8_1 Scaling: p2003 Max: 20000000.00 [N]	Access level: 2 Function plan: 5620, 5630 Unit selection: p0505 Expert list: 1 Default: 0.00 [N]
p1520[0...n] VECTOR (n/M), VECTOR_AC (n/M)	CO: Torque limit upper / M_max upper Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -1000000.00 [Nm]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 7_1 Scaling: p2003 Max: 20000000.00 [Nm]	Access level: 2 Function plan: 6020, 6630 Unit selection: p0505 Expert list: 1 Default: 0.00 [Nm]
p1521[0...n] HLA	CO: Force limit lower/regenerative / F_max lower/regen Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -20000000.00 [N]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 8_1 Scaling: p2003 Max: 1000000.00 [N]	Access level: 2 Function plan: 4970 Unit selection: p0505 Expert list: 1 Default: 0.00 [N]
p1521[0...n] SERVO_840, SERVO_DBSI	CO: Torque limit lower/regenerative / M_max lower/regen Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -1000000.00 [Nm]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 7_1 Scaling: p2003 Max: 0.00 [Nm]	Access level: 2 Function plan: 5620, 5630 Unit selection: p0505 Expert list: 1 Default: 0.00 [Nm]
p1521[0...n] HLA_840, HLA_DBSI, SERVO_840 (Lin), SERVO_DBSI (Lin)	CO: Force limit lower/regenerative / F_max lower/regen Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -1000000.00 [N]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 8_1 Scaling: p2003 Max: 0.00 [N]	Access level: 2 Function plan: 5620, 5630 Unit selection: p0505 Expert list: 1 Default: 0.00 [N]

p1521[0...n] SERVO, SERVO_AC	CO: Torque limit lower/regenerative / M_max lower/regen Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -20000000.00 [Nm]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 7_1 Scaling: p2003 Max: 1000000.00 [Nm]	Access level: 2 Function plan: 5620, 5630 Unit selection: p0505 Expert list: 1 Default: 0.00 [Nm]
p1521[0...n] SERVO (Lin), SERVO_AC (Lin)	CO: Force limit lower/regenerative / F_max lower/regen Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -20000000.00 [N]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 8_1 Scaling: p2003 Max: 1000000.00 [N]	Access level: 2 Function plan: 5620, 5630 Unit selection: p0505 Expert list: 1 Default: 0.00 [N]
p1521[0...n] VECTOR (n/M), VECTOR_AC (n/M)	CO: Torque limit lower / M_max lower Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -20000000.00 [Nm]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 7_1 Scaling: p2003 Max: 1000000.00 [Nm]	Access level: 2 Function plan: 6020, 6630 Unit selection: p0505 Expert list: 1 Default: 0.00 [Nm]
p1522[0...n] HLA	CI: Force limit upper/motoring / F_max upper/mot Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2902[5]
p1522[0...n] SERVO_840, SERVO_DBSI	CI: Torque limit upper/motoring / M_max upper/mot Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 3 Function plan: 5609, 5620, 5630, 6630 Unit selection: - Expert list: 1 Default: 2902[5]

p1522[0...n] HLA_840, HLA_DBSI, SERVO_840 (Lin), SERVO_DBSI (Lin)	Cl: Force limit upper/motoring / F_max upper/mot Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 3 Function plan: 5609, 5620, 5630, 6630 Unit selection: - Expert list: 1 Default: 2902[5]
p1522[0...n] SERVO, SERVO_AC	Cl: Torque limit upper/motoring / M_max upper/mot Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 3 Function plan: 5609, 5620, 5630, 6630 Unit selection: - Expert list: 1 Default: 1520[0]
p1522[0...n] SERVO (Lin), SERVO_AC (Lin)	Cl: Force limit upper/motoring / F_max upper/mot Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 3 Function plan: 5609, 5620, 5630, 6630 Unit selection: - Expert list: 1 Default: 1520[0]
p1522[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Cl: Torque limit upper / M_max upper Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 3 Function plan: 6630 Unit selection: - Expert list: 1 Default: 1520[0]
p1523[0...n] HLA	Cl: Force limit lower/regenerative / F_max lower/regen Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2902[12]

p1523[0...n] SERVO_840, SERVO_DBSI	CI: Torque limit lower/regenerative / M_max lower/regen Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 3 Function plan: 5609, 5620, 5630 Unit selection: - Expert list: 1 Default: 2902[12]
p1523[0...n] HLA_840, HLA_DBSI, SERVO_840 (Lin), SERVO_DBSI (Lin)	CI: Force limit lower/regenerative / F_max lower/regen Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 3 Function plan: 5609, 5620, 5630 Unit selection: - Expert list: 1 Default: 2902[12]
p1523[0...n] SERVO, SERVO_AC	CI: Torque limit lower/regenerative / M_max lower/regen Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 3 Function plan: 5609, 5620, 5630 Unit selection: - Expert list: 1 Default: 1521[0]
p1523[0...n] SERVO (Lin), SERVO_AC (Lin)	CI: Force limit lower/regenerative / F_max lower/regen Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 3 Function plan: 5609, 5620, 5630 Unit selection: - Expert list: 1 Default: 1521[0]
p1523[0...n] VECTOR (n/M), VECTOR_AC (n/M)	CI: Torque limit lower / M_max lower Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 3 Function plan: 6020, 6630 Unit selection: - Expert list: 1 Default: 1521[0]
p1524[0...n] HLA, HLA_840, HLA_DBSI	CO: Force limit upper/motoring scaling / F_max up/mot scal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -2000.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: PERCENT Max: 2000.0 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100.0 [%]

p1524[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Torque limit upper/motoring scaling / M_max up/mot scal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -2000.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: PERCENT Max: 2000.0 [%]	Access level: 3 Function plan: 5620, 5630 Unit selection: - Expert list: 1 Default: 100.0 [%]
p1524[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Force limit upper/motoring scaling / F_max up/mot scal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -2000.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: PERCENT Max: 2000.0 [%]	Access level: 3 Function plan: 5620, 5630 Unit selection: - Expert list: 1 Default: 100.0 [%]
p1524[0...n] VECTOR (n/M), VECTOR_AC (n/M)	CO: Torque limit upper scaling / M_max upper scal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -2000.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: PERCENT Max: 2000.0 [%]	Access level: 3 Function plan: 6630 Unit selection: - Expert list: 1 Default: 100.0 [%]
p1525[0...n] HLA, HLA_840, HLA_DBSI	CO: Force limit lower/regenerative scaling / F_max lo/reg scal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -2000.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: PERCENT Max: 2000.0 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100.0 [%]
p1525[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Torque limit lower/regenerative scaling / M_max low/gen scal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -2000.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: PERCENT Max: 2000.0 [%]	Access level: 3 Function plan: 5620, 5630 Unit selection: - Expert list: 1 Default: 100.0 [%]
p1525[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Force limit lower/regenerative scaling / F_max lo/reg scal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -2000.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: PERCENT Max: 2000.0 [%]	Access level: 3 Function plan: 5620, 5630 Unit selection: - Expert list: 1 Default: 100.0 [%]

p1525[0...n] VECTOR (n/M), VECTOR_AC (n/M)	CO: Torque limit lower scaling / M_max lower scal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -2000.0 [%] Max: 2000.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: PERCENT Max: 2000.0 [%]	Access level: 3 Function plan: 6630 Unit selection: - Expert list: 1 Default: 100.0 [%]
r1526 HLA, HLA_840, HLA_DBSI	CO: Force limit upper/motoring without offset / F_max up w/o offs Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [N]	Calculation: - Dynamic index: - Unit group: 8_1 Scaling: p2003 Max: - [N]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [N]
r1526 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Torque limit upper/motoring without offset / M_max up w/o offs Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: p2003 Max: - [Nm]	Access level: 3 Function plan: 5620, 5630 Unit selection: p0505 Expert list: 1 Default: - [Nm]
r1526 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Force limit upper/motoring without offset / F_max up w/o offs Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [N]	Calculation: - Dynamic index: - Unit group: 8_1 Scaling: p2003 Max: - [N]	Access level: 3 Function plan: 5620, 5630 Unit selection: p0505 Expert list: 1 Default: - [N]
r1526 VECTOR (n/M), VECTOR_AC (n/M)	CO: Total upper torque limit / M_max upper total Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: p2003 Max: - [Nm]	Access level: 3 Function plan: 6060, 6630, 6640 Unit selection: p0505 Expert list: 1 Default: - [Nm]
r1527 HLA, HLA_840, HLA_DBSI	CO: Force limit lower/regenerative without offset / F_max low w/o offs Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [N]	Calculation: - Dynamic index: - Unit group: 8_1 Scaling: p2003 Max: - [N]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [N]

r1527	CO: Torque limit lower/regenerative without offset / M_max low w/o offs		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: p2003 Max: - [Nm]	Access level: 3 Function plan: 5620, 5630 Unit selection: p0505 Expert list: 1 Default: - [Nm]
r1527	CO: Force limit lower/regenerative without offset / F_max low w/o offs		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [N]	Calculation: - Dynamic index: - Unit group: 8_1 Scaling: p2003 Max: - [N]	Access level: 3 Function plan: 5620, 5630 Unit selection: p0505 Expert list: 1 Default: - [N]
r1527	CO: Total lower torque limit / M_max lower total		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: p2003 Max: - [Nm]	Access level: 3 Function plan: 6060, 6630, 6640 Unit selection: p0505 Expert list: 1 Default: - [Nm]
p1528[0...n]	CI: Force limit upper/motoring scaling / F_max up/mot scal		
HLA, HLA_840, HLA_DBSI	Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1524[0]
p1528[0...n]	CI: Torque limit upper/motoring scaling / M_max up/mot scal		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 3617, 5609, 5620, 5630 Unit selection: - Expert list: 1 Default: 1524[0]
p1528[0...n]	CI: Force limit upper/motoring scaling / F_max up/mot scal		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 3617, 5609, 5620, 5630 Unit selection: - Expert list: 1 Default: 1524[0]

p1528[0...n] VECTOR (n/M), VECTOR_AC (n/M)	CI: Torque limit upper scaling / M_max upper scal Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 6630 Unit selection: - Expert list: 1 Default: 1524[0]
p1529[0...n] HLA, HLA_840, HLA_DBSI	CI: Force limit lower/regenerative scaling / F_max lo/reg scal Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1525[0]
p1529[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CI: Torque limit lower/regenerative scaling / M_max low/gen scal Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 3617, 5609, 5620, 5630 Unit selection: - Expert list: 1 Default: 1525[0]
p1529[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CI: Force limit lower/regenerative scaling / F_max lo/reg scal Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 3617, 5609, 5620, 5630 Unit selection: - Expert list: 1 Default: 1525[0]
p1529[0...n] VECTOR (n/M), VECTOR_AC (n/M)	CI: Torque limit lower scaling / M_max lower scal Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 6630 Unit selection: - Expert list: 1 Default: 1525[0]

p1530[0...n]	Power limit motoring / P_max mot		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U	Calculation: CALC_MOD_LIM_REF	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5640
	P group: Closed-loop control	Unit group: 14_5	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.00 [kW]	Max: 100000.00 [kW]	Default: 0.00 [kW]

p1530[0...n]	Power limit motoring / P_max mot		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U	Calculation: CALC_MOD_LIM_REF	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5640
	P group: Closed-loop control	Unit group: 14_8	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.00 [kW]	Max: 100000.00 [kW]	Default: 0.00 [kW]

p1530[0...n]	Power limit motoring / P_max mot		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T, U	Calculation: CALC_MOD_LIM_REF	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 6640
	P group: Closed-loop control	Unit group: 14_5	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.00 [kW]	Max: 100000.00 [kW]	Default: 0.00 [kW]

p1531[0...n]	Power limit regenerative / P_max gen		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U	Calculation: CALC_MOD_LIM_REF	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5640
	P group: Closed-loop control	Unit group: 14_5	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: -100000.00 [kW]	Max: -0.01 [kW]	Default: -0.01 [kW]

p1531[0...n]	Power limit regenerative / P_max gen		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U	Calculation: CALC_MOD_LIM_REF	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5640
	P group: Closed-loop control	Unit group: 14_8	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: -100000.00 [kW]	Max: -0.01 [kW]	Default: -0.01 [kW]

p1531[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Power limit regenerative / P_max gen Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -100000.00 [kW]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 14_5 Scaling: - Max: -0.01 [kW]	Access level: 2 Function plan: 6640 Unit selection: p0505 Expert list: 1 Default: -0.01 [kW]
p1532[0...n] HLA, HLA_840, HLA_DBSI	CO: Force offset, force limit / F_max offset Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -100000.00 [N]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 8_1 Scaling: p2003 Max: 100000.00 [N]	Access level: 3 Function plan: 4970 Unit selection: p0505 Expert list: 1 Default: 0.00 [N]
p1532[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Torque limit offset / M_max offset Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -100000.00 [Nm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 7_1 Scaling: p2003 Max: 100000.00 [Nm]	Access level: 3 Function plan: 5620, 5630, 5650, 7010, 8012 Unit selection: p0505 Expert list: 1 Default: 0.00 [Nm]
p1532[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Force offset, force limit / F_max offset Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -100000.00 [N]	Calculation: - Dynamic index: DDS, p0180 Unit group: 8_1 Scaling: p2003 Max: 100000.00 [N]	Access level: 3 Function plan: 5620, 5630, 5650, 7010, 8012 Unit selection: p0505 Expert list: 1 Default: 0.00 [N]
r1533 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Current limit torque-generating total / Iq_max total Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: REL Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 5640, 5722 Unit selection: p0505 Expert list: 1 Default: - [Arms]

r1533 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Current limit force-generating total / I_q_max total Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: REL Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 5640, 5722 Unit selection: p0505 Expert list: 1 Default: - [Arms]
r1533 VECTOR (n/M), VECTOR_AC (n/M)	Current limit torque-generating total / I_q_max total Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: REL Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 6640 Unit selection: p0505 Expert list: 1 Default: - [Arms]
r1534 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Total upper torque limit / M_{max} upper total Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: p2003 Max: - [Nm]	Access level: 3 Function plan: 5609, 5620, 5630, 5640 Unit selection: p0505 Expert list: 1 Default: - [Nm]
r1534 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Force limit upper total / F_{max} upper total Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [N]	Calculation: - Dynamic index: - Unit group: 8_1 Scaling: p2003 Max: - [N]	Access level: 3 Function plan: 5609, 5620, 5630, 5640 Unit selection: p0505 Expert list: 1 Default: - [N]
r1535 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Total lower torque limit / M_{max} lower total Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: p2003 Max: - [Nm]	Access level: 3 Function plan: 5609, 5620, 5630, 5640 Unit selection: p0505 Expert list: 1 Default: - [Nm]

r1535 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Force limit lower total / F_max lower total Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [N]	Calculation: - Dynamic index: - Unit group: 8_1 Scaling: p2003 Max: - [N]	Access level: 3 Function plan: 5609, 5620, 5630, 5640 Unit selection: p0505 Expert list: 1 Default: - [N]
r1536[0...1] VECTOR (n/M), VECTOR_AC (n/M)	Torque-generating current maximum limit / Isq_max Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 4 Function plan: 6640, 6710, 7960 Unit selection: p0505 Expert list: 1 Default: - [Arms]
r1537[0...1] VECTOR (n/M), VECTOR_AC (n/M)	Torque-generating current minimum limit / Isq_min Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 4 Function plan: 6640, 6710, 7960 Unit selection: p0505 Expert list: 1 Default: - [Arms]
r1538 HLA, HLA_840, HLA_DBSI	CO: Upper force limit effective / F_max upper eff Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [N]	Calculation: - Dynamic index: - Unit group: 8_1 Scaling: p2003 Max: - [N]	Access level: 2 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [N]
r1538 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Upper effective torque limit / M_max upper eff Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: p2003 Max: - [Nm]	Access level: 2 Function plan: 5609, 5650 Unit selection: p0505 Expert list: 1 Default: - [Nm]
r1538 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Upper force limit effective / F_max upper eff Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [N]	Calculation: - Dynamic index: - Unit group: 8_1 Scaling: p2003 Max: - [N]	Access level: 2 Function plan: 5609, 5650 Unit selection: p0505 Expert list: 1 Default: - [N]

r1538	CO: Upper effective torque limit / M_max upper eff		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: -	Calculation: -	Access level: 2
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 6020, 6640
	P group: Closed-loop control	Unit group: 7_1	Unit selection: p0505
	Not for motor type: REL	Scaling: p2003	Expert list: 1
	Min:	Max:	Default:
	- [Nm]	- [Nm]	- [Nm]

r1539	CO: Lower force limit effective / F_max lower eff		
HLA, HLA_840, HLA_DBSI	Changeable: -	Calculation: -	Access level: 2
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Closed-loop control	Unit group: 8_1	Unit selection: p0505
	Not for motor type: REL	Scaling: p2003	Expert list: 1
	Min:	Max:	Default:
	- [N]	- [N]	- [N]

r1539	CO: Lower effective torque limit / M_max lower eff		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: -	Calculation: -	Access level: 2
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 5609, 5650
	P group: Closed-loop control	Unit group: 7_1	Unit selection: p0505
	Not for motor type: REL	Scaling: p2003	Expert list: 1
	Min:	Max:	Default:
	- [Nm]	- [Nm]	- [Nm]

r1539	CO: Lower force limit effective / F_max lower eff		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: -	Calculation: -	Access level: 2
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 5609, 5650
	P group: Closed-loop control	Unit group: 8_1	Unit selection: p0505
	Not for motor type: REL	Scaling: p2003	Expert list: 1
	Min:	Max:	Default:
	- [N]	- [N]	- [N]

r1539	CO: Lower effective torque limit / M_max lower eff		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: -	Calculation: -	Access level: 2
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 6020, 6640
	P group: Closed-loop control	Unit group: 7_1	Unit selection: p0505
	Not for motor type: REL	Scaling: p2003	Expert list: 1
	Min:	Max:	Default:
	- [Nm]	- [Nm]	- [Nm]

p1540[0...n]	CI: Torque limit speed controller upper scaling / M_max n-ctr upScal		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T	Calculation: -	Access level: 3
	Data type: Unsigned32 / FloatingPoint32	Dynamic index: CDS, p0170	Function plan: 6020, 6060
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: PERCENT	Expert list: 1
	Min:	Max:	Default:
	-	-	1

p1541[0...n] VECTOR (n/M), VECTOR_AC (n/M)	CI: Torque limiting speed controller lower scaling / M_max nctr lowScal Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 6020, 6060 Unit selection: - Expert list: 1 Default: 1

p1542[0...n] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CI: Travel to fixed stop torque reduction / TfS M_red Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 5610 Unit selection: - Expert list: 1 Default: 0

p1542[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CI: Travel to fixed stop force reduction / TfS F_red Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 5610 Unit selection: - Expert list: 1 Default: 0

r1543 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Travel to fixed stop torque scaling / TfS M scal Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: 5610 Unit selection: - Expert list: 1 Default: - [%]

r1543 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Travel to fixed stop force scaling / TfS F scal Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: 5610 Unit selection: - Expert list: 1 Default: - [%]

p1544 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Travel to fixed stop evaluation torque reduction / TfS M_red eval Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535 [%]	Access level: 3 Function plan: 5610 Unit selection: - Expert list: 1 Default: 100 [%]

p1544 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Travel to fixed stop evaluation force reduction / TfS F_red eval Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0 [%] Max: 65535 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535 [%]	Access level: 3 Function plan: 5610 Unit selection: - Expert list: 1 Default: 100 [%]
p1545[0...n] HLA, HLA_840, HLA_DBSI	BI: Activates travel to a fixed stop / TfS activation Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: REL Min: - Max: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2520, 3617, 8012 Unit selection: - Expert list: 1 Default: 0
p1545[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	BI: Activates travel to a fixed stop / TfS activation Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: REL Min: - Max: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2520, 3617, 8012 Unit selection: - Expert list: 1 Default: [0] 0 [1] 0
p1545[0...n] VECTOR (n/M), VECTOR_AC (n/M)	BI: Activates travel to a fixed stop / TfS activation Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: REL Min: - Max: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2520, 3617, 8012 Unit selection: - Expert list: 1 Default: 0
p1546 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Speed threshold motoring/regenerating / n_thresh mot/regen Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [rpm] Max: 210000.00 [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: - Max: 210000.00 [rpm]	Access level: 2 Function plan: - Unit selection: p0505 Expert list: 1 Default: 20.00 [rpm]
p1546 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity threshold motoring/regenerative / v_thresh mot/regen Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [m/min] Max: 1000.00 [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: - Max: 1000.00 [m/min]	Access level: 2 Function plan: - Unit selection: p0505 Expert list: 1 Default: 0.20 [m/min]

r1547[0...1] VECTOR (n/M), VECTOR_AC (n/M)	CO: Torque limit for speed controller output / M_max outp n_ctrl Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: p2003 Max: - [Nm]	Access level: 3 Function plan: 6060 Unit selection: p0505 Expert list: 1 Default: - [Nm]
r1548[0...1] VECTOR (n/M), VECTOR_AC (n/M)	CO: Stall current limit torque-generating maximum / Isq_max stall Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 4 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [Arms]
r1549[0...1] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO: Stall power actual value / P_stall Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [kW]	Calculation: - Dynamic index: - Unit group: 14_5 Scaling: r2004 Max: - [kW]	Access level: 3 Function plan: 5640 Unit selection: p0505 Expert list: 1 Default: - [kW]
r1549[0...1] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Stall power actual value / P_stall Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [kW]	Calculation: - Dynamic index: - Unit group: 14_8 Scaling: r2004 Max: - [kW]	Access level: 3 Function plan: 5640 Unit selection: p0505 Expert list: 1 Default: - [kW]
p1550[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	BI: Transfer actual torque as torque offset / Accept act torque Changeable: T Data type: Unsigned32 / Binary P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 9718.23
p1550[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	BI: Transfer actual force as force offset / Accept act force Changeable: T Data type: Unsigned32 / Binary P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 9718.23

p1551[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	BI: Torque limit variable/fixed signal source / M_lim var/fixS_src Changeable: T, U Data type: Unsigned32 / Binary P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 5620, 5630, 6060, 6630 Unit selection: - Expert list: 1 Default: 1
p1551[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	BI: Force limit variable/fixed signal source / F_lim var/fixS_src Changeable: T, U Data type: Unsigned32 / Binary P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 5620, 5630, 6060, 6630 Unit selection: - Expert list: 1 Default: 1
p1552[0...n] HLA, HLA_840, HLA_DBSI	Stiction velocity threshold / Stiction v_thresh Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.000 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 10.000 [m/min]	Access level: 3 Function plan: 4970 Unit selection: p0505 Expert list: 1 Default: 0.010 [m/min]
p1552[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CI: Torque limit upper scaling without offset / M_max up w/o offs Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 5060 Unit selection: - Expert list: 1 Default: 1
p1552[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CI: Force limit upper scaling without offset / F_max up w/o offs Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 5060 Unit selection: - Expert list: 1 Default: 1
p1552[0...n] VECTOR (n/M), VECTOR_AC (n/M)	CI: Torque limit upper scaling without offset / M_max up w/o offs Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 6060 Unit selection: - Expert list: 1 Default: 1

p1553[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Stall limit scaling / Stall limit scal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: SESM, REL Min: 80.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 130.0 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100.0 [%]
p1554[0...n] HLA, HLA_840, HLA_DBSI	Stiction shutdown rate action / Stict shutdown Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 3.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: PERCENT Max: 100.0 [%]	Access level: 3 Function plan: 4970 Unit selection: - Expert list: 1 Default: 40.0 [%]
p1554[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CI: Torque limit lower scaling without offset / M_max low w/o offs Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 5060 Unit selection: - Expert list: 1 Default: 1
p1554[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CI: Force limit lower scaling without offset / F_max low w/o offs Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 5060 Unit selection: - Expert list: 1 Default: 1
p1554[0...n] VECTOR (n/M), VECTOR_AC (n/M)	CI: Torque limit lower scaling without offset / M_max low w/o offs Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 6060 Unit selection: - Expert list: 1 Default: 1
p1555[0...n] HLA, HLA_840, HLA_DBSI	Stiction force velocity positive / Stiction F v pos Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -100000000.0 [N]	Calculation: - Dynamic index: DDS, p0180 Unit group: 8_2 Scaling: - Max: 100000000.0 [N]	Access level: 3 Function plan: 4970 Unit selection: p0505 Expert list: 1 Default: 0.0 [N]

p1555[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Cl: Power limit / P_max Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: r2004 Max: -	Access level: 3 Function plan: 6640 Unit selection: - Expert list: 1 Default: 1
p1556[0...n] HLA, HLA_840, HLA_DBSI	Stiction force velocity negative / Stiction F v neg Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -100000000.0 [N]	Calculation: - Dynamic index: DDS, p0180 Unit group: 8_2 Scaling: - Max: 100000000.0 [N]	Access level: 3 Function plan: 4970 Unit selection: p0505 Expert list: 1 Default: 0.0 [N]
p1556[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Power limit scaling / P_max scal Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 340.28235E36	Access level: 2 Function plan: 6640 Unit selection: - Expert list: 1 Default: 0.00
p1560[0...n] SERVO (J_estimator, Lin), SERVO_840 (J_estimator, Lin), SERVO_AC (J_estimator, Lin), SERVO_DBSI (J_estimator, Lin)	Moment of inertia estimator accelerating force threshold value / J_est F thresh Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: REL Min: 0.10 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 10.00 [%]
p1560[0...n] SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator), VECTOR (J_estimator), VECTOR_AC (J_estimator)	Moment of inertia estimator accelerating torque threshold value / J_est M thresh Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: REL Min: 0.10 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 10.00 [%]

p1561[0...n]	Moment of inertia estimator change time moment of inertia / J_est t_change J
SERVO (J_estimator, J_estimator, Lin), SERVO_840 (J_estimator, J_estimator, Lin), SERVO_AC (J_estimator, J_estimator, Lin), SERVO_DBSI (J_estimator, J_estimator, Lin), VECTOR (J_estimator), VECTOR_AC (J_estimator)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 10.00 [ms] Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5000.00 [ms] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 500.00 [ms]

p1562[0...n]	Moment of inertia estimator change time load / J_est t load
SERVO (J_estimator, Lin), SERVO_840 (J_estimator, Lin), SERVO_AC (J_estimator, Lin), SERVO_DBSI (J_estimator, Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 5.00 [ms] Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5000.00 [ms] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 10.00 [ms]

p1562[0...n]	Moment of inertia estimator change time load / J_est t load
SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator), VECTOR (J_estimator), VECTOR_AC (J_estimator)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 5.00 [ms] Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5000.00 [ms] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 10.00 [ms]

p1563[0...n]	CO: Moment of inertia estimator load force positive direction / J_est F pos
SERVO (J_estimator, Lin), SERVO_840 (J_estimator, Lin), SERVO_AC (J_estimator, Lin), SERVO_DBSI (J_estimator, Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -340.28235E36 [N] Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: p2003 Max: 340.28235E36 [N] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [N]

p1563[0...n]	CO: Mom. of inertia estimator load torque direction of rotation pos. / J_est M pos
SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator), VECTOR (J_estimator), VECTOR_AC (J_estimator)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -340.28235E36 [Nm] Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: p2003 Max: 340.28235E36 [Nm] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [Nm]

p1564[0...n] SERVO (J_estimator, Lin), SERVO_840 (J_estimator, Lin), SERVO_AC (J_estimator, Lin), SERVO_DBSI (J_estimator, Lin)	CO: Moment of inertia estimator load force negative direction / J_est F neg Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -340.28235E36 [N]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: p2003 Max: 340.28235E36 [N]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [N]
p1564[0...n] SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator), VECTOR (J_estimator), VECTOR_AC (J_estimator)	CO: Mom. of inertia estimator load torque direction of rotation neg. / J_est M neg Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -340.28235E36 [Nm]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: p2003 Max: 340.28235E36 [Nm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [Nm]
r1566[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Flux reduction torque factor transition value / Flux red M trans Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, SESM, REL Min: - [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: 6790 Unit selection: - Expert list: 1 Default: - [%]
p1567[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Magnetization rate time scaling / Mag Tv scale Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, SESM, REL Min: 0 [%]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000 [%]	Access level: 4 Function plan: 6790 Unit selection: - Expert list: 1 Default: 100 [%]
r1568[0...5] VECTOR (n/M), VECTOR_AC (n/M)	CO: Synchronous reluctance motor flux channel / RESM flux channel Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, SESM, REL Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [%]

p1569[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	CI: Supplementary torque 3 / M_suppl 3 Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Functions Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 2 Function plan: 7010 Unit selection: - Expert list: 1 Default: 3841[0]
p1569[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CI: Supplementary force 3 / F_suppl 3 Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Functions Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2003 Max: -	Access level: 2 Function plan: 7010 Unit selection: - Expert list: 1 Default: 3841[0]
p1570[0...n] HLA, HLA_840, HLA_DBSI	Stiction voltage pulse positive / Stiction U pos Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.000 [V]	Calculation: CALC_MOD_EQU Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000 [V]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0.200 [V]
p1570[0...n] VECTOR (n/M), VECTOR_AC (n/M)	CO: Flux setpoint / Flex setp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: PMSM, REL Min: 50.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: PERCENT Max: 200.0 [%]	Access level: 3 Function plan: 6722 Unit selection: - Expert list: 1 Default: 100.0 [%]
p1571[0...n] HLA, HLA_840, HLA_DBSI	Stiction voltage pulse negative / Stiction U neg Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: RESM Min: -10.000 [V]	Calculation: CALC_MOD_EQU Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 0.000 [V]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -0.200 [V]
p1571[0...n] VECTOR (n/M), VECTOR_AC (n/M)	CI: Supplementary flux setpoint / Suppl flux setp Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 6725 Unit selection: - Expert list: 1 Default: 0

p1572[0...n] HLA, HLA_840, HLA_DBSI	Supplementary flux setpoint / Suppl flux setp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [ms]	Calculation: CALC_MOD_EQU Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2.00 [ms]
p1572[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Supplementary flux setpoint / Suppl flux setp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL Min: 0.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: PERCENT Max: 100.0 [%]	Access level: 4 Function plan: 6726 Unit selection: - Expert list: 1 Default: 0.0 [%]
p1573[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Flux threshold value magnetizing / Flux thresh magnet Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: PMSM, REL, RESM Min: 10.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: PERCENT Max: 200.0 [%]	Access level: 3 Function plan: 6722 Unit selection: - Expert list: 1 Default: 100.0 [%]
p1574[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Voltage reserve dynamic / U_reserve dyn Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [Vrms]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 5_1 Scaling: - Max: 150.0 [Vrms]	Access level: 3 Function plan: 6723, 6724 Unit selection: p0505 Expert list: 1 Default: 10.0 [Vrms]
p1575[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Voltage target value limit / U_tgt val lim Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: REL Min: 50.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 300.00 [%]	Access level: 4 Function plan: 6725 Unit selection: - Expert list: 1 Default: 200.00 [%]
p1576[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Flux boost adaptation speed, lower / Flux boost n lower Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: 0.00 [rpm]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.00 [rpm]	Access level: 3 Function plan: 6725 Unit selection: p0505 Expert list: 1 Default: 0.00 [rpm]

p1577[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Flux boost adaptation speed upper / Flux boost n upper Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: 1.0 [%]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.0 [%]	Access level: 3 Function plan: 6725 Unit selection: - Expert list: 1 Default: 200.0 [%]
p1578[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Flux reduction flux decrease smoothing time / Flux red dec t_sm Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: PMSM, SESM, REL Min: 20 [ms]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5000 [ms]	Access level: 3 Function plan: 5722 Unit selection: - Expert list: 1 Default: 200 [ms]
p1578[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Flux reduction flux decrease smoothing time / Flux red dec t_sm Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, SESM, REL Min: 20 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5000 [ms]	Access level: 3 Function plan: 6791 Unit selection: - Expert list: 1 Default: 200 [ms]
p1579[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Flux reduction flux build-up smoothing time / Flux red up t_sm Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: PMSM, SESM, REL Min: 0 [ms]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5000 [ms]	Access level: 3 Function plan: 5722 Unit selection: - Expert list: 1 Default: 4 [ms]
p1579[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Flux reduction flux build-up smoothing time / Flux red up t_sm Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, SESM, REL Min: 0 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5000 [ms]	Access level: 3 Function plan: 6791 Unit selection: - Expert list: 1 Default: 4 [ms]
p1580[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Efficiency optimization / Efficiency opt. Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: PMSM, SESM, REL, RESM Min: 0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100 [%]	Access level: 2 Function plan: 6722 Unit selection: - Expert list: 1 Default: 0 [%]

p1581[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Flux reduction factor / Flux red factor Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: PMSM, SESM, REL Min: 20 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100 [%]	Access level: 2 Function plan: 5722 Unit selection: - Expert list: 1 Default: 100 [%]
p1581[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Flux reduction factor / Flux red factor Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, SESM, REL Min: 0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100 [%]
p1582[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Flux setpoint smoothing time / Flux setp T_smth Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 4 [ms]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5000 [ms]	Access level: 3 Function plan: 6722, 6724, 6725 Unit selection: - Expert list: 1 Default: 15 [ms]
r1583 VECTOR (n/M), VECTOR_AC (n/M)	Flux setpoint smoothed / Flux setp smooth Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 4 Function plan: 6722, 6723, 6724 Unit selection: - Expert list: 1 Default: - [%]
p1584[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Field weakening operation flux setpoint smoothing time / Field weak T_smth Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: PMSM, REL, RESM Min: 0 [ms]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 20000 [ms]	Access level: 3 Function plan: 6722 Unit selection: - Expert list: 1 Default: 0 [ms]
p1585[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Flux actual value smoothing time / Flux actVal T_smth Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: PMSM, REL, RESM Min: 0 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0 [ms]

p1585[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Flux actual value smoothing time / Flux actVal T_smth Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: 0 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000 [ms]	Access level: 3 Function plan: 6726 Unit selection: - Expert list: 1 Default: 0 [ms]
p1586[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Field weakening characteristic scaling / Field weak scal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: SESM, REL Min: 80.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 120.0 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100.0 [%]
r1589 VECTOR (n/M), VECTOR_AC (n/M)	Field-weakening current pre-control value / I_FieldWeak prectr Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, SESM, REL, RESM Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 4 Function plan: 6724 Unit selection: p0505 Expert list: 1 Default: - [Arms]
p1590[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Flux controller P gain / Flux controller Kp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: PMSM, REL, RESM Min: 0.0 [A/Vs]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 999999.0 [A/Vs]	Access level: 3 Function plan: 5722 Unit selection: - Expert list: 1 Default: 10.0 [A/Vs]
p1590[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Flux controller P gain / Flux controller Kp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: PMSM, REL, RESM Min: 0.0	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 999999.0	Access level: 4 Function plan: 6723 Unit selection: - Expert list: 1 Default: 10.0
p1592[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Flux controller integral time / Flux controller Tn Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: PMSM, REL, RESM Min: 0 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000 [ms]	Access level: 3 Function plan: 5722 Unit selection: - Expert list: 1 Default: 30 [ms]

p1592[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Flux controller integral time / Flux controller Tn Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: PMSM, REL, RESM Min: 0 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000 [ms]	Access level: 4 Function plan: 6723 Unit selection: - Expert list: 1 Default: 30 [ms]
r1593 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Field weakening controller output / Field_ctrl outp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL, RESM Min: - [Arms]	Calculation: - Dynamic index: - Unit group: - Scaling: p2002 Max: - [Arms]	Access level: 4 Function plan: 6723, 6724, 6726 Unit selection: - Expert list: 1 Default: - [Arms]
r1593[0...1] VECTOR (n/M), VECTOR_AC (n/M)	CO: Field weakening controller / flux controller output / Field/Fl_ctrl outp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL, RESM Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 4 Function plan: 6723, 6724, 6726 Unit selection: p0505 Expert list: 1 Default: - [Arms]
p1594[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Field-weakening controller P gain / Field_ctrl Kp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, SESM, REL, RESM Min: 0.00	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000.00	Access level: 4 Function plan: 6724 Unit selection: - Expert list: 1 Default: 0.00
p1595[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Field weakening controller additional setpoint / Field_ctr add_setp Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: REL Min: -80.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 50.00 [%]	Access level: 4 Function plan: 6726 Unit selection: - Expert list: 1 Default: 0.00 [%]
p1596[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Field weakening controller integral-action time / Field_ctrl Tn Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 10 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000 [ms]	Access level: 3 Function plan: 6723, 6724 Unit selection: - Expert list: 1 Default: 50 [ms]

r1597 VECTOR (n/M), VECTOR_AC (n/M)	CO: Field weakening controller output / Field_ctrl outp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: PMSM, REL Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 4 Function plan: 6723 Unit selection: - Expert list: 1 Default: - [%]
r1598 VECTOR (n/M), VECTOR_AC (n/M)	CO: Total flux setpoint / Flux setp total Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: 6714, 6723, 6724, 6725, 6726, 8020 Unit selection: - Expert list: 1 Default: - [%]
p1599[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Flux controller excitation current difference / Flux ctr I_exc_dif Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: 0.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.0 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 3.0 [%]
p1600[0...n] VECTOR (n/M), VECTOR_AC (n/M)	P flux controller P gain / P flux ctrl Kp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: 0.0	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 999999.0	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 10.0
p1601[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Current injection ramp-up time / I_inject t_ramp-up Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, SESM, REL Min: 1 [ms]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000 [ms]	Access level: 3 Function plan: 6790 Unit selection: - Expert list: 1 Default: 20 [ms]
r1602 VECTOR (n/M), VECTOR_AC (n/M)	CO: P flux controller output / P flux ctrl outp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 4 Function plan: 6726, 6727 Unit selection: p0505 Expert list: 1 Default: - [Arms]

p1603[0...n] SERVO_840, SERVO_DBSI	Field-generating current maximum / Id max Changeable: C2, T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.0 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 90.0 [%]
p1603[0...n] SERVO, SERVO_AC	Field-generating current maximum / Id max Changeable: C2, T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.0 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [%]
p1604[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Pulse technique current limit / Pulse current lim Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, SESM, REL Min: 0.00 [Arms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.00 [Arms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [Arms]
p1605[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Pulse technique pattern configuration / Puls patrn config Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: ASM, SESM, REL Min: 1	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2
r1606 VECTOR (n/M), VECTOR_AC (n/M)	CO: Pulse technique pattern actual / Puls pattern act Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: ASM, SESM, REL Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 5	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p1607[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Pulse technique stimulus / Puls stimulus Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, SESM, REL Min: 0.000 [mVs]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 20000.000 [mVs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 32.000 [mVs]

r1608[0...8] VECTOR (n/M), VECTOR_AC (n/M)	CO: Pulse technique response / Puls response Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: ASM, SESM, REL Min: - [A]	Calculation: - Dynamic index: - Unit group: 6_5 Scaling: p2002 Max: - [A]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [A]
p1609[0...n] VECTOR (n/M), VECTOR_AC (n/M)	I/f operation current setpoint / I/f op I_setp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: 0.00 [Arms]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: 6_2 Scaling: - Max: 10000.00 [Arms]	Access level: 3 Function plan: 6727 Unit selection: p0505 Expert list: 1 Default: 0.00 [Arms]
p1610[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Torque setpoint static (sensorless) / M_set static Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -200.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 200.0 [%]	Access level: 2 Function plan: 6700, 6721, 6722, 6726 Unit selection: - Expert list: 1 Default: 50.0 [%]
p1611[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Additional acceleration torque (sensorless) / M_suppl_accel Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [%]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 200.0 [%]	Access level: 2 Function plan: 6700, 6721, 6722, 6726 Unit selection: - Expert list: 1 Default: 30.0 [%]
p1612[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Current setpoint open-loop control, encoderless / I_setCtrEncoderI Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [Arms]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: 6_2 Scaling: - Max: 10000.00 [Arms]	Access level: 2 Function plan: - Unit selection: p0505 Expert list: 1 Default: 0.00 [Arms]
p1612[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Current setpoint magnetizing open-loop controlled / Id_set ctrl Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: 0.00 [Arms]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: 6_2 Scaling: - Max: 10000.00 [Arms]	Access level: 2 Function plan: - Unit selection: p0505 Expert list: 1 Default: 0.00 [Arms]

r1614 VECTOR (n/M), VECTOR_AC (n/M)	EMF maximum / EMF max Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: ASM, PMSM, REL, RESM Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: 5_1 Scaling: p2001 Max: - [Vrms]	Access level: 4 Function plan: 6725 Unit selection: p0505 Expert list: 1 Default: - [Vrms]
p1616[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Current setpoint smoothing time / I_set T_smooth Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 4 [ms]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000 [ms]	Access level: 3 Function plan: 6721, 6722, 6726 Unit selection: - Expert list: 1 Default: 40 [ms]
r1617 VECTOR (n/M), VECTOR_AC (n/M)	CO: Torque setpoint (controlled) / M_set ctrl Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: - [Nm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Nm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [Nm]
r1618 VECTOR (n/M), VECTOR_AC (n/M)	Current model controller pre-control / I_mod_ctrl prectrl Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 4 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [Arms]
p1619[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Setpoint/actual value tracking threshold / SetAct track thrsh Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: 0.00 [Arms]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: 6_2 Scaling: p2002 Max: 10000.00 [Arms]	Access level: 3 Function plan: 6727 Unit selection: p0505 Expert list: 1 Default: 0.00 [Arms]
p1620[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Stator current minimum / I_stator min Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: -10000.00 [Arms]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: 6_2 Scaling: - Max: 10000.00 [Arms]	Access level: 3 Function plan: 6727 Unit selection: p0505 Expert list: 1 Default: 0.00 [Arms]

p1621[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Changeover speed inner cos phi = 1 / n_chngov cos phi=1 Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: 0.00 [rpm]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.00 [rpm]	Access level: 3 Function plan: 6727 Unit selection: p0505 Expert list: 1 Default: 0.00 [rpm]
p1622[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Field-generating current setpoint smoothing time constant / Id_setp T_smth Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: 0.1 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 200.0 [ms]	Access level: 3 Function plan: 6727 Unit selection: - Expert list: 1 Default: 20.0 [ms]
r1623[0...1] VECTOR (n/M), VECTOR_AC (n/M)	Field-generating current setpoint (steady-state) / Id_set stationary Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: PMSM, REL, RESM Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 4 Function plan: 6723, 6726, 6727 Unit selection: p0505 Expert list: 1 Default: - [Arms]
r1624 VECTOR (n/M), VECTOR_AC (n/M)	Field-generating current setpoint total / Id_setp total Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: REL Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 4 Function plan: 6640, 6721, 6723, 6727 Unit selection: p0505 Expert list: 1 Default: - [Arms]
p1625[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Excitation current setpoint calibration / I_exc_setp cal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: 10.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 200.0 [%]	Access level: 3 Function plan: 6727 Unit selection: - Expert list: 1 Default: 100.0 [%]
r1626[0...1] VECTOR (n/M), VECTOR_AC (n/M)	CO: Excitation current setpoint / I_exc_setp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: 6727 Unit selection: - Expert list: 1 Default: - [%]

r1627 VECTOR (n/M), VECTOR_AC (n/M)	CO: Current model load angle / I_mod load angle Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: - [°]	Calculation: - Dynamic index: - Unit group: - Scaling: p2005 Max: - [°]	Access level: 3 Function plan: 6727 Unit selection: - Expert list: 1 Default: - [°]
p1628[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Current model controller dynamic factor / I_mod_ctr dyn_fact Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: ASM, PMSM, REL, RESM Min: 1 [%]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 400 [%]	Access level: 3 Function plan: 6727 Unit selection: - Expert list: 1 Default: 50 [%]
p1629[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Current model controller P gain / I_mod_ctrl Kp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: 0.000	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100000.000	Access level: 4 Function plan: 6727 Unit selection: - Expert list: 1 Default: 0.000
p1630[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Current model controller integral time / I_mod_ctrl Tn Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: 0.00 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.00 [ms]	Access level: 4 Function plan: 6727 Unit selection: - Expert list: 1 Default: 0.00 [ms]
r1631 VECTOR (n/M), VECTOR_AC (n/M)	Current model controller P gain effective / I_mod ctrl Kp eff Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 6727 Unit selection: - Expert list: 1 Default: -
r1632 VECTOR (n/M), VECTOR_AC (n/M)	Current model controller integral time effective / I_mod_ctrl Tn eff Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: - [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [ms]	Access level: 3 Function plan: 6727 Unit selection: - Expert list: 1 Default: - [ms]

r1633 VECTOR (n/M), VECTOR_AC (n/M)	Current model flux setpoint / I_mod flux setp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: - [%] Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%] Access level: 3 Function plan: 6727 Unit selection: - Expert list: 1 Default: - [%]
r1634 VECTOR (n/M), VECTOR_AC (n/M)	Current model flux actual value / I_mod flux act val Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: - [%] Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%] Access level: 3 Function plan: 6727 Unit selection: - Expert list: 1 Default: - [%]
r1635 VECTOR (n/M), VECTOR_AC (n/M)	Current model controller I component / I_mod_ctrl I comp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: - [Arms] Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms] Access level: 4 Function plan: 6727 Unit selection: p0505 Expert list: 1 Default: - [Arms]
r1636 VECTOR (n/M), VECTOR_AC (n/M)	Current model controller output / I_mod_ctrl outp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: - [Arms] Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms] Access level: 4 Function plan: 6727 Unit selection: p0505 Expert list: 1 Default: - [Arms]
r1637 VECTOR (n/M), VECTOR_AC (n/M)	Current model magnetizing current d axis / I_mod I_mag d-ax Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: - [Arms] Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms] Access level: 4 Function plan: 6727 Unit selection: p0505 Expert list: 1 Default: - [Arms]
r1638 VECTOR (n/M), VECTOR_AC (n/M)	Current model magnetizing current q axis / I_mod I_mag q-ax Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: - [Arms] Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms] Access level: 4 Function plan: 6727 Unit selection: p0505 Expert list: 1 Default: - [Arms]

r1639 VECTOR (n/M), VECTOR_AC (n/M)	CO: Current model Isq after actual value tracking / I_mod Isq track Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 4 Function plan: 6727 Unit selection: p0505 Expert list: 1 Default: - [Arms]
p1640[0...n] VECTOR (n/M), VECTOR_AC (n/M)	CI: Excitation current actual value signal source / I_exc_ActVal S_src Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 6727 Unit selection: - Expert list: 1 Default: 0
r1641[0...1] VECTOR (n/M), VECTOR_AC (n/M)	Excitation current actual value / I_exc_act val Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: 6727, 8020 Unit selection: - Expert list: 1 Default: - [%]
p1642[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Minimum excitation current / Min I_exc Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: 0.1 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 50.0 [%]	Access level: 4 Function plan: 6727 Unit selection: - Expert list: 1 Default: 5.0 [%]
p1643[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Minimum excitation current closed-loop control gain factor / I_exc_min Kp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: 0.00	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5.00	Access level: 4 Function plan: 6727 Unit selection: - Expert list: 1 Default: 0.40
r1644 VECTOR (n/M), VECTOR_AC (n/M)	CO: Excitation current monitoring output / I_exc_monit outp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 4 Function plan: 6727 Unit selection: p0505 Expert list: 1 Default: - [Arms]

p1645[0...7] VECTOR (n/M), VECTOR_AC (n/M)	BI: Excitation feedback signals signal source / Exc FS S_src Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: ASM, PMSM, REL, RESM Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 6495 Unit selection: - Expert list: 1 Default: [0...6] 1 [7] 0
p1646 VECTOR (n/M), VECTOR_AC (n/M)	Excitation monitoring time / Excit t_monit Changeable: T Data type: FloatingPoint32 P group: Commands Not for motor type: ASM, PMSM, REL, RESM Min: 2.0 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1300.0 [s]	Access level: 2 Function plan: 6495 Unit selection: - Expert list: 1 Default: 20.0 [s]
p1647 VECTOR (n/M), VECTOR_AC (n/M)	Excitation switch-off delay time / Exc t_off Changeable: T Data type: FloatingPoint32 P group: Commands Not for motor type: ASM, PMSM, REL, RESM Min: 0.0 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 5.0 [s]	Access level: 2 Function plan: 6495 Unit selection: - Expert list: 1 Default: 0.8 [s]
r1648.0...11 VECTOR (n/M), VECTOR_AC (n/M)	CO/BO: Excitation control word / Excitation STW Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: ASM, PMSM, REL, RESM Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 6495 Unit selection: - Expert list: 1 Default: -
r1649.0...8 VECTOR (n/M), VECTOR_AC (n/M)	CO/BO: Excitation status word / Excitation ZSW Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: ASM, PMSM, REL, RESM Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 6495 Unit selection: - Expert list: 1 Default: -
r1650 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Current setpoint torque-generating before filter / Iq_set before filt Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 5710 Unit selection: p0505 Expert list: 1 Default: - [Arms]

r1650 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Current setpoint force-generating before filter / Iq_set before filt Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 5710 Unit selection: p0505 Expert list: 1 Default: - [Arms]
r1651 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	CO: Torque setpoint function generator / M_set FG Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: p2003 Max: - [Nm]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [Nm]
r1651 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Force setpoint function generator / F_set FG Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [N]	Calculation: - Dynamic index: - Unit group: 8_1 Scaling: p2003 Max: - [N]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [N]
p1653[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Current setpoint torque-generating smoothing time minimum / Isq_s T_smth min Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: PMSM, REL Min: 0.1 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 20.0 [ms]	Access level: 4 Function plan: 6710 Unit selection: - Expert list: 1 Default: 0.1 [ms]
p1654[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Curr. setpoint torque-gen. smoothing time field weakening range / Isq_s T_smth FW Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: PMSM, REL Min: 0.1 [ms]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 50.0 [ms]	Access level: 4 Function plan: 6710 Unit selection: - Expert list: 1 Default: 4.8 [ms]
p1655[0...4] VECTOR (n/M), VECTOR_AC (n/M)	CI: Current setpoint/Speed actual value filter nat. frequency tuning / I/n_setp_filt f_n Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 6700, 6710 Unit selection: - Expert list: 1 Default: 1

p1656[0...n] HLA, HLA_840, HLA_DBSI	Manipulated variable filter velocity controller activation / Filt v_ctrl act Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 0000 bin
p1656[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Activates current setpoint filter / I_setp_filt act Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 5710 Unit selection: - Expert list: 1 Default: 0001 bin
p1656[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Current setpoint/Speed actual value filter activation / I_setp_filt act Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4715, 6710 Unit selection: - Expert list: 1 Default: 0000 0001 bin
p1656 A_INF (Suppl cl-loop ctrl), A_INF_840 (Suppl cl-loop ctrl), R_INF (Suppl cl-loop ctrl)	Signal filter activation / I_setp_filt act Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 bin
p1657[0...n] HLA, HLA_840, HLA_DBSI	Manipulated variable filter 1 velocity controller type / Filt 1 v_ctrl type Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: REL Min: 1	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 1
p1657[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Current setpoint filter 1 type / I_set_filt 1 type Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: REL Min: 1	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: 5710, 6710 Unit selection: - Expert list: 1 Default: 1

p1658[0...n] HLA, HLA_840, HLA_DBSI	Manip. var. filter 1 velocity controller denom. natural freq. / Filt1 v_ctr fn_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 1999.0 [Hz]
p1658[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Current setpoint filter 1 denominator natural frequency / I_set_filt1 fn_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 5710, 6710 Unit selection: - Expert list: 1 Default: 1999.0 [Hz]
p1659[0...n] HLA, HLA_840, HLA_DBSI	Manip. variable filter 1 velocity controller denominator damping / Filt 1 v_ctr D_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.001	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 0.700
p1659[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Current setpoint filter 1 denominator damping / I_set_filt 1 D_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.001	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 5710, 6710 Unit selection: - Expert list: 1 Default: 0.700
p1660[0...n] HLA, HLA_840, HLA_DBSI	Manip. var. filter 1 velocity controller numerator natural freq. / Filt1 v_ctr fn_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 1999.0 [Hz]
p1660[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Current setpoint filter 1 numerator natural frequency / I_set_filt1 fn_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 5710, 6710 Unit selection: - Expert list: 1 Default: 1999.0 [Hz]

p1661[0...n] HLA, HLA_840, HLA_DBSI	Manip. variable filter 1 velocity controller numerator damping / Filt 1 v_ctr D_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 0.700
p1661[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Current setpoint filter 1 numerator damping / I_set_filt 1 D_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 5710, 6710 Unit selection: - Expert list: 1 Default: 0.700
p1662[0...n] HLA, HLA_840, HLA_DBSI	Manipulated variable filter 2 velocity controller type / Filt 2 v_ctrl type Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: REL Min: 1	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 1
p1662[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Current setpoint filter 2 type / I_set_filt 2 type Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: REL Min: 1	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: 5710, 6710 Unit selection: - Expert list: 1 Default: 1
p1663[0...n] HLA, HLA_840, HLA_DBSI	Manip. var. filter 2 velocity controller denom. natural freq. / Filt2 v_ctr fn_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 1999.0 [Hz]
p1663[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Current setpoint filter 2 denominator natural frequency / I_set_filt2 fn_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 5710, 6710 Unit selection: - Expert list: 1 Default: 1999.0 [Hz]

p1664[0...n] HLA, HLA_840, HLA_DBSI	Manip. variable filter 2 velocity controller denominator damping / Filt 2 v_ctr D_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.001	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 0.700
p1664[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Current setpoint filter 2 denominator damping / I_set_filt 2 D_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.001	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 5710, 6710 Unit selection: - Expert list: 1 Default: 0.700
p1665[0...n] HLA, HLA_840, HLA_DBSI	Manip. var. filter 2 velocity controller numerator natural freq. / Filt2 v_ctr fn_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 1999.0 [Hz]
p1665[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Current setpoint filter 2 numerator natural frequency / I_set_filt2 fn_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 5710, 6710 Unit selection: - Expert list: 1 Default: 1999.0 [Hz]
p1666[0...n] HLA, HLA_840, HLA_DBSI	Manip. variable filter 2 velocity controller numerator damping / Filt 2 v_ctr D_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 4965 Unit selection: - Expert list: 1 Default: 0.700
p1666[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Current setpoint filter 2 numerator damping / I_set_filt 2 D_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 5710, 6710 Unit selection: - Expert list: 1 Default: 0.700

p1667[0...n]	Current setpoint filter 3 type / I_set_filt 3 type		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: DDS, p0180	Function plan: 5710
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	1	2	1

p1668[0...n]	Current setpoint filter 3 denominator natural frequency / I_set_filt3 fn_den		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5710
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.5 [Hz]	16000.0 [Hz]	1999.0 [Hz]

p1669[0...n]	Current setpoint filter 3 denominator damping / I_set_filt 3 D_den		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5710
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.001	10.000	0.700

p1670[0...n]	Current setpoint filter 3 numerator natural frequency / I_set_filt3 fn_num		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5710
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.5 [Hz]	16000.0 [Hz]	1999.0 [Hz]

p1671[0...n]	Current setpoint filter 3 numerator damping / I_set_filt 3 D_num		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5710
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.000	10.000	0.700

p1672[0...n]	Current setpoint filter 4 type / I_set_filt 4 type		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: DDS, p0180	Function plan: 5710
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	1	2	1

p1673[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Current setpoint filter 4 denominator natural frequency / I_set_filt4 fn_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 5710 Unit selection: - Expert list: 1 Default: 1999.0 [Hz]
p1674[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Current setpoint filter 4 denominator damping / I_set_filt 4 D_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.001	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 5710 Unit selection: - Expert list: 1 Default: 0.700
p1675[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Current setpoint filter 4 numerator natural frequency / I_set_filt4 fn_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 5710 Unit selection: - Expert list: 1 Default: 1999.0 [Hz]
p1676[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Current setpoint filter 4 numerator damping / I_set_filt 4 D_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 5710 Unit selection: - Expert list: 1 Default: 0.700
p1677[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Speed actual value filter 5 type / n_act_filt 5 type Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: REL Min: 1	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: 4715 Unit selection: - Expert list: 1 Default: 2
p1677 A_INF (Suppl cl-loop ctrl), A_INF_840 (Suppl cl-loop ctrl), R_INF (Suppl cl-loop ctrl)	Vdc actual value filter 5 type / Vdc act_filt 5 typ Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: 8940 Unit selection: - Expert list: 1 Default: 2

p1678[0...n]	Speed actual value filter 5 denominator natural frequency / n_act_filt5 fn_den		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T, U	Calculation: CALC_MOD_CON	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 4715
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.5 [Hz]	Max: 16000.0 [Hz]	Default: 1999.0 [Hz]

p1678	Vdc actual value filter 5 denominator natural frequency / VdcAct_filt5 fn_den		
A_INF (Suppl cl-loop ctrl), A_INF_840 (Suppl cl-loop ctrl), R_INF (Suppl cl-loop ctrl)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 8940
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: 0.5 [Hz]	Max: 16000.0 [Hz]	Default: 1000.0 [Hz]

p1679[0...n]	Speed actual value filter 5 denominator damping / n_act_filt 5 D_den		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T, U	Calculation: CALC_MOD_CON	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 4715
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.001	Max: 10.000	Default: 0.700

p1679	Vdc actual value filter 5 denominator damping / Vdc act_filt5 D_den		
A_INF (Suppl cl-loop ctrl), A_INF_840 (Suppl cl-loop ctrl), R_INF (Suppl cl-loop ctrl)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 8940
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: 0.001	Max: 10.000	Default: 0.700

p1680[0...n]	Speed actual value filter 5 numerator natural frequency / n_act_filt5 fn_num		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 4715
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.5 [Hz]	Max: 16000.0 [Hz]	Default: 1999.0 [Hz]

p1680	Vdc actual value filter 5 numerator natural frequency / VdcAct_filt5 fn_num		
A_INF (Suppl cl-loop ctrl), A_INF_840 (Suppl cl-loop ctrl), R_INF (Suppl cl-loop ctrl)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 8940
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: 0.5 [Hz]	Max: 16000.0 [Hz]	Default: 1000.0 [Hz]

p1681[0...n]	Speed actual value filter 5 numerator damping / n_act_filt 5 D_num		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 4715
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.000	Max: 10.000	Default: 0.700

p1681	Vdc actual value filter 5 numerator damping / Vdc act_filt5 D_num		
A_INF (Suppl cl-loop ctrl), A_INF_840 (Suppl cl-loop ctrl), R_INF (Suppl cl-loop ctrl)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: 0.000	Max: 10.000	Default: 0.010

p1699	Filter data acceptance / Filt data accept		
HLA, HLA_840, HLA_DBSI	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0	Max: 1	Default: 0

p1699	Filter data acceptance / Filt data accept		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0	Max: 1	Default: 0

p1700[0...n]	Force controller loop gain / F_ctrl loop_gain		
HLA, HLA_840, HLA_DBSI	Changeable: T, U	Calculation: CALC_MOD_EQU	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: 0.0 [N/V]	Max: 1000000000.0 [N/V]	Default: 0.0 [N/V]

p1701[0...n]	Current controller reference model dead time / I_ctrRefMod t_dead		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5714
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: 0.000	Max: 1.000	Default: 1.000

p1702[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Isd current controller pre-control scaling / Isd_ctr_prectrScal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, REL Min: 0.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 200.0 [%]	Access level: 4 Function plan: 6714 Unit selection: - Expert list: 1 Default: 70.0 [%]
p1703[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Isq current controller pre-control scaling / Isq_ctr_prectrScal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 200.0 [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [%]
p1703[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Isq current controller pre-control scaling / Isq_ctr_prectrScal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [%]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 200.0 [%]	Access level: 4 Function plan: 6714 Unit selection: - Expert list: 1 Default: 70.0 [%]
p1704[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Isq current controller pre-control EMF scaling / Isq_ctrl EMF scal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: 0.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 200.0 [%]	Access level: 4 Function plan: 6714, 6726 Unit selection: - Expert list: 1 Default: 100.0 [%]
p1705[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Flux setpoint/actual value tracking threshold / Flux track thresh Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: 0.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: PERCENT Max: 100.0 [%]	Access level: 4 Function plan: 6714, 6726 Unit selection: - Expert list: 1 Default: 100.0 [%]
p1710[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Current controller adaptation in-line axis starting point Kp / Id_adapt pt Kp Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, PMSM, SESM, REL, RESM Min: 0.00 [Arms]	Calculation: CALC_MOD_REG Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 6000.00 [Arms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [Arms]

p1711[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Current ctrl adaptation in-line axis starting point Kp adapted / Id_adap pt Kp adap Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, PMSM, SESM, REL, RESM Min: 0.00 [Arms]	Calculation: CALC_MOD_REG Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 6000.00 [Arms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [Arms]
p1712[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Current controller adaptation in-line axis p gain adaptation / Id_adapt Kp adapt Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, PMSM, SESM, REL, RESM Min: 0.00 [%]	Calculation: CALC_MOD_REG Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 1000.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100.00 [%]
p1715[0...n] HLA, HLA_840, HLA_DBSI	Force controller P gain / F_ctrl Kp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.000	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.000	Access level: 3 Function plan: 4970 Unit selection: - Expert list: 1 Default: 0.000
p1715[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Current controller P gain / I_ctrl Kp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000 [V/A]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: 18_1 Scaling: - Max: 100000.000 [V/A]	Access level: 3 Function plan: 5714, 7017 Unit selection: p0505 Expert list: 1 Default: 0.000 [V/A]
p1715[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Current controller P gain / I_ctrl Kp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100000.000	Access level: 3 Function plan: 6700, 6714, 7017 Unit selection: - Expert list: 1 Default: 0.000
p1716[0...n] HLA, HLA_840, HLA_DBSI	Force controller P gain weakening / F_ctrl Kp red Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.1 [%]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.0 [%]	Access level: 3 Function plan: 4970 Unit selection: - Expert list: 1 Default: 40.0 [%]

p1717[0...n] HLA, HLA_840, HLA_DBSI	Force controller integral time / F_ctrl Tn Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2000.00 [ms]	Access level: 3 Function plan: 4970 Unit selection: - Expert list: 1 Default: 40.00 [ms]
p1717[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Current controller integral-action time / I_ctrl Tn Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000.00 [ms]	Access level: 3 Function plan: 5714, 6700, 6714, 7017 Unit selection: - Expert list: 1 Default: 2.00 [ms]
p1718[0...n] HLA, HLA_840, HLA_DBSI	Force controller D component smoothing time constant / F_ctrl D comp T Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.250 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.000 [ms]	Access level: 3 Function plan: 4970 Unit selection: - Expert list: 1 Default: 0.500 [ms]
r1718 VECTOR (n/M), VECTOR_AC (n/M)	CO: Isq controller output / Isq_ctrl outp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: 5_1 Scaling: p2001 Max: - [Vrms]	Access level: 4 Function plan: 6714 Unit selection: p0505 Expert list: 1 Default: - [Vrms]
p1719[0...n] HLA, HLA_840, HLA_DBSI	Force controller derivative-action time / F_ctrl t_deriv Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -10000.0 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.0 [ms]	Access level: 3 Function plan: 4970 Unit selection: - Expert list: 1 Default: 0.0 [ms]
r1719 VECTOR (n/M), VECTOR_AC (n/M)	Isq controller integral component / Isq_ctrl I_comp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: 5_1 Scaling: p2001 Max: - [Vrms]	Access level: 4 Function plan: 6714 Unit selection: p0505 Expert list: 1 Default: - [Vrms]

p1720[0...n] HLA, HLA_840, HLA_DBSI	Force controller pre-control factor / F_ctr prectr fact Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.0 [%]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 120.0 [%]	Access level: 3 Function plan: 4970 Unit selection: - Expert list: 1 Default: 100.0 [%]
p1720[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Current controller d axis p gain / Id_ctrl Kp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, SESM, REL Min: 0.000	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100000.000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000
p1721[0...n] HLA, HLA_840, HLA_DBSI	Precontrol filter activation / Prectrl_filt act Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4970 Unit selection: - Expert list: 1 Default: 0000 bin
p1722[0...n] HLA, HLA_840, HLA_DBSI	Precontrol filter type / Prectrl_filt type Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: REL Min: 1	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: 4970 Unit selection: - Expert list: 1 Default: 1
p1722[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Current controller d axis integral time / I_ctrl d-axis Tn Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, SESM, REL Min: 0.00 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2.00 [ms]
r1723 VECTOR (n/M), VECTOR_AC (n/M)	CO: Isd controller output / Isd_ctrl outp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: 5_1 Scaling: p2001 Max: - [Vrms]	Access level: 4 Function plan: 6714 Unit selection: p0505 Expert list: 1 Default: - [Vrms]

p1724[0...n] HLA, HLA_840, HLA_DBSI	Precontrol filter denominator natural frequency / Prectr_filt fn_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 4970 Unit selection: - Expert list: 1 Default: 1999.0 [Hz]
r1724 VECTOR (n/M), VECTOR_AC (n/M)	Isd controller integral component / Isd_ctrl I_comp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: 5_1 Scaling: p2001 Max: - [Vrms]	Access level: 4 Function plan: 6714 Unit selection: p0505 Expert list: 1 Default: - [Vrms]
p1725[0...n] HLA, HLA_840, HLA_DBSI	Precontrol filter denominator damping / Prectr_filt D_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.001	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: p2001 Max: 10.000	Access level: 3 Function plan: 4970 Unit selection: - Expert list: 1 Default: 0.700
r1725 VECTOR (n/M), VECTOR_AC (n/M)	Isd controller integral component limit / Isd_ctrl I_limit Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: 5_1 Scaling: p2001 Max: - [Vrms]	Access level: 4 Function plan: 6714 Unit selection: p0505 Expert list: 1 Default: - [Vrms]
p1726[0...n] HLA, HLA_840, HLA_DBSI	Precontrol filter numerator natural frequency / Prectr_filt fn_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 4970 Unit selection: - Expert list: 1 Default: 1999.0 [Hz]
p1726[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Quadrature arm decoupling scaling / Transv_decpl scal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [%]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 200.0 [%]	Access level: 4 Function plan: 6714 Unit selection: - Expert list: 1 Default: 75.0 [%]

p1727[0...n] HLA, HLA_840, HLA_DBSI	Precontrol filter numerator damping / Prectrl_filt D_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 4970 Unit selection: - Expert list: 1 Default: 0.700
p1727[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Quadrature arm decoupling at voltage limit scaling / TrnsvDecplVmaxScal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 200.0 [%]	Access level: 4 Function plan: 6714 Unit selection: - Expert list: 1 Default: 50.0 [%]
r1728 VECTOR (n/M), VECTOR_AC (n/M)	De-coupling voltage in-line axis / U_dir-axis_decoupl Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: 5_1 Scaling: p2001 Max: - [Vrms]	Access level: 3 Function plan: 6714 Unit selection: p0505 Expert list: 1 Default: - [Vrms]
r1729 VECTOR (n/M), VECTOR_AC (n/M)	De-coupling voltage quadrature axis / U_quad_decoupl Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: 5_1 Scaling: p2001 Max: - [Vrms]	Access level: 3 Function plan: 6714 Unit selection: p0505 Expert list: 1 Default: - [Vrms]
p1730[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Isd controller integral component shutdown threshold / Isd ctrl Tn shutd Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: PMSM, SESM, REL Min: 30 [%]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 150 [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 30 [%]
p1731[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Isd controller combination current time component / Isd ctr I_combi T1 Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: PMSM, SESM, REL, RESM Min: 0.00 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [ms]

r1732	CO: Direct-axis voltage setpoint / Direct U set		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 5700, 5714, 6714, 5718
	P group: Closed-loop control	Unit group: 5_1	Unit selection: p0505
	Not for motor type: REL	Scaling: p2001	Expert list: 1
	Min: - [Vrms]	Max: - [Vrms]	Default: - [Vrms]
r1732[0...1]	CO: Direct-axis voltage setpoint / Direct U set		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 5700, 5714, 6714, 5718
	P group: Closed-loop control	Unit group: 5_1	Unit selection: p0505
	Not for motor type: REL	Scaling: p2001	Expert list: 1
	Min: - [Vrms]	Max: - [Vrms]	Default: - [Vrms]
r1733	CO: Quadrature-axis voltage setpoint / Quad U set		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 5700, 5714, 5718, 6714, 6719
	P group: Closed-loop control	Unit group: 5_1	Unit selection: p0505
	Not for motor type: REL	Scaling: p2001	Expert list: 1
	Min: - [Vrms]	Max: - [Vrms]	Default: - [Vrms]
r1733[0...1]	CO: Quadrature-axis voltage setpoint / Quad U set		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 5700, 5714, 5718, 6714, 6719
	P group: Closed-loop control	Unit group: 5_1	Unit selection: p0505
	Not for motor type: REL	Scaling: p2001	Expert list: 1
	Min: - [Vrms]	Max: - [Vrms]	Default: - [Vrms]
p1734[0...n]	Isq current controller precontrol eddy current compensation drop / Isq_ctr_prctr drop		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U	Calculation: -	Access level: 4
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: 0.0 [%]	Max: 200.0 [%]	Default: 10.0 [%]

p1735[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Isq current controller prectrl eddy current comp time constant / Isq_ctr_prectrl T Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5.00 [ms]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0.75 [ms]
p1740[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Gain resonance damping for encoderless closed-loop control / Gain res_damp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.025
p1744[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Motor model speed threshold stall detection / MotMod n_thr stall Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: SESM, REL Min: 0.00 [rpm]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.00 [rpm]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: 100.00 [rpm]
p1745[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Motor model error threshold stall detection / MotMod ThreshStall Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [%]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000.0 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 5.0 [%]
r1746 VECTOR (n/M), VECTOR_AC (n/M)	Motor model error signal stall detection / MotMod sig stall Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [%]
p1748[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Motor model lower changeover speed n_set -> n_act / MotMod low n_chng Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, REL, RESM Min: 0.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 90.0 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 50.0 [%]

p1749[0...n]	Motor model upper changeover speed / increase changeover speed / Up/incr n_chgov		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: PMSM, REL, RESM	Scaling: -	Expert list: 1
	Min: 0.0 [%]	Max: 99.0 [%]	Default: 50.0 [%]

p1750[0...n]	Motor model configuration / MotMod config		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T, U	Calculation: CALC_MOD_LIM_REF	Access level: 3
	Data type: Unsigned8	Dynamic index: DDS, p0180	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: SESM, REL	Scaling: -	Expert list: 1
	Min: -	Max: -	Default: 0000 0000 bin

r1751	Motor model status / MotMod status		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned32	Dynamic index: -	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: SESM, REL	Scaling: -	Expert list: 1
	Min: -	Max: -	Default: -

p1752[0...n]	Motor model changeover speed operation with encoder / MotMod n_chgov enc		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U	Calculation: CALC_MOD_REG	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: -
	P group: Closed-loop control	Unit group: 3_1	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.00 [rpm]	Max: 210000.00 [rpm]	Default: 210000.00 [rpm]

p1752[0...n]	Motor model with encoder changeover velocity / MotMod enc v_chgov		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U	Calculation: CALC_MOD_REG	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: -
	P group: Closed-loop control	Unit group: 4_1	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.00 [m/min]	Max: 1000.00 [m/min]	Default: 1000.00 [m/min]

p1752[0...n]	Motor model changeover speed operation with encoder / MotMod n_chgov enc		
VECTOR, VECTOR_AC	Changeable: T, U	Calculation: CALC_MOD_REG	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: -
	P group: Closed-loop control	Unit group: 3_1	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.00 [rpm]	Max: 210000.00 [rpm]	Default: 210000.00 [rpm]

p1753[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Motor model changeover speed hysteresis operation with encoder / MotMod n_chgovHysE Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [%]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 90.0 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [%]
p1754[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Flux angle difference smoothing time / Angle diff T_smth Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, REL Min: 0.1 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.0 [ms]	Access level: 3 Function plan: 6733 Unit selection: - Expert list: 1 Default: 5.0 [ms]
p1755[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor model changeover speed encoderless operation / MotMod n_chgSnsorI Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [rpm]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.00 [rpm]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: 210000.00 [rpm]
p1755[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Motor model changeover velocity encoderless operation / MotMod v_chgSnsorI Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [m/min]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 1000.00 [m/min]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: 1000.00 [m/min]
p1755[0...n] VECTOR, VECTOR_AC	Motor model changeover speed encoderless operation / MotMod n_chgSnsorI Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [rpm]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.00 [rpm]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: 210000.00 [rpm]
p1756 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor model changeover speed hysteresis / MotMod n_chgov hys Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [%]	Calculation: CALC_MOD_CON Dynamic index: - Unit group: - Scaling: - Max: 90.0 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 5.0 [%]

p1756 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Motor model changeover velocity hysteresis / MotMod v_chgov hys Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [%]	Calculation: CALC_MOD_CON Dynamic index: - Unit group: - Scaling: - Max: 90.0 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 5.0 [%]
p1756 VECTOR, VECTOR_AC	Motor model changeover speed hysteresis encoderless operation / MotMod n_chgov hys Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.0 [%]	Calculation: CALC_MOD_REG Dynamic index: - Unit group: - Scaling: - Max: 95.0 [%]	Access level: 3 Function plan: 6730, 6731, 6732, 6733 Unit selection: - Expert list: 1 Default: 50.0 [%]
p1757[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Motor model w/o enc. op./cl.-loop controlled stab. controller Kp / MotMod w/o enc Kp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: SESM, REL Min: 0.01	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.00	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0.70
p1758[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Motor model changeover delay time closed/open-loop control / MotMod t_cl_op Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: PMSM, SESM, REL, RESM Min: 100 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1000 [ms]
p1759[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Motor model changeover delay time open/closed-loop control / MotMod t_op_cl Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: PMSM, SESM, REL, RESM Min: 0 [ms]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2000 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0 [ms]
p1760[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Motor model with encoder speed adaptation Kp / MotMod wE n_ada Kp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: SESM, REL Min: 0.000	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100000.000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1000.000

p1761[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Motor model with encoder speed adaptation Tn / MotMod wE n_ada Tn Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: SESM, REL Min: 0 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 4 [ms]
r1762[0...1] VECTOR (n/M), VECTOR_AC (n/M)	Motor model deviation component 1 / MotMod dev comp 1 Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: SESM, REL Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: 6721, 6730, 6731 Unit selection: - Expert list: 1 Default: -
r1763 VECTOR (n/M), VECTOR_AC (n/M)	Motor model deviation component 2 / MotMod dev comp 2 Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: SESM, REL, RESM Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p1764[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Motor model without encoder speed adaptation Kp / MotMod woE n_adaKp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: SESM, REL Min: 0.000	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100000.000	Access level: 3 Function plan: 6730 Unit selection: - Expert list: 1 Default: 1000.000
r1765[0...1] VECTOR (n/M), VECTOR_AC (n/M)	Motor model speed adaptation Kp effective / MotM n_ada Kp act Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: SESM, REL Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p1766[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Motor model voltage model calculation enable / U_mod calc enab Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, REL, RESM Min: 0.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 90.0 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 50.0 [%]

p1767[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Motor model without encoder speed adaptation Tn / MotMod woE n_adaTn Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: SESM, REL Min: 1 [ms] Max: 200 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 200 [ms]	Access level: 3 Function plan: 6730 Unit selection: - Expert list: 1 Default: 4 [ms]
r1768[0...1] VECTOR (n/M), VECTOR_AC (n/M)	Motor model speed adaptation Vi effective / MotM n_ada Vi act Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: SESM, REL Min: - Max: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r1770[0...2] VECTOR (n/M), VECTOR_AC (n/M)	CO: Motor model speed adaptation proportional component / MotMod n_adapt Kp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: SESM, REL Min: - [rpm] Max: -	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 6730 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r1771 VECTOR (n/M), VECTOR_AC (n/M)	CO: Motor model speed adaptation I comp. / MotMod n_adapt Tn Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: SESM, REL Min: - [rpm] Max: -	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 6730 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r1773[0...1] VECTOR (n/M), VECTOR_AC (n/M)	Motor model slip speed / MotMod slip Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: SESM, REL, RESM Min: - [rpm] Max: -	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: - Max: - [rpm]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [rpm]
p1774[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Motor model offset voltage compensation alpha / MotMod offs comp A Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: PMSM, SESM, REL Min: -5.000 [V] Max: 5.000 [V]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5.000 [V]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [V]

p1775[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Motor model offset voltage compensation beta / MotMod offs comp B Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: PMSM, SESM, REL Min: -5.000 [V]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5.000 [V]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [V]
r1776[0...6] VECTOR (n/M), VECTOR_AC (n/M)	Motor model status signals / MotMod status sig Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r1778 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor model flux angle difference / MotMod ang diff Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [°]	Calculation: - Dynamic index: - Unit group: - Scaling: p2005 Max: - [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [°]
r1778 VECTOR (n/M), VECTOR_AC (n/M)	Motor model flux angle difference / MotMod ang diff Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: - [°]	Calculation: - Dynamic index: - Unit group: - Scaling: p2005 Max: - [°]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [°]
r1779 VECTOR (n/M), VECTOR_AC (n/M)	Motor model absolute flux / MotMod abs flux Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: PMSM, SESM, REL, RESM Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [%]
p1780[0...n] SERVO_840, SERVO_DBSI	Motor model adaptation configuration / MotMod adapt conf Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin

p1780[0...n]	Motor model adaptation configuration / MotMod adapt conf		
SERVO, SERVO_AC	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: DDS, p0180	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0000 0000 0010 0000 bin

p1780[0...n]	Motor/converter model adaptation configuration / MotMod adapt conf		
SERVO (Ext M_ctrl), SERVO_840 (Ext M_ctrl), SERVO_AC (Ext M_ctrl), SERVO_DBSI (Ext M_ctrl)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: DDS, p0180	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0000 0001 0010 1000 bin

p1780[0...n]	Motor model adaptation configuration / MotMod adapt conf		
VECTOR, VECTOR_AC	Changeable: T, U	Calculation: CALC_MOD_CON	Access level: 3
	Data type: Unsigned16	Dynamic index: DDS, p0180	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0000 0000 0111 1100 bin

p1784[0...n]	Motor model feedback scaling / MotMod fdbk scal		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T, U	Calculation: CALC_MOD_CON	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: PMSM, SESM, REL, RESM	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.0 [%]	1000.0 [%]	0.0 [%]

p1785[0...n]	Motor model Lh adaptation Kp / MotMod Lh Kp		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T, U	Calculation: CALC_MOD_CON	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: PMSM, SESM, REL, RESM	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.000	10.000	0.100

p1786[0...n]	Motor model Lh adaptation integral time / MotMod Lh Tn		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T, U	Calculation: CALC_MOD_CON	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: PMSM, SESM, REL, RESM	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	10 [ms]	10000 [ms]	100 [ms]

r1787[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Motor model Lh adaptation corrective value / MotMod Lh corr Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: PMSM, SESM, REL, RESM Min: - [mH]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: - [mH]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [mH]
r1791 VECTOR (n/M), VECTOR_AC (n/M)	Motor model Lh adaptation switch-on frequency / MotMod Lh f_on Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: PMSM, SESM, REL, RESM Min: - [Hz]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Hz]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [Hz]
r1792 VECTOR (n/M), VECTOR_AC (n/M)	Motor model Lh adaptation switch-on slip / MotMod Lh fslip Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: PMSM, SESM, REL, RESM Min: - [Hz]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Hz]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [Hz]
p1795[0...n] SERVO (Ext M_ctrl), SERVO_840 (Ext M_ctrl), SERVO_AC (Ext M_ctrl), SERVO_DBSI (Ext M_ctrl)	Motor model kT adaptation smoothing time / MotMod kT T_smth Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, SESM, REL, RESM Min: 1 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100 [ms]
p1795[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Motor model kT adaptation integral time / MotMod kT Tn Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, SESM, REL, RESM Min: 10 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000 [ms]	Access level: 3 Function plan: 6731 Unit selection: - Expert list: 1 Default: 100 [ms]
r1797 SERVO (Ext M_ctrl, Lin), SERVO_840 (Ext M_ctrl, Lin), SERVO_AC (Ext M_ctrl, Lin), SERVO_DBSI (Ext M_ctrl, Lin)	Motor model kT adaptation corrective value / MotMod kT corr Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, SESM, REL, RESM Min: - [N/Arms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [N/Arms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [N/Arms]

r1797 SERVO (Ext M_ctrl), SERVO_840 (Ext M_ctrl), SERVO_AC (Ext M_ctrl), SERVO_DBSI (Ext M_ctrl)	Motor model kT adaptation corrective value / MotMod kT corr Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, SESM, REL, RESM Min: - [Nm/A]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Nm/A]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [Nm/A]
r1797[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Motor model kT adaptation corrective value / MotMod kT corr Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, SESM, REL, RESM Min: - [Nm/A]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: - [Nm/A]	Access level: 3 Function plan: 6731 Unit selection: - Expert list: 1 Default: - [Nm/A]
p1798[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Motor model pulse technique speed adaptation Kp / MotMod PulsTech Kp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, SESM, REL Min: 0.000	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000.000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1.000
p1799[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Pulse technique speed adaptation Tn / PulsTech adapt Tn Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, SESM, REL Min: 0 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 10 [ms]
p1800[0...n] HLA, HLA_840, HLA_DBSI	Manipulated variable filter activation / ManVarFilt act Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4966 Unit selection: - Expert list: 1 Default: 0000 bin
p1800[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Pulse frequency setpoint / Pulse freq setp Changeable: T, U Data type: FloatingPoint32 P group: Modulation Not for motor type: - Min: 1.000 [kHz]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 32.000 [kHz]	Access level: 2 Function plan: 8021 Unit selection: - Expert list: 1 Default: 4.000 [kHz]

p1800[0...n] VECTOR, VECTOR_AC	Pulse frequency setpoint / Pulse freq setp Changeable: T, U Data type: FloatingPoint32 P group: Modulation Not for motor type: - Min: 1.000 [kHz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16.000 [kHz]	Access level: 2 Function plan: 8021 Unit selection: - Expert list: 1 Default: 4.000 [kHz]
p1801[0...n] HLA, HLA_840, HLA_DBSI	Manipulated variable filter type / ManVarFilt type Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 1	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: 4966 Unit selection: - Expert list: 1 Default: 1
r1801 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Actual pulse frequency / Pulse freq act Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [kHz]	Calculation: - Dynamic index: - Unit group: - Scaling: p2000 Max: - [kHz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [kHz]
r1801[0...1] VECTOR, VECTOR_AC	CO: Pulse frequency / Pulse frequency Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [kHz]	Calculation: - Dynamic index: - Unit group: - Scaling: p2000 Max: - [kHz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [kHz]
r1801 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Actual pulse frequency / Pulse freq act Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [kHz]	Calculation: - Dynamic index: - Unit group: - Scaling: p2000 Max: - [kHz]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [kHz]
p1802[0...n] HLA, HLA_840, HLA_DBSI	Manipulated variable filter denominator natural frequency / ManVarFilt fn_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.5 [Hz]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 4966 Unit selection: - Expert list: 1 Default: 1999.0 [Hz]

p1802[0...n] VECTOR, VECTOR_AC	Modulator mode / Modulator mode Changeable: T Data type: Integer16 P group: Modulation Not for motor type: - Min: 0	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 19	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p1802[0...n] VECTOR (F3E), VECTOR_AC (F3E)	Modulator mode / Modulator mode Changeable: T Data type: Integer16 P group: Modulation Not for motor type: - Min: 0	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 4	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 4
p1803[0...n] HLA, HLA_840, HLA_DBSI	Manipulated variable filter denominator damping / ManVar_filt D_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.001	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 4966 Unit selection: - Expert list: 1 Default: 0.700
p1803[0...n] VECTOR, VECTOR_AC	Maximum modulation depth / Modulat depth max Changeable: T, U Data type: FloatingPoint32 P group: Modulation Not for motor type: - Min: 20.0 [%]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 150.0 [%]	Access level: 3 Function plan: 6723 Unit selection: - Expert list: 1 Default: 100.0 [%]
p1803[0...n] VECTOR (F3E), VECTOR_AC (F3E)	Maximum modulation depth / Modulat depth max Changeable: T, U Data type: FloatingPoint32 P group: Modulation Not for motor type: - Min: 20.0 [%]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 150.0 [%]	Access level: 3 Function plan: 6723 Unit selection: - Expert list: 1 Default: 106.0 [%]

p1804[0...n] HLA, HLA_840, HLA_DBSI	Manipulated variable filter numerator natural freq. / ManVarFilt fn_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 4966 Unit selection: - Expert list: 1 Default: 1999.0 [Hz]
p1804[0...n] VECTOR, VECTOR_AC	Filter time constant smoothed modulation index / T_filt mod_idx sm Changeable: T, U Data type: FloatingPoint32 P group: Modulation Not for motor type: - Min: 0.0 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.0 [ms]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 10.0 [ms]
p1805[0...n] HLA, HLA_840, HLA_DBSI	Manipulated variable filter numerator damping / ManVarFilt D_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 4966 Unit selection: - Expert list: 1 Default: 0.700
p1806[0...n] VECTOR, VECTOR_AC	Filter time constant Vdc correction / T_filt Vdc_corr Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.0 [ms]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.0 [ms]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [ms]
r1807 VECTOR, VECTOR_AC	Actual DC link voltage to calculate the modulation depth / VdcActValMod_depth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: 5_2 Scaling: p2001 Max: - [V]	Access level: 4 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [V]
r1808 VECTOR, VECTOR_AC	DC link voltage actual value for U_max calculation / Vdc act val U_max Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: 5_2 Scaling: p2001 Max: - [V]	Access level: 4 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [V]

r1809 VECTOR, VECTOR_AC	CO: Modulator mode actual / Modulator mode act Changeable: - Data type: Integer16 P group: Modulation Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 9	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p1810 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Modulator configuration / Modulator config Changeable: T Data type: Unsigned16 P group: Modulation Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
p1810 VECTOR, VECTOR_AC	Modulator configuration / Modulator config Changeable: T, U Data type: Unsigned16 P group: Modulation Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0010 bin
p1810 VECTOR (F3E), VECTOR_AC (F3E)	Modulator configuration / Modulator config Changeable: T, U Data type: Unsigned16 P group: Modulation Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
p1810 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Modulator configuration / Modulator config Changeable: T, U Data type: Unsigned16 P group: Modulation Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 1000 0100 0001 0000 bin
p1811[0...n] VECTOR, VECTOR_AC	Pulse frequency wobulation amplitude / Puls wobb ampl Changeable: T, U Data type: FloatingPoint32 P group: Modulation Not for motor type: - Min: 0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 20 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0 [%]

p1811 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Pulse frequency wobulation amplitude / Puls wobb ampl Changeable: T Data type: FloatingPoint32 P group: Modulation Not for motor type: - Min: 0 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20 [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0 [%]
p1812 VECTOR, VECTOR_AC	BI: Offset calibration output current measurement / Off_calibr I_outp Changeable: T Data type: Unsigned32 / Binary P group: Modulation Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 1
p1814[0...n] VECTOR, VECTOR_AC	Vdc filter dead band for modulation switchover / Vdc filt dead band Changeable: T, U Data type: FloatingPoint32 P group: Modulation Not for motor type: - Min: 0.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 12.0 [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [%]
p1815 A_INF, A_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Phase for PWM generation subgroup / Ph for PWM subgr Changeable: T, U Data type: Unsigned16 P group: Modulation Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0001 bin
p1816 A_INF, A_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Set phase for PWM generation manually / Set Ph for PWM Changeable: T, U Data type: Integer16 P group: Modulation Not for motor type: - Min: -1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 16	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -1
p1817 VECTOR, VECTOR_AC	Minimum ratio, pulse frequency to the output frequency / Min f_puls / f_max Changeable: C2(2) Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 8.3	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 15.0	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 12.0

p1818 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Phase for PWM generation configuration / Ph for PWM config Changeable: T Data type: Integer16 P group: Modulation Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
p1819 S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Phase for PWM generation / Ph for PWM Changeable: T, U Data type: Integer16 P group: Modulation Not for motor type: - Min: -1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 16	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -1
p1819 A_INF, A_INF_840, R_INF	Phase for PWM generation / Ph for PWM Changeable: T, U Data type: Integer16 P group: Modulation Not for motor type: - Min: -1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 16	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p1820[0...n] HLA, HLA_840, HLA_DBSI	Invert output voltage / U_output inv Changeable: C2(3) Data type: Integer16 P group: Motor Not for motor type: - Min: 0	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: 4966 Unit selection: - Expert list: 1 Default: 0
p1820[0...n] VECTOR, VECTOR_AC	Reverse the output phase sequence / Outp_ph_seq rev Changeable: C2(3) Data type: Integer16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: 6732 Unit selection: - Expert list: 1 Default: 0
p1821[0...n] HLA, HLA_840, HLA_DBSI	Direction / Direction Changeable: C2(3) Data type: Integer16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p1821[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Direction of rotation / Dir of rot Changeable: C2(3) Data type: Integer16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: 4704, 4710, 4711, 4715, 5730, 6730, 6731, 6732 Unit selection: - Expert list: 1 Default: 0
p1821[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Direction / Direction Changeable: C2(3) Data type: Integer16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: 4704, 4710, 4711, 4715, 5730, 6730, 6731, 6732 Unit selection: - Expert list: 1 Default: 0
p1821[0...n] VECTOR, VECTOR_AC	Direction of rotation / Dir of rot Changeable: C2(3) Data type: Integer16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: 4704, 4710, 4711, 4715, 5730, 6730, 6731, 6732 Unit selection: - Expert list: 1 Default: 0
p1822 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Power unit line phases monitoring tolerance time / PU ph monit t_tol Changeable: T Data type: Unsigned32 P group: - Not for motor type: - Min: 500 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 540000 [ms]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 1000 [ms]
p1825 VECTOR, VECTOR_AC	Converter valve threshold voltage / Threshold voltage Changeable: T, U Data type: FloatingPoint32 P group: Modulation Not for motor type: - Min: 0.0 [Vrms]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 100.0 [Vrms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.6 [Vrms]

p1827 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed compensation valve lockout time operating mode / INFcomp t_lockMode Changeable: T, U Data type: Integer16 P group: Modulation Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0
p1828 VECTOR, VECTOR_AC	Compensation valve lockout time phase U / Comp t_lock ph U Changeable: T, U Data type: FloatingPoint32 P group: Modulation Not for motor type: - Min: 0.00 [μs]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 1000000.00 [μs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [μs]
p1829 VECTOR, VECTOR_AC	Compensation valve lockout time phase V / Comp t_lock ph V Changeable: T, U Data type: FloatingPoint32 P group: Modulation Not for motor type: - Min: 0.00 [μs]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 1000000.00 [μs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [μs]
p1830[0...n] HLA, HLA_840, HLA_DBSI	Factor plane adaptation positive / Fact pl_adap pos Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 10.0 [%]	Calculation: CALC_MOD_EQU Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 200.0 [%]	Access level: 3 Function plan: 4965, 4970, 4975 Unit selection: - Expert list: 1 Default: 100.0 [%]
p1830 VECTOR, VECTOR_AC	Compensation valve lockout time phase W / Comp t_lock ph W Changeable: T, U Data type: FloatingPoint32 P group: Modulation Not for motor type: - Min: 0.00 [μs]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 1000000.00 [μs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [μs]
p1831[0...n] HLA, HLA_840, HLA_DBSI	Factor plane adaptation negative / Fact pl_adap neg Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 10.0 [%]	Calculation: CALC_MOD_EQU Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 200.0 [%]	Access level: 3 Function plan: 4965, 4970, 4975 Unit selection: - Expert list: 1 Default: 100.0 [%]

p1832[0...n] HLA, HLA_840, HLA_DBSI	Valve offset / Valve offset Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: -10.0000 [V]	Calculation: CALC_MOD_ALL Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 10.0000 [V]	Access level: 3 Function plan: 4966 Unit selection: - Expert list: 1 Default: 0.0000 [V]
p1832 VECTOR, VECTOR_AC	Dead time compensation current level / t_dead_comp I_lev Changeable: T, U Data type: FloatingPoint32 P group: Modulation Not for motor type: - Min: 0.0 [Arms]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 10000.0 [Arms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [Arms]
p1833[0...n] HLA, HLA_840, HLA_DBSI	Transition point compensation Q1 positive zero range / Trans pt Q1 pos Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.01 [%]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 95.00 [%]	Access level: 3 Function plan: 4966, 4975 Unit selection: - Expert list: 1 Default: 0.01 [%]
r1833[0...2] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Setpoints phase currents for HW current control / Setp_I Changeable: - Data type: FloatingPoint32 P group: Modulation Not for motor type: - Min: - [A]	Calculation: - Dynamic index: - Unit group: 6_5 Scaling: - Max: - [A]	Access level: 4 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [A]
p1834[0...n] HLA, HLA_840, HLA_DBSI	Transition point compensation U1 positive zero range / Trans pt U1 pos Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.00 [%]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 95.00 [%]	Access level: 3 Function plan: 4966, 4975 Unit selection: - Expert list: 1 Default: 0.00 [%]
p1835[0...n] HLA, HLA_840, HLA_DBSI	Transition point compensation rounding 1 positive zero range / Trans pt rnd 1 pos Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 30.00 [%]	Access level: 3 Function plan: 4966, 4975 Unit selection: - Expert list: 1 Default: 0.00 [%]

p1835[0...1] VECTOR (n/M), VECTOR_AC (n/M)	Pulse frequency reduction switchover frequency shift / f_puls_red f_sw Changeable: T, U Data type: FloatingPoint32 P group: Modulation Not for motor type: SESM, REL Min: 0.00 [Hz]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 800.00 [Hz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [Hz]
p1836[0...n] HLA, HLA_840, HLA_DBSI	Transition point compensation Q1 negative zero range / Trans pt Q1 neg Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.01 [%]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 95.00 [%]	Access level: 3 Function plan: 4966, 4975 Unit selection: - Expert list: 1 Default: 0.01 [%]
r1836[0...1] VECTOR (n/M), VECTOR_AC (n/M)	Pulse frequency reduction, switchover frequency / f_puls_red f_sw Changeable: - Data type: FloatingPoint32 P group: Modulation Not for motor type: SESM, REL Min: - [Hz]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Hz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [Hz]
p1837[0...n] HLA, HLA_840, HLA_DBSI	Transition point compensation U1 negative zero range / Trans pt U1 neg Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.00 [%]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 95.00 [%]	Access level: 3 Function plan: 4966, 4975 Unit selection: - Expert list: 1 Default: 0.00 [%]
r1837 VECTOR, VECTOR_AC	Gating unit configuration / Gating unit config Changeable: - Data type: Unsigned32 P group: Modulation Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p1838[0...n] HLA, HLA_840, HLA_DBSI	Transition point compensation rounding 1 negative zero range / Trans pt rnd 1 neg Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 30.00 [%]	Access level: 3 Function plan: 4966, 4975 Unit selection: - Expert list: 1 Default: 0.00 [%]

r1838.0...15 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO/BO: Gating unit status word 1 / Gating unit ZSW1 Changeable: - Data type: Unsigned16 P group: Modulation Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p1839[0...n] HLA, HLA_840, HLA_DBSI	Transition point compensation Q2 positive / Trans pt Q2 pos Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.20 [%]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 95.00 [%]	Access level: 3 Function plan: 4966, 4975 Unit selection: - Expert list: 1 Default: 10.00 [%]
p1840[0...n] HLA, HLA_840, HLA_DBSI	Transition point compensation U2 positive / Trans pt U2 pos Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.00 [%]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 95.00 [%]	Access level: 3 Function plan: 4966, 4975 Unit selection: - Expert list: 1 Default: 10.00 [%]
p1840[0...n] VECTOR, VECTOR_AC	Actual value correction configuration / ActVal_corr conf Changeable: T Data type: Unsigned16 P group: Modulation Not for motor type: - Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
p1841[0...n] HLA, HLA_840, HLA_DBSI	Transition point compensation rounding 2 positive / Trans pt rnd 2 pos Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.00 [%]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 30.00 [%]	Access level: 3 Function plan: 4966, 4975 Unit selection: - Expert list: 1 Default: 2.50 [%]
r1841 VECTOR, VECTOR_AC	Actual value correction status word / ActVal_corr status Changeable: - Data type: Unsigned16 P group: Modulation Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -

p1842[0...n] HLA, HLA_840, HLA_DBSI	Transition point compensation Q2 negative / Trans pt Q2 neg Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.00 [%]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 95.00 [%]	Access level: 3 Function plan: 4966, 4975 Unit selection: - Expert list: 1 Default: 10.00 [%]
p1843[0...n] HLA, HLA_840, HLA_DBSI	Transition point compensation U2 negative / Trans pt U2 neg Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.00 [%]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 95.00 [%]	Access level: 3 Function plan: 4966, 4975 Unit selection: - Expert list: 1 Default: 10.00 [%]
p1844[0...n] HLA, HLA_840, HLA_DBSI	Transition point compensation rounding 2 negative / Trans pt rnd 2 neg Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.00 [%]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 30.00 [%]	Access level: 3 Function plan: 4966, 4975 Unit selection: - Expert list: 1 Default: 2.50 [%]
p1845[0...n] HLA, HLA_840, HLA_DBSI	Transition point compensation Q3 positive saturation / TransPt Q3 pos sat Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.20 [%]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00 [%]	Access level: 3 Function plan: 4975 Unit selection: - Expert list: 1 Default: 100.00 [%]
p1845[0...n] VECTOR, VECTOR_AC	Actual value correction evaluation factor Lsig / ActVal_cor ev Lsig Changeable: T, U Data type: FloatingPoint32 P group: Modulation Not for motor type: - Min: 0.00	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.00	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 1.00
p1846[0...n] HLA, HLA_840, HLA_DBSI	Transition point compensation U3 positive saturation / TransPt U3 pos sat Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.20 [%]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00 [%]	Access level: 3 Function plan: 4975 Unit selection: - Expert list: 1 Default: 100.00 [%]

p1846[0...n] VECTOR, VECTOR_AC	Actual value correction damping factor / ActV_corr D_factor Changeable: T, U Data type: FloatingPoint32 P group: Modulation Not for motor type: - Min: 0.00	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.00	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 1.00
p1847[0...n] HLA, HLA_840, HLA_DBSI	Transition point compensation Q3 negative saturation / TransPt Q3 neg sat Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.20 [%]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00 [%]	Access level: 3 Function plan: 4975 Unit selection: - Expert list: 1 Default: 100.00 [%]
p1848[0...n] HLA, HLA_840, HLA_DBSI	Transition point compensation U3 negative saturation / TransPt U3 neg sat Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.20 [%]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00 [%]	Access level: 3 Function plan: 4975 Unit selection: - Expert list: 1 Default: 100.00 [%]
r1848[0...5] VECTOR, VECTOR_AC	Actual value correction phase currents / ActVal_corr I_ph Changeable: - Data type: FloatingPoint32 P group: Modulation Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r1849[0...5] VECTOR, VECTOR_AC	Actual value correction phase voltages / ActVal_corr U_ph Changeable: - Data type: FloatingPoint32 P group: Modulation Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p1850[0...n] HLA, HLA_840, HLA_DBSI	Control voltage limiting positive / U_ctrl lim pos Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [V]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.0 [V]	Access level: 3 Function plan: 4966 Unit selection: - Expert list: 1 Default: 10.0 [V]

p1851[0...n] HLA, HLA_840, HLA_DBSI	Control voltage limiting negative / U_ctrl limit neg Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: -10.0 [V]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 0.0 [V]	Access level: 3 Function plan: 4966 Unit selection: - Expert list: 1 Default: -10.0 [V]

p1900 VECTOR, VECTOR_AC	Motor data identification and rotating measurement / MotID and rot meas Changeable: C2(1), T Data type: Integer16 P group: Motor identification Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 2

p1900 VECTOR (n/M), VECTOR_AC (n/M)	Motor data identification and rotating measurement / MotID and rot meas Changeable: C2(1), T Data type: Integer16 P group: Motor identification Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 2

p1901 VECTOR, VECTOR_AC	Test pulse evaluation configuration / Test puls config Changeable: T Data type: Unsigned32 P group: Motor identification Not for motor type: - Min: -	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin

r1902 VECTOR, VECTOR_AC	Test pulse evaluation status / Test puls ev stat Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -

p1903 HLA, HLA_840, HLA_DBSI	BI: Data identification control / Data ident ctrl Changeable: T, U Data type: Unsigned32 / Binary P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1

p1905 VECTOR (n/M), VECTOR_AC (n/M)	Parameter tuning selection / Par tuning select Changeable: C2(1), T Data type: Integer16 P group: Motor identification Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 90	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p1909 HLA, HLA_840, HLA_DBSI	Data identification without enabling activation / Data ID w/o enab Changeable: T, U Data type: Unsigned16 P group: Motor identification Not for motor type: - Min: -	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
p1909[0...n] SERVO (Ext M_ctrl, Ext M_ctrl, Lin), SERVO_840 (Ext M_ctrl, Ext M_ctrl, Lin), SERVO_AC (Ext M_ctrl, Ext M_ctrl, Lin), SERVO_DBSI (Ext M_ctrl, Ext M_ctrl, Lin)	Motor data identification control word / MotID STW Changeable: T Data type: Unsigned16 P group: Motor identification Not for motor type: - Min: -	Calculation: CALC_MOD_ALL Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0110 0111 0000 0000 bin
p1909[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Motor data identification control word / MotID STW Changeable: T Data type: Unsigned16 P group: Motor identification Not for motor type: - Min: -	Calculation: CALC_MOD_ALL Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0010 0111 0000 0000 bin
p1909[0...n] VECTOR, VECTOR_AC	Motor data identification control word / MotID STW Changeable: T Data type: Unsigned32 P group: Motor identification Not for motor type: - Min: -	Calculation: CALC_MOD_ALL Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
p1910 HLA, HLA_840, HLA_DBSI	Valve offset calibration standstill activation / Valv_off_calib act Changeable: T, U Data type: Integer16 P group: Motor identification Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0

p1910	Motor data identification routine stationary (standstill) / MotID standstill		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T	Calculation: -	Access level: 2
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Motor identification	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-3	1	0

p1910	Motor data identification selection / MotID selection		
VECTOR, VECTOR_AC	Changeable: T	Calculation: -	Access level: 2
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Motor identification	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	28	1

p1911	Phases to be identified number / Ph to ident qty		
VECTOR, VECTOR_AC	Changeable: T	Calculation: -	Access level: 4
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Motor identification	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	1	3	1

r1912	Stator resistance identified / R_stator ident		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Motor identification	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	- [ohm]	- [ohm]	- [ohm]

r1912[0...2]	Identified stator resistance / R_stator ident		
VECTOR, VECTOR_AC	Changeable: -	Calculation: -	Access level: 4
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Motor identification	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	- [ohm]	- [ohm]	- [ohm]

r1913	Rotor time constant identified / T_rotor ident		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Motor identification	Unit group: -	Unit selection: -
	Not for motor type: PMSM, RESM	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	- [ms]	- [ms]	- [ms]

r1913[0...2] VECTOR, VECTOR_AC	Identified rotor time constant / T_rotor ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: PMSM, RESM Min: - [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [ms]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [ms]
r1914[0...2] VECTOR, VECTOR_AC	Identified total leakage inductance / L_total_leak ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mH]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [mH]
r1915 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Stator inductance identified / L_stator ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mH]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [mH]
r1915[0...2] VECTOR, VECTOR_AC	Identified nominal stator inductance / L_stator ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mH]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [mH]
r1916[0...2] VECTOR, VECTOR_AC	Identified stator inductance 1 / L_stator 1 ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mH]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [mH]
r1917[0...2] VECTOR, VECTOR_AC	Identified stator inductance 2 / L_stator 2 ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mH]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [mH]

r1918[0...2] VECTOR, VECTOR_AC	Identified stator inductance 3 / L_stator 3 ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mH]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [mH]
r1919[0...2] VECTOR, VECTOR_AC	Identified stator inductance 4 / L_stator 4 ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mH]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [mH]
r1920[0...2] VECTOR, VECTOR_AC	Identified dynamic leakage inductance / L_leak dyn ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mH]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [mH]
r1921[0...2] VECTOR, VECTOR_AC	Identified dynamic leakage inductance 1 / L_leak 1 dyn id Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mH]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [mH]
r1922[0...2] VECTOR, VECTOR_AC	Identified dynamic leakage inductance 2 / L_leak 2 dyn id Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mH]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [mH]
r1923[0...2] VECTOR, VECTOR_AC	Identified dynamic leakage inductance 3 / L_leak 3 dyn id Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mH]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [mH]

r1924[0...2] VECTOR, VECTOR_AC	Identified dynamic leakage inductance 4 / L_leak 4 dyn id Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mH]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [mH]
r1925 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Threshold voltage identified / U_threshold ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Vrms]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [Vrms]
r1925[0...2] VECTOR, VECTOR_AC	Identified threshold voltage / U_threshold ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Vrms]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [Vrms]
r1926[0...2] VECTOR, VECTOR_AC	Identified effective valve lockout time / t_lock_valve id Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [µs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [µs]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [µs]
r1927 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Rotor resistance identified / R_rotor ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [ohm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [ohm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [ohm]
r1927[0...2] VECTOR, VECTOR_AC	Identified rotor resistance / R_rotor ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [ohm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [ohm]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [ohm]

r1929[0...2] VECTOR, VECTOR_AC	Identified cable resistance / R_cable ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [ohm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [ohm]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [ohm]
r1932[0...19] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	d inductance identified / Ld ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mH]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [mH]
r1933[0...19] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	d inductance identification current / Ld I_ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Arms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [Arms]
r1934[0...9] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	q inductance identified / Lq ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mH]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [mH]
r1934[0...9] VECTOR (n/M), VECTOR_AC (n/M)	q inductance identified / Lq ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mH]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [mH]
r1935[0...20] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Identification current / I_ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Arms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [Arms]

r1935[0...20] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Identification current / I_ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Arms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [Arms]
r1935[0...9] VECTOR (n/M), VECTOR_AC (n/M)	q inductance identification current / Lq I_ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Arms]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [Arms]
r1936 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Magnetizing inductance identified / L_H ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mH]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [mH]
r1937[0...10] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Torque constant identified / kT ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [Nm/A]	Calculation: - Dynamic index: - Unit group: 28_1 Scaling: - Max: - [Nm/A]	Access level: 3 Function plan: - Unit selection: p0100 Expert list: 1 Default: - [Nm/A]
r1937[0...10] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Force constant identified / kT ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [N/Arms]	Calculation: - Dynamic index: - Unit group: 29_1 Scaling: - Max: - [N/Arms]	Access level: 3 Function plan: - Unit selection: p0100 Expert list: 1 Default: - [N/Arms]
r1938 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Voltage constant identified / kE ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Vrms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [Vrms]

r1938 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Voltage constant identified / kE ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [Vrms s/m]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Vrms s/m]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [Vrms s/m]
r1939 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Reluctance torque constant identified / kT_reluct ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mH]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [mH]
r1939 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Reluctance force constant identified / kT_reluct ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mH]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [mH]
r1947 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Optimum load angle identified / phi_load ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [°]
r1948 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Magnetizing current identified / I_mag ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Arms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [Arms]
r1949.0...1 HLA, HLA_840, HLA_DBSI	CO/BO: Status word data identification / ZSW data ident Changeable: - Data type: Unsigned32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r1950[0...39]	Voltage emulation error voltage values / U_error U_values		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [V]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [V]
r1951[0...19]	Voltage emulation error current values / U_error I_error		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [A]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [A]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [A]
p1952[0...n]	Voltage emulation error final value / U_error final val		
SERVO (Ext M_ctrl), SERVO_840 (Ext M_ctrl), SERVO_AC (Ext M_ctrl), SERVO_DBSI (Ext M_ctrl)	Changeable: T Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.000 [V]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.000 [V]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [V]
p1953[0...n]	Voltage emulation error current offset / U_error I_offset		
SERVO (Ext M_ctrl), SERVO_840 (Ext M_ctrl), SERVO_AC (Ext M_ctrl), SERVO_DBSI (Ext M_ctrl)	Changeable: T Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.000 [A]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.000 [A]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [A]
p1954[0...n]	Voltage emulation error semiconductor voltage / U_error U_diode		
SERVO (Ext M_ctrl), SERVO_840 (Ext M_ctrl), SERVO_AC (Ext M_ctrl), SERVO_DBSI (Ext M_ctrl)	Changeable: T Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: -10.000 [V]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000 [V]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [V]

p1955[0...3] HLA, HLA_840, HLA_DBSI	Valve identification voltage / Valve ident U	Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.00 [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10.00 [V]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: [0] 0.00 [V] [1] 10.00 [V] [2] 2.00 [V] [3] 2.00 [V]
p1956[0...1] HLA, HLA_840, HLA_DBSI	Valve identification measuring distance / Valve ident dist	Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.0 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.0 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: [0] 10.0 [%] [1] 90.0 [%]
p1957[0...1] HLA, HLA_840, HLA_DBSI	Valve identification measured value / Valve ident val	Changeable: T, U Data type: Unsigned16 P group: Motor identification Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: [0] 100 [1] 4
p1958[0...4] HLA, HLA_840, HLA_DBSI	Valve identification time / Valve ident t	Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.00 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.00 [s]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: [0] 0.10 [s] [1] 0.10 [s] [2] 0.10 [s] [3] 4.00 [s] [4] 4.00 [s]
p1958[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Rotating measurement ramp-up/ramp-down time / Rot meas t_r up/dn	Changeable: T Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: -1.00 [s]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 999999.00 [s]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -1.00 [s]

p1958[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Moving measurement ramp-up/ramp-down time / Mov meas t_r up/dn Changeable: T Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: -1.00 [s]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 999999.00 [s]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -1.00 [s]
p1959[0...n] HLA, HLA_840, HLA_DBSI	Data identification moving configuration / Dat_id mov config Changeable: T, U Data type: Unsigned16 P group: Motor identification Not for motor type: REL Min: -	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0001 0011 1111 bin
p1959[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Rotating measurement configuration / Rot meas config Changeable: T Data type: Unsigned16 P group: Motor identification Not for motor type: REL Min: -	Calculation: CALC_MOD_ALL Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 1110 1110 0111 bin
p1959[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Moving measurement configuration / Mov meas config Changeable: T Data type: Unsigned16 P group: Motor identification Not for motor type: REL Min: -	Calculation: CALC_MOD_ALL Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 1110 1110 0111 bin
p1959[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Rotating measurement configuration / Rot meas config Changeable: T Data type: Unsigned16 P group: Motor identification Not for motor type: REL Min: -	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0001 1111 bin
p1960 HLA, HLA_840, HLA_DBSI	Moving measurement selection / Mov meas sel Changeable: T, U Data type: Integer16 P group: Motor identification Not for motor type: REL Min: -3	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0

p1960	Rotating measurement selection / Rot meas sel		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T	Calculation: -	Access level: 2
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Motor identification	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-3	1	0

p1960	Moving measurement selection / Mov meas sel		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T	Calculation: -	Access level: 2
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Motor identification	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-3	1	0

p1960	Rotating measurement selection / Rot meas sel		
VECTOR, VECTOR_AC	Changeable: T	Calculation: -	Access level: 2
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Motor identification	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	4	0

r1961[0...511]	Valve identification voltage characteristic / Valve ID char U		
HLA, HLA_840, HLA_DBSI	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Motor identification	Unit group: -	Unit selection: -
	Not for motor type: RESM	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	- [V]	- [V]	- [V]

p1961	Saturation characteristic speed to determine / Sat_char n determ		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Motor identification	Unit group: -	Unit selection: -
	Not for motor type: REL, RESM	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	26 [%]	75 [%]	40 [%]

r1962[0...511]	Valve identification characteristic velocity / Valve ID char v		
HLA, HLA_840, HLA_DBSI	Changeable: -	Calculation: -	Access level: 4
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Motor identification	Unit group: -	Unit selection: -
	Not for motor type: RESM	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	- [m/min]	- [m/min]	- [m/min]

r1962[0...9]	Saturation characteristic magnetizing current identified / Sat_char I_mag		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Motor identification	Unit group: -	Unit selection: -
	Not for motor type: PMSM, REL, RESM	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	- [%]	- [%]	- [%]

r1962[0...4]	Saturation characteristic magnetizing current / Sat_char I_mag		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: -	Calculation: -	Access level: 4
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Motor identification	Unit group: -	Unit selection: -
	Not for motor type: PMSM, REL, RESM	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	- [%]	- [%]	- [%]

r1963[0...511]	Valve identification system pressure characteristic / Valve ID char pp		
HLA, HLA_840, HLA_DBSI	Changeable: -	Calculation: -	Access level: 4
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Motor identification	Unit group: -	Unit selection: -
	Not for motor type: RESM	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	- [bar]	- [bar]	- [bar]

r1963[0...9]	Saturation characteristic stator flux identified / Sat_char flux		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Motor identification	Unit group: -	Unit selection: -
	Not for motor type: PMSM, REL, RESM	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	- [%]	- [%]	- [%]

r1963[0...4]	Saturation characteristic magnetizing inductance / Sat_char L_main		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: -	Calculation: -	Access level: 4
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Motor identification	Unit group: -	Unit selection: -
	Not for motor type: PMSM, REL, RESM	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	- [%]	- [%]	- [%]

r1964[0...511]	Valve identification characteristic force / Valve ID char F		
HLA, HLA_840, HLA_DBSI	Changeable: -	Calculation: -	Access level: 4
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Motor identification	Unit group: 8_1	Unit selection: p0505
	Not for motor type: RESM	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	- [N]	- [N]	- [N]

r1964[0...4] VECTOR (n/M), VECTOR_AC (n/M)	Saturation characteristic rotor flux / Sat_char rot flux Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: PMSM, REL, RESM Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [%]
p1965 VECTOR (n/M), VECTOR_AC (n/M)	Speed_ctrl_opt speed / n_opt speed Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: REL Min: 10 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 75 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 40 [%]
p1967 VECTOR (n/M), VECTOR_AC (n/M)	Speed_ctrl_opt dynamic factor / n_opt dyn_factor Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: REL Min: 1 [%]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 400 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100 [%]
r1968 VECTOR (n/M), VECTOR_AC (n/M)	Speed_ctrl_opt dynamic factor actual / n_opt dyn_fact act Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: REL Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [%]
r1969 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Moment of inertia identified / M_inertia ident Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: REL Min: - [kgm ²]	Calculation: - Dynamic index: - Unit group: 25_1 Scaling: - Max: - [kgm ²]	Access level: 3 Function plan: - Unit selection: p0100 Expert list: 1 Default: - [kgm ²]
r1969 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	High load inertia identified / High load inert id Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: REL Min: - [kg]	Calculation: - Dynamic index: - Unit group: 27_1 Scaling: - Max: - [kg]	Access level: 3 Function plan: - Unit selection: p0100 Expert list: 1 Default: - [kg]

r1969 VECTOR (n/M), VECTOR_AC (n/M)	Speed_ctrl_opt moment of inertia determined / n_opt M_inert det Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: REL Min: - [kgm ²]	Calculation: - Dynamic index: - Unit group: 25_1 Scaling: - Max: - [kgm ²]	Access level: 4 Function plan: - Unit selection: p0100 Expert list: 1 Default: - [kgm ²]
r1970[0...1] VECTOR (n/M), VECTOR_AC (n/M)	Speed_ctrl_opt vibration test vibration frequency determined / n_opt f_vib det Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: REL Min: - [Hz]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Hz]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [Hz]
r1971[0...1] VECTOR (n/M), VECTOR_AC (n/M)	Speed_ctrl_opt vibration test standard deviation determined / n_opt std_dev det Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: REL Min: - [Hz]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Hz]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [Hz]
r1972[0...1] VECTOR (n/M), VECTOR_AC (n/M)	Speed_ctrl_opt vibration test number of periods determined / n_opt per_qty det Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: REL Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r1973[0...1] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Encoder pulse number identified / Pulse No. ident Changeable: - Data type: Integer32 P group: Motor identification Not for motor type: REL Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r1973 VECTOR (n/M), VECTOR_AC (n/M)	Rotating measurement encoder test pulse number determined / n_opt puls no. det Changeable: - Data type: Integer32 P group: Motor identification Not for motor type: REL Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

p1974 VECTOR (n/M), VECTOR_AC (n/M)	Speed_ctrl_opt saturation characteristic rotor flux maximum / n_opt rot_fl max Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: PMSM, SESM, REL, RESM Min: 104 [%] Max: 120 [%]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 120 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 120 [%]
r1979.0...12 VECTOR (n/M), VECTOR_AC (n/M)	BO: Speed_ctrl_opt status / n_opt status Changeable: - Data type: Unsigned16 P group: Motor identification Not for motor type: REL Min: - Max: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p1980[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	PolID technique / PolID technique Changeable: T, U Data type: Integer16 P group: Motor identification Not for motor type: - Min: 0	Calculation: CALC_MOD_ALL Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 99	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 99
p1980[0...n] VECTOR, VECTOR_AC	PolID technique / PolID technique Changeable: T, U Data type: Integer16 P group: Motor identification Not for motor type: ASM Min: 1	Calculation: CALC_MOD_REG Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 12	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 4
p1981[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	PolID distance max / PolID distance max Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0 [°]	Calculation: CALC_MOD_ALL Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 180 [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 10 [°]
p1982[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	PolID selection / PolID selection Changeable: T Data type: Integer16 P group: Motor identification Not for motor type: - Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p1982[0...n] VECTOR, VECTOR_AC	PolID selection / PolID selection Changeable: T Data type: Integer16 P group: Motor identification Not for motor type: - Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p1983 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	PolID test / PolID test Changeable: T, U Data type: Unsigned16 P group: Motor identification Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
r1984 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	PolID angular difference / PolID ang diff Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [°]
r1985 HLA, HLA_840, HLA_DBSI	Chld v/U characteristic velocity measured / Chld v/U v meas Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [m/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [m/min]
r1985 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	PolID saturation curve / PolID sat_char Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Arms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [Arms]
r1986 HLA, HLA_840, HLA_DBSI	Chld v/U characteristic velocity parameterized / Chld v/U v par Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [m/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [m/min]

r1986 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	PolID saturation characteristic 2 / PoleID sat_curve 2 Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r1987 HLA, HLA_840, HLA_DBSI	Chld v/U characteristic voltage / Chld v/U U Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [V]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [V]
r1987 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	PolID trigger characteristic / PolID trig_char Changeable: - Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [%]
p1990 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Encoder adjustment determine angular commutation offset / Enc_adj det ang Changeable: T, U Data type: Integer16 P group: Motor identification Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p1990 VECTOR, VECTOR_AC	Encoder adjustment determine angular commutation offset / Enc_adj det ang Changeable: T Data type: Integer16 P group: Motor identification Not for motor type: ASM Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p1991[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Motor changeover angular commutation correction / Ang_com corr Changeable: T Data type: FloatingPoint32 P group: - Not for motor type: - Min: -180 [°]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 180 [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0 [°]

r1992.0...15	CO/BO: PolID diagnostics / PolID diag		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r1992.0...15	CO/BO: PolID diagnostics / PolID diag		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p1993[0...n]	PolID motion-based current / PolID I mot_bas		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.00 [Arms]	Calculation: CALC_MOD_EQU Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 20000.00 [Arms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [Arms]
p1994[0...n]	PolID motion-based rise time / PolID T mot_bas		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 2500 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100 [ms]
p1995[0...n]	PolID motion-based gain / PolID kp mot_bas		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.000 [Nms/rad]	Calculation: CALC_MOD_CON Dynamic index: MDS, p0130 Unit group: 17_1 Scaling: - Max: 999999.000 [Nms/rad]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: 0.300 [Nms/rad]
p1995[0...n]	PolID motion-based gain / PolID kp mot_bas		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.000 [Ns/m]	Calculation: CALC_MOD_CON Dynamic index: MDS, p0130 Unit group: 24_2 Scaling: - Max: 999999.000 [Ns/m]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: 10.000 [Ns/m]

p1996[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	PolID motion-based integral time / PolID Tn mot_bas Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.0 [ms]	Calculation: CALC_MOD_CON Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 500.0 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2.0 [ms]
p1997[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	PolID motion-based smoothing time / PolID t_sm mot_bas Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.0 [ms]	Calculation: CALC_MOD_CON Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 50.0 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [ms]
p1998[0...n] VECTOR (n/M), VECTOR_AC (n/M)	PolID circle center point / PolID circ center Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.0000 [A]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.0000 [A]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0000 [A]
p1999[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Ang. commutation offset calibr. and PolID scaling / Com_ang_offs scal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 10 [%]	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 5000 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100 [%]
p2000 HLA, HLA_840, HLA_DBSI	Reference velocity / v_ref Changeable: T Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 0.600 [m/min]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 600.000 [m/min]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 120.000 [m/min]
p2000 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Reference speed reference frequency / n_ref f_ref Changeable: T Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 6.00 [rpm]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 210000.00 [rpm]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 3000.00 [rpm]

p2000 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Reference velocity reference frequency / v_ref f_ref Changeable: T Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 0.60 [m/min]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 700.00 [m/min]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 120.00 [m/min]
p2000 VECTOR, VECTOR_AC	Reference speed reference frequency / n_ref f_ref Changeable: T Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 6.00 [rpm]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 210000.00 [rpm]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 3000.00 [rpm]
p2000 A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	Reference frequency / f_ref Changeable: T Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 0.10 [Hz]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 1000.00 [Hz]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 50.00 [Hz]
p2000 TM41	Reference speed reference frequency / n_ref f_ref Changeable: T Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 6.00 [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 210000.00 [rpm]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 3000.00 [rpm]
p2000 ENC, ENC_840	Reference speed reference frequency / n_ref f_ref Changeable: T Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 6.00 [rpm]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 210000.00 [rpm]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 3000.00 [rpm]
p2000 ENC (Lin_enc), ENC_840 (Lin_enc)	Reference velocity reference frequency / v_ref f_ref Changeable: T Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 0.60 [m/min]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 600.00 [m/min]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 120.00 [m/min]

p2001 HLA, HLA_840, HLA_DBSI	Reference voltage / Reference voltage Changeable: T Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 10 [V]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 100000 [V]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1000 [V]
p2001 A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Reference voltage / Reference voltage Changeable: T Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 10 [Vrms]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 100000 [Vrms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1000 [Vrms]
p2002 HLA, HLA_840, HLA_DBSI	Reference pressure / p_ref Changeable: T Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 0.10 [bar]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 5000.00 [bar]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100.00 [bar]
p2002 A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Reference current / I_ref Changeable: T Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 0.10 [Arms]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 100000.00 [Arms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100.00 [Arms]
p2003 HLA, HLA_840, HLA_DBSI	Reference force / F_ref Changeable: T Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 0.01 [N]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: 8_2 Scaling: - Max: 20000000.00 [N]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: 100.00 [N]

p2003	Reference torque / M_ref		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: T Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 0.01 [Nm]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: 7_2 Scaling: - Max: 20000000.00 [Nm]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: 1.00 [Nm]

p2003	Reference force / Reference force		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 0.01 [N]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: 8_2 Scaling: - Max: 20000000.00 [N]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: 100.00 [N]

r2004	Reference power / P_ref		
HLA, HLA_840, HLA_DBSI	Changeable: - Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: - [kW]	Calculation: - Dynamic index: - Unit group: 14_10 Scaling: - Max: - [kW]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [kW]

r2004	Reference power / P_ref		
A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: - [kW]	Calculation: - Dynamic index: - Unit group: 14_10 Scaling: - Max: - [kW]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [kW]

p2005	Reference angle / Reference angle		
A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: T Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 90.00 [°]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 180.00 [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 90.00 [°]

p2006			
TM120, TM150, TM31	Reference temperature / Ref temp		
Changeable: T	Calculation: CALC_MOD_ALL	Access level: 3	
Data type: FloatingPoint32	Dynamic index: -	Function plan: -	
P group: Communications	Unit group: -	Unit selection: -	
Not for motor type: -	Scaling: -	Expert list: 1	
Min:	Max:	Default:	
50.00 [°C]	300.00 [°C]	100.00 [°C]	
p2006			
A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Reference temperature / Ref temp		
Changeable: T	Calculation: CALC_MOD_ALL	Access level: 3	
Data type: FloatingPoint32	Dynamic index: -	Function plan: -	
P group: Communications	Unit group: 21_1	Unit selection: p0505	
Not for motor type: -	Scaling: -	Expert list: 1	
Min:	Max:	Default:	
50.00 [°C]	300.00 [°C]	100.00 [°C]	
p2007			
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Reference acceleration / a_ref		
Changeable: T	Calculation: CALC_MOD_ALL	Access level: 3	
Data type: FloatingPoint32	Dynamic index: -	Function plan: -	
P group: Communications	Unit group: -	Unit selection: -	
Not for motor type: -	Scaling: -	Expert list: 1	
Min:	Max:	Default:	
0.01 [rev/s²]	500000.00 [rev/s²]	0.01 [rev/s²]	
p2007			
HLA, HLA_840, HLA_DBSI, SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Reference acceleration / a_ref		
Changeable: T	Calculation: CALC_MOD_ALL	Access level: 3	
Data type: FloatingPoint32	Dynamic index: -	Function plan: -	
P group: Communications	Unit group: 22_1	Unit selection: p0505	
Not for motor type: -	Scaling: -	Expert list: 1	
Min:	Max:	Default:	
0.01 [m/s²]	10000.00 [m/s²]	0.01 [m/s²]	
r2019[0...7]			
CU_I_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Comm IF error statistics / Comm err		
Changeable: -	Calculation: -	Access level: 4	
Data type: Unsigned32	Dynamic index: -	Function plan: -	
P group: Communications	Unit group: -	Unit selection: -	
Not for motor type: -	Scaling: -	Expert list: 1	
Min:	Max:	Default:	
-	-	-	

p2020 CU_S_AC_DP, CU_S120_DP	Field bus interface baud rate / Field bus baud Changeable: T Data type: Integer16 P group: Communications Not for motor type: - Min: 4	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 8
p2021 CU_S_AC_DP, CU_S120_DP	Field bus interface address / Field bus address Changeable: T Data type: Unsigned16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 31	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p2022 CU_S_AC_DP, CU_S120_DP	Field bus int USS PZD no. / Field bus USS PZD Changeable: T Data type: Unsigned16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 16	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 2
p2023 CU_S_AC_DP, CU_S120_DP	Field bus interface USS PKW count / Field bus USS PKW Changeable: T Data type: Integer16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 127	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 127
p2024[0...2] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Fieldbus interface times / Fieldbus times Changeable: T, U Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: [0] 1000 [ms] [1] 0 [ms] [2] 0 [ms]

r2029[0...7] CU_S_AC_DP, CU_S120_DP	Field bus interface error statistics / Field bus error Changeable: - Data type: Unsigned32 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p2030 CU_S_AC_PN, CU_S120_PN	Field bus interface protocol selection / Field bus protocol Changeable: T Data type: Integer16 P group: Communications Not for motor type: - Min: 7	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 13	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 7
p2030 CU_S_AC_DP, CU_S120_DP	Field bus interface protocol selection / Field bus protocol Changeable: T Data type: Integer16 P group: Communications Not for motor type: - Min: 3	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 3
r2032 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Master control control word effective / PcCtrl STW eff Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r2032 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Master control control word effective / PcCtrl STW eff Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r2032 A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	Master control control word effective / PcCtrl STW eff Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -

p2035 CU_S_AC_DP, CU_S120_DP	Fieldbus interface USS PIV drive object number / Fieldbus USS DO_no Changeable: T, U Data type: Integer16 P group: Communications Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 62	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 2
p2037 A_INF, A_INF_840, B_INF, B_INF_840, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	IF1 PROFIdrive STW1.10 = 0 mode / IF1 PD STW1.10=0 Changeable: T Data type: Integer16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p2038 HLA_840, HLA_DBSI, SERVO_840, SERVO_DBSI	IF1 PROFIdrive STW/ZSW interface mode / PD STW/ZSW IF mode Changeable: T Data type: Integer16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
p2038 SERVO_840 (EPOS, Position control, Position control), SERVO_DBSI (EPOS, Position control, Position control)	IF1 PROFIdrive STW/ZSW interface mode / PD STW/ZSW IF mode Changeable: T Data type: Integer16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
p2038 SERVO, SERVO_AC	IF1 PROFIdrive STW/ZSW interface mode / PD STW/ZSW IF mode Changeable: T Data type: Integer16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p2038	IF1 PROFIdrive STW/ZSW interface mode / PD STW/ZSW IF mode		
SERVO (EPOS, Position control, Position control), SERVO_AC (EPOS, Position control, Position control)	Changeable: T	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Communications	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	0	0

p2038	IF1 PROFIdrive STW/ZSW interface mode / PD STW/ZSW IF mode		
VECTOR, VECTOR_AC	Changeable: T	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Communications	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	2	0

p2038	IF1 PROFIdrive STW/ZSW interface mode / PD STW/ZSW IF mode		
VECTOR (EPOS, Position control, Position control), VECTOR_AC (EPOS, Position control, Position control)	Changeable: T	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Communications	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	0	0

p2039	Select debug monitor interface / Debug monit select		
CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: T, U	Calculation: -	Access level: 4
	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: Communications	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	3	0

p2039	Select debug monitor interface / Debug monit select		
CU_I_840	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: Communications	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	3	1

p2040	Fieldbus interface monitoring time / Fieldbus t_monit		
CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Communications	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0 [ms]	1999999 [ms]	100 [ms]

p2040 CU_I_840, CU_LINK, CU_NX_840	COMM INT monitoring time / COMM INT t_monit Changeable: T, U Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1999999 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 20 [ms]
p2042 CU_S_AC_DP, CU_S120_DP	PROFIBUS Ident Number / PB ident No. Changeable: T Data type: Integer16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
r2043.0...2 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	BO: IF1 PROFIdrive PZD state / IF1 PD PZD state Changeable: - Data type: Unsigned8 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2410 Unit selection: - Expert list: 1 Default: -
p2044 A_INF, A_INF_840, B_INF, B_INF_840, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	IF1 PROFIdrive fault delay / IF1 PD fault delay Changeable: T, U Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 0 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100 [s]	Access level: 3 Function plan: 2410 Unit selection: - Expert list: 1 Default: 0 [s]
p2045 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR (n/M), VECTOR_AC (n/M)	CI: PB/PN clock synchronous controller sign-of-life signal source / PB/PN ctrSoL s_src Changeable: T Data type: Unsigned32 / Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2410 Unit selection: - Expert list: 1 Default: 0

p2047 CU_S_AC_DP, CU_S120_DP	PROFIBUS additional monitoring time / PB suppl t_monit Changeable: T, U Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20000 [ms]	Access level: 3 Function plan: 2410 Unit selection: - Expert list: 1 Default: 0 [ms]
p2048 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	IF1 PROFIdrive PZD sampling time / IF1 PZD t_sample Changeable: C1(3) Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 1.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 16.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 4.00 [ms]
p2049 SERVO, SERVO_840, SERVO_DBSI, VECTOR	PROFIdrive isochronous operation asynchronous participation / Isochron async Changeable: C1(3) Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
r2050[0...19] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	CO: IF1 PROFIdrive PZD receive word / IF1 PZD rcv word Changeable: - Data type: Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r2050[0...19] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41	CO: IF1 PROFIdrive PZD receive word / IF1 PZD rcv word Changeable: - Data type: Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2440, 2468 Unit selection: - Expert list: 1 Default: -
r2050[0...31] VECTOR, VECTOR_AC	CO: IF1 PROFIdrive PZD receive word / IF1 PZD rcv word Changeable: - Data type: Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2440, 2468 Unit selection: - Expert list: 1 Default: -

r2050[0...9] A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	CO: IF1 PROFIdrive PZD receive word / IF1 PZD recv word Changeable: - Data type: Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r2050[0...4] TB30, TM120, TM150, TM15DI_DO, TM31	CO: IF1 PROFIdrive PZD receive word / IF1 PZD recv word Changeable: - Data type: Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r2050[0...3] ENC, ENC_840	CO: IF1 PROFIdrive PZD receive word / IF1 PZD recv word Changeable: - Data type: Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2440, 2468 Unit selection: - Expert list: 1 Default: -
p2051[0...24] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	CI: IF1 PROFIdrive PZD send word / IF1 PZD send word Changeable: T, U Data type: Unsigned32 / Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p2051[0...27] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41	CI: IF1 PROFIdrive PZD send word / IF1 PZD send word Changeable: T, U Data type: Unsigned32 / Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2470 Unit selection: - Expert list: 1 Default: 0
p2051[0...31] VECTOR, VECTOR_AC	CI: IF1 PROFIdrive PZD send word / IF1 PZD send word Changeable: T, U Data type: Unsigned32 / Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2470 Unit selection: - Expert list: 1 Default: 0

p2051[0...9] A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	CI: IF1 PROFIdrive PZD send word / IF1 PZD send word Changeable: T, U Data type: Unsigned32 / Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p2051[0...4] TB30, TM120, TM150, TM15DI_DO, TM31	CI: IF1 PROFIdrive PZD send word / IF1 PZD send word Changeable: T, U Data type: Unsigned32 / Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p2051[0...11] ENC, ENC_840	CI: IF1 PROFIdrive PZD send word / IF1 PZD send word Changeable: T, U Data type: Unsigned32 / Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2470 Unit selection: - Expert list: 1 Default: 0
r2053[0...24] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	IF1 PROFIdrive diagnostics PZD send word / IF1 diag send word Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r2053[0...27] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41	IF1 PROFIdrive diagnostics PZD send word / IF1 diag send word Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2450, 2470 Unit selection: - Expert list: 1 Default: -
r2053[0...31] VECTOR, VECTOR_AC	IF1 PROFIdrive diagnostics PZD send word / IF1 diag send word Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2450, 2470 Unit selection: - Expert list: 1 Default: -

r2053[0...9] A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	IF1 PROFIdrive diagnostics PZD send word / IF1 diag send word Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r2053[0...4] TB30, TM120, TM150, TM15DI_DO, TM31	IF1 PROFIdrive diagnostics PZD send word / IF1 diag send word Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r2053[0...11] ENC, ENC_840	IF1 PROFIdrive diagnostics PZD send word / IF1 diag send word Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2450, 2470 Unit selection: - Expert list: 1 Default: -
r2054 CU_I_840, CU_LINK, CU_NX_840	COMM INT state / C INT state Changeable: - Data type: Integer16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r2054 CU_S_AC_DP, CU_S120_DP	PROFIBUS status / PB status Changeable: - Data type: Integer16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4	Access level: 3 Function plan: 2410 Unit selection: - Expert list: 1 Default: -
r2055[0...2] CU_S_AC_DP, CU_S120_DP, CU_S120_PN	PROFIBUS diagnostics standard / PB diag standard Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2410 Unit selection: - Expert list: 1 Default: -

r2057 CU_S_AC_DP, CU_S120_DP	PROFIBUS address switch diagnostics / PB addr sw diag Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2410 Unit selection: - Expert list: 1 Default: -
r2058[0...139] CU_I_840, CU_LINK, CU_NX_840	COMM INT receive configuration data / C INT E_config_dat Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r2059[0...7] CU_I_840, CU_LINK, CU_NX_840	COMM INT identification data / C INT ident_dat Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r2060[0...18] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41	CO: IF1 PROFIdrive PZD receive double word / IF1 PZD recv DW Changeable: - Data type: Integer32 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2440, 2468 Unit selection: - Expert list: 1 Default: -
r2060[0...30] VECTOR, VECTOR_AC	CO: IF1 PROFIdrive PZD receive double word / IF1 PZD recv DW Changeable: - Data type: Integer32 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2440, 2468 Unit selection: - Expert list: 1 Default: -
r2060[0...2] ENC, ENC_840	CO: IF1 PROFIdrive PZD receive double word / IF1 PZD recv DW Changeable: - Data type: Integer32 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2440, 2468 Unit selection: - Expert list: 1 Default: -

p2061[0...26] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41	CI: IF1 PROFIdrive PZD send double word / IF1 PZD send DW Changeable: T, U Data type: Unsigned32 / Integer32 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2470 Unit selection: - Expert list: 1 Default: 0
p2061[0...30] VECTOR, VECTOR_AC	CI: IF1 PROFIdrive PZD send double word / IF1 PZD send DW Changeable: T, U Data type: Unsigned32 / Integer32 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2470 Unit selection: - Expert list: 1 Default: 0
p2061[0...10] ENC, ENC_840	CI: IF1 PROFIdrive PZD send double word / IF1 PZD send DW Changeable: T, U Data type: Unsigned32 / Integer32 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2470 Unit selection: - Expert list: 1 Default: 0
r2063[0...26] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41	IF1 PROFIdrive diagnostics PZD send double word / IF1 diag send DW Changeable: - Data type: Unsigned32 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2450, 2470 Unit selection: - Expert list: 1 Default: -
r2063[0...30] VECTOR, VECTOR_AC	IF1 PROFIdrive diagnostics PZD send double word / IF1 diag send DW Changeable: - Data type: Unsigned32 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2450, 2470 Unit selection: - Expert list: 1 Default: -
r2063[0...10] ENC, ENC_840	IF1 PROFIdrive diagnostics PZD send double word / IF1 diag send DW Changeable: - Data type: Unsigned32 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2450, 2470 Unit selection: - Expert list: 1 Default: -

r2064[0...7] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	PB/PN diagnostics clock cycle synchronism / PB/PN diag clock Changeable: - Data type: Integer32 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2410 Unit selection: - Expert list: 1 Default: -
r2065 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR (n/M), VECTOR_AC (n/M)	PB/PN controller sign of life diagnostics / PB/PN ctr SoL diag Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2410 Unit selection: - Expert list: 1 Default: -
r2067[0...1] A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	IF1 PZD maximum interconnected / IF1 PZDmaxIntercon Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p2070 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	IF1 PROFIdrive SIC/SCC start receive / SIC/SCC start recv Changeable: T Data type: Unsigned8 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 18	Access level: 3 Function plan: 2423 Unit selection: - Expert list: 1 Default: 0

p2070 VECTOR, VECTOR_AC	IF1 PROFIdrive SIC/SCC start receive / SIC/SCC start rcv Changeable: T Data type: Unsigned8 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 30	Access level: 3 Function plan: 2423 Unit selection: - Expert list: 1 Default: 0
p2071 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	IF1 PROFIdrive SIC/SCC start send / SIC/SCC start send Changeable: T Data type: Unsigned8 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 26	Access level: 3 Function plan: 2423 Unit selection: - Expert list: 1 Default: 0
p2071 VECTOR, VECTOR_AC	IF1 PROFIdrive SIC/SCC start send / SIC/SCC start send Changeable: T Data type: Unsigned8 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 30	Access level: 3 Function plan: 2423 Unit selection: - Expert list: 1 Default: 0
p2072 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Response receive value after PZD failure / Resp aft PZD fail Changeable: T Data type: Unsigned32 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
r2074[0...19] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41	IF1 PROFIdrive diagnostics bus address PZD receive / IF1diag addr rcv Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r2074[0...31] VECTOR, VECTOR_AC	IF1 PROFIdrive diagnostics bus address PZD receive / IF1diag addr rcv Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r2074[0...9] A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	IF1 PROFIdrive diagnostics bus address PZD receive / IF1diag addr rcv Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r2074[0...4] TB30, TM120, TM150, TM15DI_DO, TM31	IF1 PROFIdrive diagnostics bus address PZD receive / IF1diag addr rcv Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r2074[0...3] ENC, ENC_840	IF1 PROFIdrive diagnostics bus address PZD receive / IF1diag addr rcv Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r2075[0...19] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41	IF1 PROFIdrive diagnostics telegram offset PZD receive / IF1 diag offs rcv Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2410 Unit selection: - Expert list: 1 Default: -

r2075[0...31]	IF1 PROFIdrive diagnostics telegram offset PZD receive / IF1 diag offs recv		
VECTOR, VECTOR_AC	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: 2410
	P group: Communications	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-

r2075[0...9]	IF1 PROFIdrive diagnostics telegram offset PZD receive / IF1 diag offs recv		
A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: 2410
	P group: Communications	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-

r2075[0...4]	IF1 PROFIdrive diagnostics telegram offset PZD receive / IF1 diag offs recv		
TB30, TM120, TM150, TM15DI_DO, TM31	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: 2410
	P group: Communications	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-

r2075[0...3]	IF1 PROFIdrive diagnostics telegram offset PZD receive / IF1 diag offs recv		
ENC, ENC_840	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: 2410
	P group: Communications	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-

r2076[0...24]	IF1 PROFIdrive diagnostics telegram offset PZD send / IF1 diag offs send		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: 2410
	P group: Communications	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-

r2076[0...27]	IF1 PROFIdrive diagnostics telegram offset PZD send / IF1 diag offs send		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: 2410
	P group: Communications	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-

r2076[0...31] VECTOR, VECTOR_AC	IF1 PROFIdrive diagnostics telegram offset PZD send / IF1 diag offs send		
	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: 2410
	P group: Communications	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: -	Max: -	Default: -
r2076[0...9] A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	IF1 PROFIdrive diagnostics telegram offset PZD send / IF1 diag offs send		
	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: 2410
	P group: Communications	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: -	Max: -	Default: -
r2076[0...4] TB30, TM120, TM150, TM15DI_DO, TM31	IF1 PROFIdrive diagnostics telegram offset PZD send / IF1 diag offs send		
	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: 2410
	P group: Communications	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: -	Max: -	Default: -
r2076[0...11] ENC, ENC_840	IF1 PROFIdrive diagnostics telegram offset PZD send / IF1 diag offs send		
	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: 2410
	P group: Communications	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: -	Max: -	Default: -
r2077[0...15] CU_S_AC_DP, CU_S120_DP	PROFIBUS diagnostics peer-to-peer data transfer addresses / PB diag peer addr		
	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned8	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: -	Max: -	Default: -
p2079 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	IF1 PROFIdrive PZD telegram selection extended / IF1 PZD telegr ext		
	Changeable: T	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Communications	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: 390	Max: 999	Default: 999

p2079 HLA, HLA_840, HLA_DBSI	IF1 PROFIdrive PZD telegram selection extended / IF1 PZD telegr ext Changeable: T Data type: Integer16 P group: Communications Not for motor type: - Min: 166	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 999
p2079 SERVO_840, SERVO_DBSI	IF1 PROFIdrive PZD telegram selection extended / IF1 PZD telegr ext Changeable: T Data type: Integer16 P group: Communications Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 136
p2079 SERVO, SERVO_AC	IF1 PROFIdrive PZD telegram selection extended / IF1 PZD telegr ext Changeable: T Data type: Integer16 P group: Communications Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 999
p2079 SERVO (EPOS, EPOS, Position control, Position control, Spin_diag), SERVO_840 (EPOS, EPOS, Position control, Position control, Spin_diag), SERVO_AC (EPOS, EPOS, Position control, Position control, Spin_diag), SERVO_DBSI (EPOS, EPOS, Position control, Position control, Spin_diag), VECTOR (EPOS, EPOS, n/M, Position control, Position control), VECTOR_AC (EPOS, EPOS, n/M, Position control, Position control)	IF1 PROFIdrive PZD telegram selection extended / IF1 PZD telegr ext Changeable: T Data type: Integer16 P group: Communications Not for motor type: - Min: 7	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 999

p2079	IF1 PROFIdrive PZD telegram selection extended / IF1 PZD telegr ext		
SERVO (Position control, Position control, Spin_diag), SERVO_840 (Position control, Position control, Spin_diag), SERVO_AC (Position control, Position control, Spin_diag), SERVO_DBSI (Position control, Position control, Spin_diag), VECTOR (n/M, Position control, Position control), VECTOR_AC (n/M, Position control, Position control)	Changeable: T Data type: Integer16 P group: Communications Not for motor type: - Min: 999	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 999

p2079	IF1 PROFIdrive PZD telegram selection extended / IF1 PZD telegr ext		
SERVO (Spin_diag), SERVO_840 (Spin_diag), SERVO_AC (Spin_diag), SERVO_DBSI (Spin_diag)	Changeable: T Data type: Integer16 P group: Communications Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 999

p2079	IF1 PROFIdrive PZD telegram selection extended / IF1 PZD telegr ext		
VECTOR, VECTOR_AC	Changeable: T Data type: Integer16 P group: Communications Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 999

p2079	IF1 PROFIdrive PZD telegram selection extended / IF1 PZD telegr ext		
VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T Data type: Integer16 P group: Communications Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 999

p2079	IF1 PROFIdrive PZD telegram selection extended / IF1 PZD telegr ext		
A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	Changeable: T Data type: Integer16 P group: Communications Not for motor type: - Min: 370	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 999

p2079	IF1 PROFIdrive PZD telegram selection extended / IF1 PZD telegr ext		
TM41	Changeable: T	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Communications	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	3	999	999
p2079	IF1 PROFIdrive PZD telegram selection extended / IF1 PZD telegr ext		
ENC, ENC_840	Changeable: T	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Communications	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	81	999	999
p2080[0...15]	BI: Binector-connector converter status word 1 / Bin/con ZSW1		
A_INF, A_INF_840,	Changeable: T, U	Calculation: -	Access level: 3
B_INF, B_INF_840,	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: 2472
CU_I_840,	P group: Communications	Unit group: -	Unit selection: -
CU_NX_840,	Not for motor type: -	Scaling: -	Expert list: 1
CU_S_AC_DP,	Min:	Max:	Default:
CU_S_AC_PN,	-	-	0
CU_S120_DP,			
CU_S120_PN, ENC,			
ENC_840, HLA,			
HLA_840, HLA_DBSI,			
R_INF, S_INF,			
S_INF_840, SERVO,			
SERVO_840,			
SERVO_AC,			
SERVO_DBSI, TB30,			
TM120, TM150,			
TM15DI_DO, TM31,			
TM41, VECTOR,			
VECTOR_AC			

p2081[0...15]

A_INF, A_INF_840,
B_INF, B_INF_840,
CU_I_840,
CU_NX_840,
CU_S_AC_DP,
CU_S_AC_PN,
CU_S120_DP,
CU_S120_PN, ENC,
ENC_840, HLA,
HLA_840, HLA_DBSI,
R_INF, S_INF,
S_INF_840, SERVO,
SERVO_840,
SERVO_AC,
SERVO_DBSI, TB30,
TM120, TM150,
TM15DI_DO, TM31,
TM41, VECTOR,
VECTOR_AC

BI: Binector-connector converter status word 2 / Bin/con ZSW2**Changeable:** T, U**Data type:** Unsigned32 / Binary**P group:** Communications**Not for motor type:** -**Min:**

-

Calculation: -**Dynamic index:** -**Unit group:** -**Scaling:** -**Max:**

-

Access level: 3**Function plan:** 2472**Unit selection:** -**Expert list:** 1**Default:**

0

p2082[0...15]

A_INF, A_INF_840,
B_INF, B_INF_840,
CU_I_840,
CU_NX_840,
CU_S_AC_DP,
CU_S_AC_PN,
CU_S120_DP,
CU_S120_PN, ENC,
ENC_840, HLA,
HLA_840, HLA_DBSI,
R_INF, S_INF,
S_INF_840, SERVO,
SERVO_840,
SERVO_AC,
SERVO_DBSI, TB30,
TM120, TM150,
TM15DI_DO, TM31,
TM41, VECTOR,
VECTOR_AC

BI: Binector-connector converter status word 3 / Bin/con ZSW3**Changeable:** T, U**Data type:** Unsigned32 / Binary**P group:** Communications**Not for motor type:** -**Min:**

-

Calculation: -**Dynamic index:** -**Unit group:** -**Scaling:** -**Max:**

-

Access level: 3**Function plan:** 2472**Unit selection:** -**Expert list:** 1**Default:**

0

p2083[0...15]	BI: Binector-connector converter status word 4 / Bin/con ZSW4		
A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned32 / Binary P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2472 Unit selection: - Expert list: 1 Default: 0
p2084[0...15]	BI: Binector-connector converter status word 5 / Bin/con ZSW5		
A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned32 / Binary P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2472 Unit selection: - Expert list: 1 Default: 0

p2088[0...4]	Invert binector-connector converter status word / Bin/con ZSW inv		
A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2472 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
r2089[0...4]	CO: Send binector-connector converter status word / Bin/con ZSW send		
A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2472 Unit selection: - Expert list: 1 Default: -

r2090.0...15	BO: IF1 PROFIBUS PZD1 receive bit-serial / IF1 PZD1 recv bitw		
A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2468 Unit selection: - Expert list: 1 Default: -
r2091.0...15	BO: IF1 PROFIdrive PZD2 receive bit-serial / IF1 PZD2 recv bitw		
A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2468 Unit selection: - Expert list: 1 Default: -
r2092.0...15	BO: IF1 PROFIdrive PZD3 receive bit-serial / IF1 PZD3 recv bitw		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2468 Unit selection: - Expert list: 1 Default: -

r2093.0...15	BO: IF1 PROFIdrive PZD4 receive bit-serial / IF1 PZD4 recv bitw		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2468 Unit selection: - Expert list: 1 Default: -
r2094.0...15	BO: Connector-binector converter binector output / Con/bin outp		
A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2468 Unit selection: - Expert list: 1 Default: -
r2095.0...15	BO: Connector-binector converter binector output / Con/bin outp		
A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2468 Unit selection: - Expert list: 1 Default: -

p2098[0...1]	Inverter connector-binector converter binector output / Con/bin outp inv		
A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2468 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
p2099[0...1]	CI: Connector-binector converter signal source / Con/bin S_src		
A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned32 / Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2468 Unit selection: - Expert list: 1 Default: 0

p2100[0...19]	Change fault response fault number / Chng resp F_no		
A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_LINK, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HUB, R_INF, S_INF, S_INF_840, SERVO, SERVO_AC, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41, TM54F_MA, TM54F_SL, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned16 P group: Messages Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: 8050, 8075 Unit selection: - Expert list: 1 Default: 0

p2100[0...19]	Change fault response fault number / Chng resp F_no		
HLA_840, HLA_DBSI, SERVO_840, SERVO_DBSI	Changeable: T, U Data type: Unsigned16 P group: Messages Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: 8050, 8075 Unit selection: - Expert list: 1 Default: [0] 7841 [1...19] 0

p2101[0...19]	Change fault response response / Chng resp resp		
CU_I_840, CU_LINK, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HUB, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM54F_MA, TM54F_SL	Changeable: T, U Data type: Integer16 P group: Messages Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 0	Access level: 3 Function plan: 8050, 8075 Unit selection: - Expert list: 1 Default: 0

p2101[0...19]	Change fault response response / Chng resp resp		
HLA_840, HLA_DBSI, SERVO_840, SERVO_DBSI	Changeable: T, U Data type: Integer16 P group: Messages Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 7	Access level: 3 Function plan: 8050, 8075 Unit selection: - Expert list: 1 Default: [0] 3 [1...19] 0

p2101[0...19] HLA, SERVO, SERVO_AC, TM41, VECTOR, VECTOR_AC	Change fault response response / Chng resp resp Changeable: T, U Data type: Integer16 P group: Messages Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 7	Access level: 3 Function plan: 8050, 8075 Unit selection: - Expert list: 1 Default: 0
p2101[0...19] A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	Change fault response response / Chng resp resp Changeable: T, U Data type: Integer16 P group: Messages Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: 8050, 8075 Unit selection: - Expert list: 1 Default: 0
p2102 CU_I_840, CU_NX_840	BI: Acknowledge all faults / Ackn all faults Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2546, 8060 Unit selection: - Expert list: 1 Default: 2090.7
p2102 CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	BI: Acknowledge all faults / Ackn all faults Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2546, 8060 Unit selection: - Expert list: 1 Default: 0
p2103 CU_I_840, CU_LINK, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HUB, TB30, - TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM54F_MA, TM54F_SL	BI: 1st acknowledge faults / 1st acknowledge Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p2103[0...n]	BI: 1st acknowledge faults / 1st acknowledge		
A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2441, 2442, 2443, 2447, 2475, 2546, 9220, 9677, 9678 Unit selection: - Expert list: 1 Default: 0
p2104	BI: 2nd acknowledge faults / 2nd acknowledge		
CU_I_840, CU_LINK, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HUB, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM54F_MA, TM54F_SL	Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p2104[0...n]	BI: 2nd acknowledge faults / 2nd acknowledge		
A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2546, 8060 Unit selection: - Expert list: 1 Default: 0
p2105	BI: 3rd acknowledge faults / 3rd acknowledge		
CU_I_840, CU_LINK, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HUB, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM54F_MA, TM54F_SL	Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p2105[0...n]	BI: 3rd acknowledge faults / 3rd acknowledge		
A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2546, 8060 Unit selection: - Expert list: 1 Default: 0
p2106	BI: External fault 1 / External fault 1		
CU_I_840, CU_LINK, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HUB, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM54F_MA, TM54F_SL	Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
p2106[0...n]	BI: External fault 1 / External fault 1		
A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2546 Unit selection: - Expert list: 1 Default: 1
p2107	BI: External fault 2 / External fault 2		
CU_I_840, CU_LINK, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HUB, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM54F_MA, TM54F_SL	Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1

p2107[0...n]	BI: External fault 2 / External fault 2	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2546 Unit selection: - Expert list: 1 Default: 1
A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min: -		
p2108	BI: External fault 3 / External fault 3	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
CU_I_840, CU_LINK, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HUB, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM54F_MA, TM54F_SL	Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min: -		
p2108[0...n]	BI: External fault 3 / External fault 3	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2546 Unit selection: - Expert list: 1 Default: 1
A_INF, B_INF, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min: -		
p2108[0...n]	BI: External fault 3 / External fault 3	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2546 Unit selection: - Expert list: 1 Default: 0
A_INF_840, B_INF_840, S_INF_840	Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min: -		
r2109[0...63]	Fault time removed in milliseconds / t_fit resolved ms	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8050, 8060 Unit selection: - Expert list: 1 Default: - [ms]
All objects	Changeable: - Data type: Unsigned32 P group: Messages Not for motor type: - Min: - [ms]		

r2110[0...63] All objects	Alarm number / Alarm number Changeable: - Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 8065 Unit selection: - Expert list: 1 Default: -
p2111 All objects	Alarm counter / Alarm counter Changeable: T, U Data type: Unsigned16 P group: Messages Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: 8050, 8065 Unit selection: - Expert list: 1 Default: 0
p2112 CU_I_840, CU_LINK, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HUB, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM54F_MA, TM54F_SL	BI: External alarm 1 / External alarm 1 Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
p2112[0...n] A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	BI: External alarm 1 / External alarm 1 Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2546 Unit selection: - Expert list: 1 Default: 1
r2114[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	System runtime total / Sys runtime tot Changeable: - Data type: Unsigned32 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

p2116	BI: External alarm 2 / External alarm 2		
CU_I_840, CU_LINK, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HUB, TB30, _ TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM54F_MA, TM54F_SL	Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min:	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
p2116[0...n]	BI: External alarm 2 / External alarm 2		
A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min:	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2546 Unit selection: - Expert list: 1 Default: 1
p2117	BI: External alarm 3 / External alarm 3		
CU_I_840, CU_LINK, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HUB, TB30, _ TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM54F_MA, TM54F_SL	Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min:	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
p2117[0...n]	BI: External alarm 3 / External alarm 3		
A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min:	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2546 Unit selection: - Expert list: 1 Default: 1
p2118[0...19]	Change message type message number / Chng type msg_no		
All objects	Changeable: T, U Data type: Unsigned16 P group: Messages Not for motor type: - Min:	Calculation: - Dynamic index: - Unit group: - Scaling: - Max:	Access level: 3 Function plan: 8050, 8075 Unit selection: - Expert list: 1 Default:
	0	65535	0

p2119[0...19] All objects	Change message type type / Change type type Changeable: T, U Data type: Integer16 P group: Messages Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 3 Function plan: 8050, 8075 Unit selection: - Expert list: 1 Default: 1
r2120 All objects	CO: Sum of fault and alarm buffer changes / Sum buffer changed Changeable: - Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: 8065 Unit selection: - Expert list: 1 Default: -
r2121 All objects	CO: Counter alarm buffer changes / Alarm buff changed Changeable: - Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8065 Unit selection: - Expert list: 1 Default: -
r2122[0...63] All objects	Alarm code / Alarm code Changeable: - Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 8050, 8065 Unit selection: - Expert list: 1 Default: -
r2123[0...63] All objects	Alarm time received in milliseconds / t_alarm rcv ms Changeable: - Data type: Unsigned32 P group: Messages Not for motor type: - Min: - [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [ms]	Access level: 3 Function plan: 8050, 8065 Unit selection: - Expert list: 1 Default: - [ms]
r2124[0...63] All objects	Alarm value / Alarm value Changeable: - Data type: Integer32 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8050, 8065 Unit selection: - Expert list: 1 Default: -

r2125[0...63]	Alarm time removed in milliseconds / t_alarm res ms		
All objects	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned32	Dynamic index: -	Function plan: 8050, 8065
	P group: Messages	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	- [ms]	- [ms]	- [ms]
p2126[0...19]	Change acknowledge mode fault number / Chng ackn F_no		
All objects	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: 8050, 8075
	P group: Messages	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	65535	0
p2127[0...19]	Change acknowledge mode mode / Chng ackn mode		
All objects	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: 8050, 8075
	P group: Messages	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	1	3	1
p2128[0...15]	Faults/alarms trigger selection / F/A trigger sel		
All objects	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: 8050, 8070
	P group: Messages	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	65535	0
r2129.0...15	CO/BO: Faults/alarms trigger word / F/A trigger word		
All objects	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: 8070
	P group: Messages	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-
r2130[0...63]	Fault time received in days / t_fault recv days		
All objects	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: 8060
	P group: Messages	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-

r2131 All objects	CO: Actual fault code / Act fault code Changeable: - Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8060 Unit selection: - Expert list: 1 Default: -
r2132 All objects	CO: Actual alarm code / Actual alarm code Changeable: - Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8065 Unit selection: - Expert list: 1 Default: -
r2133[0...63] All objects	Fault value for float values / Fault val float Changeable: - Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8060 Unit selection: - Expert list: 1 Default: -
r2134[0...63] All objects	Alarm value for float values / Alarm value float Changeable: - Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8065 Unit selection: - Expert list: 1 Default: -
r2135.0...15 All objects	CO/BO: Status word faults/alarms 2 / ZSW fault/alarm 2 Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2548 Unit selection: - Expert list: 1 Default: -
r2136[0...63] All objects	Fault time removed in days / t_fit resolv days Changeable: - Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8060 Unit selection: - Expert list: 1 Default: -

r2138.7...15 All objects	CO/BO: Control word faults/alarms / STW fault/alarm Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2546 Unit selection: - Expert list: 1 Default: -
r2139.0...15 All objects	CO/BO: Status word faults/alarms 1 / ZSW fault/alarm 1 Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2548 Unit selection: - Expert list: 1 Default: -
p2140[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Hysteresis speed 2 / n_hysteresis 2 Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [rpm]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 300.00 [rpm]	Access level: 3 Function plan: 8010 Unit selection: p0505 Expert list: 1 Default: 90.00 [rpm]
p2140[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Hysteresis velocity 2 / v_hysteresis 2 Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [m/min]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 10.00 [m/min]	Access level: 3 Function plan: 8010 Unit selection: p0505 Expert list: 1 Default: 0.90 [m/min]
p2141[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Speed threshold 1 / n_thresh val 1 Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [rpm]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.00 [rpm]	Access level: 3 Function plan: 8010 Unit selection: p0505 Expert list: 1 Default: 5.00 [rpm]

p2141[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity threshold value 1 / v_thresh val 1 Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [m/min]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 1000.00 [m/min]	Access level: 3 Function plan: 8010 Unit selection: p0505 Expert list: 1 Default: 0.05 [m/min]
p2142[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Hysteresis speed 1 / n_hysteresis 1 Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [rpm]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 300.00 [rpm]	Access level: 3 Function plan: 8010 Unit selection: p0505 Expert list: 1 Default: 2.00 [rpm]
p2142[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Hysteresis speed 1 / n_hysteresis 1 Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [m/min]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 10.00 [m/min]	Access level: 3 Function plan: 8010 Unit selection: p0505 Expert list: 1 Default: 0.02 [m/min]
p2144[0...n] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BI: Motor stall monitoring enable (negated) / Mot stall enab neg Changeable: T, U Data type: Unsigned32 / Binary P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8012 Unit selection: - Expert list: 1 Default: 0
r2145[0...63] All objects	Alarm time received in days / t_alarm rcv days Changeable: - Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8065 Unit selection: - Expert list: 1 Default: -

r2146[0...63] All objects	Alarm time removed in days / t_alarm res days Changeable: - Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8065 Unit selection: - Expert list: 1 Default: -
p2147 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Delete fault buffer of all drive objects / Del fault buffer Changeable: T, U Data type: Integer16 P group: Displays, signals Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 4 Function plan: 8060 Unit selection: - Expert list: 1 Default: 0
p2148[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BI: RFG active / RFG active Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min: -	Calculation: CALC_MOD_LIM_REF Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8011 Unit selection: - Expert list: 1 Default: 0
p2149[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Monitoring configuration / Monit config Changeable: T, U Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
p2149[0...n] VECTOR, VECTOR_AC	Monitoring configuration / Monit config Changeable: T, U Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0001 bin
p2150[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Hysteresis speed 3 / n_hysteresis 3 Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [rpm]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 300.00 [rpm]	Access level: 3 Function plan: 8010, 8011 Unit selection: p0505 Expert list: 1 Default: 2.00 [rpm]

p2150[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Hysteresis velocity 3 / v_hysteresis 3 Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [m/min]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 3.00 [m/min]	Access level: 3 Function plan: 8010, 8011 Unit selection: p0505 Expert list: 1 Default: 0.02 [m/min]
p2151[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Cl: Speed setpoint for messages/signals / n_set for msg Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 8011 Unit selection: - Expert list: 1 Default: 1438[0]
p2151[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Cl: Velocity setpoint for messages/signals / v_set for msg Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 8011 Unit selection: - Expert list: 1 Default: 1438[0]
p2151[0...n] VECTOR, VECTOR_AC	Cl: Speed setpoint for messages/signals / n_set for msg Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 8011 Unit selection: - Expert list: 1 Default: 1170[0]
p2153[0...n] HLA, HLA_840, HLA_DBSI	Velocity actual value filter time constant / v_act_filt T Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000000 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0 [ms]
p2153[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Speed actual value filter time constant / n_act_filt T Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000000 [ms]	Access level: 3 Function plan: 8010 Unit selection: - Expert list: 1 Default: 0 [ms]

p2153[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity actual value filter time constant / v_act_filt T Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000000 [ms]	Access level: 3 Function plan: 8010 Unit selection: - Expert list: 1 Default: 0 [ms]
p2154[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CI: Speed setpoint 2 / n_set 2 Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 8010 Unit selection: - Expert list: 1 Default: 0
p2154[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CI: Velocity setpoint 2 / v_set 2 Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 8010 Unit selection: - Expert list: 1 Default: 0
p2155[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Speed threshold 2 / n_thresh val 2 Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [rpm]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.00 [rpm]	Access level: 3 Function plan: 8010 Unit selection: p0505 Expert list: 1 Default: 900.00 [rpm]
p2155[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity threshold value 2 / v_thresh val 2 Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [m/min]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 1000.00 [m/min]	Access level: 3 Function plan: 8010 Unit selection: p0505 Expert list: 1 Default: 9.00 [m/min]

p2155[0...n] VECTOR, VECTOR_AC	Speed threshold 2 / n_thresh val 2 Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [rpm]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.00 [rpm]	Access level: 3 Function plan: 8010 Unit selection: p0505 Expert list: 1 Default: 900.00 [rpm]
p2156[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	On delay comparison value reached / t_on cmpr val rchd Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.0 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.0 [ms]	Access level: 2 Function plan: 8010 Unit selection: - Expert list: 1 Default: 0.0 [ms]
p2161[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Speed threshold 3 / n_thresh val 3 Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [rpm]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.00 [rpm]	Access level: 3 Function plan: 8010, 8011 Unit selection: p0505 Expert list: 1 Default: 5.00 [rpm]
p2161[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Velocity threshold value 3 / v_thresh val 3 Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [m/min]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 1000.00 [m/min]	Access level: 3 Function plan: 8010, 8011 Unit selection: p0505 Expert list: 1 Default: 0.05 [m/min]
p2161[0...n] VECTOR, VECTOR_AC	Speed threshold 3 / n_thresh val 3 Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [rpm]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.00 [rpm]	Access level: 3 Function plan: 8010, 8011 Unit selection: p0505 Expert list: 1 Default: 5.00 [rpm]

p2162[0...n]	Hysteresis speed $n_{act} > n_{max}$ / Hyst $n_{act} > n_{max}$		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [rpm]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 60000.00 [rpm]	Access level: 2 Function plan: 8010 Unit selection: p0505 Expert list: 1 Default: 0.00 [rpm]
p2162[0...n]	Hysteresis velocity $v_{act} > v_{max}$ / Hyst $v_{act} > v_{max}$		
HLA, HLA_840, HLA_DBSI, SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [m/min]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 1000.00 [m/min]	Access level: 2 Function plan: 8010 Unit selection: p0505 Expert list: 1 Default: 6.00 [m/min]
p2163[0...n]	Velocity threshold value 4 / v_{thresh} val 4		
HLA, HLA_840, HLA_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [m/min]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 1000.00 [m/min]	Access level: 2 Function plan: - Unit selection: p0505 Expert list: 1 Default: 0.90 [m/min]
p2163[0...n]	Speed threshold 4 / n_{thresh} val 4		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [rpm]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.00 [rpm]	Access level: 2 Function plan: 8011 Unit selection: p0505 Expert list: 1 Default: 90.00 [rpm]
p2163[0...n]	Velocity threshold value 4 / v_{thresh} val 4		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [m/min]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 1000.00 [m/min]	Access level: 2 Function plan: 8011 Unit selection: p0505 Expert list: 1 Default: 0.90 [m/min]

p2164[0...n] HLA, HLA_840, HLA_DBSI	Hysteresis velocity 4 / v_hysteresis 4 Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [m/min]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 10.00 [m/min]	Access level: 2 Function plan: - Unit selection: p0505 Expert list: 1 Default: 0.02 [m/min]
p2164[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Hysteresis speed 4 / n_hysteresis 4 Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [rpm]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 200.00 [rpm]	Access level: 2 Function plan: 8011 Unit selection: p0505 Expert list: 1 Default: 2.00 [rpm]
p2164[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Hysteresis velocity 4 / v_hysteresis 4 Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [m/min]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 10.00 [m/min]	Access level: 2 Function plan: 8011 Unit selection: p0505 Expert list: 1 Default: 0.02 [m/min]
p2166[0...n] HLA, HLA_840, HLA_DBSI	Off delay v_act = v_set / t_del_off n_i=n_so Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.0 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.0 [ms]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 200.0 [ms]
p2166[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Off delay n_act = n_set / t_del_off n_i=n_so Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.0 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.0 [ms]	Access level: 2 Function plan: 8011 Unit selection: - Expert list: 1 Default: 200.0 [ms]

p2166[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Off delay $v_{act} = v_{set} / t_{del\_off} n_i = n_{set}$ Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.0 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.0 [ms]	Access level: 2 Function plan: 8011 Unit selection: - Expert list: 1 Default: 200.0 [ms]
p2167[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Switch-on delay $n_{act} = n_{set} / t_{on} n_{act} = n_{set}$ Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.0 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.0 [ms]	Access level: 2 Function plan: 8011 Unit selection: - Expert list: 1 Default: 200.0 [ms]
p2167[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	On delay $v_{act} = v_{set} / t_{on} n_{act} = n_{set}$ Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.0 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.0 [ms]	Access level: 2 Function plan: 8011 Unit selection: - Expert list: 1 Default: 200.0 [ms]
r2169 HLA, HLA_840, HLA_DBSI	CO: Actual velocity smoothed signals / v_{act} smth message Changeable: - Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 2 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [m/min]
r2169 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Actual speed smoothed signals / n_{act} smth message Changeable: - Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 2 Function plan: 8010 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r2169 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Actual velocity smoothed signals / v_{act} smth message Changeable: - Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 2 Function plan: 8010 Unit selection: p0505 Expert list: 1 Default: - [m/min]

p2174[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Torque threshold value 1 / M_thresh val 1 Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [Nm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 7_1 Scaling: - Max: 20000000.00 [Nm]	Access level: 2 Function plan: 8012 Unit selection: p0505 Expert list: 1 Default: 5.13 [Nm]
p2174[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Force threshold value 1 / F_thresh val 1 Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [N]	Calculation: - Dynamic index: DDS, p0180 Unit group: 8_1 Scaling: - Max: 20000000.00 [N]	Access level: 2 Function plan: 8012 Unit selection: p0505 Expert list: 1 Default: 1000.00 [N]
p2174[0...n] VECTOR, VECTOR_AC	Torque threshold value 1 / M_thresh val 1 Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [Nm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 7_1 Scaling: - Max: 20000000.00 [Nm]	Access level: 2 Function plan: 8012 Unit selection: p0505 Expert list: 1 Default: 5.13 [Nm]
p2175[0...n] HLA, HLA_840, HLA_DBSI	Motor blocked velocity threshold / Mot lock v_thresh Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [m/min]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 1000.00 [m/min]	Access level: 3 Function plan: 8012 Unit selection: p0505 Expert list: 1 Default: 1.20 [m/min]
p2175[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor blocked speed threshold / Mot lock n_thresh Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [rpm]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.00 [rpm]	Access level: 3 Function plan: 8012 Unit selection: p0505 Expert list: 1 Default: 120.00 [rpm]

p2175[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Motor blocked velocity threshold / Mot lock v_thresh Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [m/min]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 1000.00 [m/min]	Access level: 3 Function plan: 8012 Unit selection: p0505 Expert list: 1 Default: 1.20 [m/min]
p2175[0...n] VECTOR, VECTOR_AC	Motor blocked speed threshold / Mot lock n_thresh Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [rpm]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.00 [rpm]	Access level: 3 Function plan: 8012 Unit selection: p0505 Expert list: 1 Default: 120.00 [rpm]
p2177[0...n] HLA, HLA_840, HLA_DBSI	Motor blocked delay time / Mot lock t_del Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.000 [s]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 65.000 [s]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 1.000 [s]
p2177[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor blocked delay time / Mot lock t_del Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.000 [s]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 65.000 [s]	Access level: 2 Function plan: 8012 Unit selection: - Expert list: 1 Default: 1.000 [s]
p2177[0...n] VECTOR, VECTOR_AC	Motor blocked delay time / Mot lock t_del Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.000 [s]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 65.000 [s]	Access level: 2 Function plan: 8012 Unit selection: - Expert list: 1 Default: 1.000 [s]

p2178[0...n] VECTOR, VECTOR_AC	Motor stalled delay time / Mot stall t_del Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.000 [s]	Calculation: CALC_MOD_REG Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000 [s]	Access level: 3 Function plan: 8012 Unit selection: - Expert list: 1 Default: 0.010 [s]
p2181[0...n] SERVO (Ext msg), SERVO_840 (Ext msg), SERVO_AC (Ext msg), SERVO_DBSI (Ext msg), VECTOR (Ext msg), VECTOR_AC (Ext msg)	Load monitoring response / Load monit resp Changeable: T, U Data type: Integer16 P group: Messages Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 6	Access level: 3 Function plan: 8013 Unit selection: - Expert list: 1 Default: 0
p2182[0...n] SERVO (Ext msg, Lin), SERVO_840 (Ext msg, Lin), SERVO_AC (Ext msg, Lin), SERVO_DBSI (Ext msg, Lin)	Load monitoring velocity threshold 1 / v_thresh 1 Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 1000.00 [m/min]	Access level: 3 Function plan: 8013 Unit selection: p0505 Expert list: 1 Default: 0.05 [m/min]
p2182[0...n] SERVO (Ext msg), SERVO_840 (Ext msg), SERVO_AC (Ext msg), SERVO_DBSI (Ext msg), VECTOR (Ext msg), VECTOR_AC (Ext msg)	Load monitoring speed threshold value 1 / n_thresh 1 Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.00 [rpm]	Access level: 3 Function plan: 8013 Unit selection: p0505 Expert list: 1 Default: 150.00 [rpm]
p2183[0...n] SERVO (Ext msg, Lin), SERVO_840 (Ext msg, Lin), SERVO_AC (Ext msg, Lin), SERVO_DBSI (Ext msg, Lin)	Load monitoring velocity threshold 2 / v_thresh 2 Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 1000.00 [m/min]	Access level: 3 Function plan: 8013 Unit selection: p0505 Expert list: 1 Default: 0.05 [m/min]
p2183[0...n] SERVO (Ext msg), SERVO_840 (Ext msg), SERVO_AC (Ext msg), SERVO_DBSI (Ext msg), VECTOR (Ext msg), VECTOR_AC (Ext msg)	Load monitoring speed threshold value 2 / n_thresh 2 Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.00 [rpm]	Access level: 3 Function plan: 8013 Unit selection: p0505 Expert list: 1 Default: 900.00 [rpm]

p2184[0...n]	Load monitoring velocity threshold 3 / v_thresh 3		
SERVO (Ext msg, Lin), SERVO_840 (Ext msg, Lin), SERVO_AC (Ext msg, Lin), SERVO_DBSI (Ext msg, Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 1000.00 [m/min]	Access level: 3 Function plan: 8013 Unit selection: p0505 Expert list: 1 Default: 0.05 [m/min]
p2184[0...n]	Load monitoring speed threshold value 3 / n_thresh 3		
SERVO (Ext msg), SERVO_840 (Ext msg), SERVO_AC (Ext msg), SERVO_DBSI (Ext msg), VECTOR (Ext msg), VECTOR_AC (Ext msg)	Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.00 [rpm]	Access level: 3 Function plan: 8013 Unit selection: p0505 Expert list: 1 Default: 1500.00 [rpm]
p2185[0...n]	Load monitoring force threshold 1 upper / F_thresh 1 upper		
SERVO (Ext msg, Lin), SERVO_840 (Ext msg, Lin), SERVO_AC (Ext msg, Lin), SERVO_DBSI (Ext msg, Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [N]	Calculation: - Dynamic index: DDS, p0180 Unit group: 8_1 Scaling: - Max: 100000.00 [N]	Access level: 3 Function plan: 8013 Unit selection: p0505 Expert list: 1 Default: 100000.00 [N]
p2185[0...n]	Load monitoring torque threshold 1 upper / M_thresh 1 upper		
SERVO (Ext msg), SERVO_840 (Ext msg), SERVO_AC (Ext msg), SERVO_DBSI (Ext msg), VECTOR (Ext msg), VECTOR_AC (Ext msg)	Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [Nm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 7_1 Scaling: - Max: 20000000.00 [Nm]	Access level: 3 Function plan: 8013 Unit selection: p0505 Expert list: 1 Default: 10000000.00 [Nm]
p2186[0...n]	Load monitoring force threshold 1 lower / F_thresh 1 lower		
SERVO (Ext msg, Lin), SERVO_840 (Ext msg, Lin), SERVO_AC (Ext msg, Lin), SERVO_DBSI (Ext msg, Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [N]	Calculation: - Dynamic index: DDS, p0180 Unit group: 8_1 Scaling: - Max: 100000.00 [N]	Access level: 3 Function plan: 8013 Unit selection: p0505 Expert list: 1 Default: 0.00 [N]
p2186[0...n]	Load monitoring torque threshold 1 lower / M_thresh 1 lower		
SERVO (Ext msg), SERVO_840 (Ext msg), SERVO_AC (Ext msg), SERVO_DBSI (Ext msg), VECTOR (Ext msg), VECTOR_AC (Ext msg)	Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [Nm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 7_1 Scaling: - Max: 20000000.00 [Nm]	Access level: 3 Function plan: 8013 Unit selection: p0505 Expert list: 1 Default: 0.00 [Nm]

p2187[0...n] SERVO (Ext msg, Lin), SERVO_840 (Ext msg, Lin), SERVO_AC (Ext msg, Lin), SERVO_DBSI (Ext msg, Lin)	Load monitoring force threshold 2 upper / F_thresh 2 upper Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [N]	Calculation: - Dynamic index: DDS, p0180 Unit group: 8_1 Scaling: - Max: 100000.00 [N]	Access level: 3 Function plan: 8013 Unit selection: p0505 Expert list: 1 Default: 100000.00 [N]
p2187[0...n] SERVO (Ext msg), SERVO_840 (Ext msg), SERVO_AC (Ext msg), SERVO_DBSI (Ext msg), VECTOR (Ext msg), VECTOR_AC (Ext msg)	Load monitoring torque threshold 2 upper / M_thresh 2 upper Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [Nm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 7_1 Scaling: - Max: 20000000.00 [Nm]	Access level: 3 Function plan: 8013 Unit selection: p0505 Expert list: 1 Default: 10000000.00 [Nm]
p2188[0...n] SERVO (Ext msg, Lin), SERVO_840 (Ext msg, Lin), SERVO_AC (Ext msg, Lin), SERVO_DBSI (Ext msg, Lin)	Load monitoring force threshold 2 lower / F_thresh 2 lower Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [N]	Calculation: - Dynamic index: DDS, p0180 Unit group: 8_1 Scaling: - Max: 100000.00 [N]	Access level: 3 Function plan: 8013 Unit selection: p0505 Expert list: 1 Default: 0.00 [N]
p2188[0...n] SERVO (Ext msg), SERVO_840 (Ext msg), SERVO_AC (Ext msg), SERVO_DBSI (Ext msg), VECTOR (Ext msg), VECTOR_AC (Ext msg)	Load monitoring torque threshold 2 lower / M_thresh 2 lower Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [Nm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 7_1 Scaling: - Max: 20000000.00 [Nm]	Access level: 3 Function plan: 8013 Unit selection: p0505 Expert list: 1 Default: 0.00 [Nm]
p2189[0...n] SERVO (Ext msg, Lin), SERVO_840 (Ext msg, Lin), SERVO_AC (Ext msg, Lin), SERVO_DBSI (Ext msg, Lin)	Load monitoring force threshold 3 upper / F_thresh 3 upper Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [N]	Calculation: - Dynamic index: DDS, p0180 Unit group: 8_1 Scaling: - Max: 100000.00 [N]	Access level: 3 Function plan: 8013 Unit selection: p0505 Expert list: 1 Default: 100000.00 [N]
p2189[0...n] SERVO (Ext msg), SERVO_840 (Ext msg), SERVO_AC (Ext msg), SERVO_DBSI (Ext msg), VECTOR (Ext msg), VECTOR_AC (Ext msg)	Load monitoring torque threshold 3 upper / M_thresh 3 upper Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [Nm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 7_1 Scaling: - Max: 20000000.00 [Nm]	Access level: 3 Function plan: 8013 Unit selection: p0505 Expert list: 1 Default: 10000000.00 [Nm]

p2190[0...n]	Load monitoring force threshold 3 lower / F_thresh 3 lower		
SERVO (Ext msg, Lin), SERVO_840 (Ext msg, Lin), SERVO_AC (Ext msg, Lin), SERVO_DBSI (Ext msg, Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [N]	Calculation: - Dynamic index: DDS, p0180 Unit group: 8_1 Scaling: - Max: 100000.00 [N]	Access level: 3 Function plan: 8013 Unit selection: p0505 Expert list: 1 Default: 0.00 [N]

p2190[0...n]	Load monitoring torque threshold 3 lower / M_thresh 3 lower		
SERVO (Ext msg), SERVO_840 (Ext msg), SERVO_AC (Ext msg), SERVO_DBSI (Ext msg), VECTOR (Ext msg), VECTOR_AC (Ext msg)	Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [Nm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 7_1 Scaling: - Max: 20000000.00 [Nm]	Access level: 3 Function plan: 8013 Unit selection: p0505 Expert list: 1 Default: 0.00 [Nm]

p2192[0...n]	Load monitoring delay time / Load monit t_del		
SERVO (Ext msg), SERVO_840 (Ext msg), SERVO_AC (Ext msg), SERVO_DBSI (Ext msg), VECTOR (Ext msg), VECTOR_AC (Ext msg)	Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 65.00 [s]	Access level: 3 Function plan: 8013 Unit selection: - Expert list: 1 Default: 10.00 [s]

p2194[0...n]	Torque threshold value 2 / M_thresh val 2		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [%]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00 [%]	Access level: 2 Function plan: 8012 Unit selection: - Expert list: 1 Default: 90.00 [%]

p2194[0...n]	Force threshold value 2 / F_thresh val 2		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [%]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00 [%]	Access level: 2 Function plan: 8012 Unit selection: - Expert list: 1 Default: 90.00 [%]

p2195[0...n]	Torque utilization switch-off delay / M_util t_off		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.0 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000.0 [ms]	Access level: 2 Function plan: 8012 Unit selection: - Expert list: 1 Default: 800.0 [ms]

p2195[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Force utilization switch-off delay / F_util t_off Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.0 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000.0 [ms]	Access level: 2 Function plan: 8012 Unit selection: - Expert list: 1 Default: 800.0 [ms]
p2196[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Torque utilization scaling / M_util scal Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000.00 [%]	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 100.00 [%]
r2197.1...13 HLA, HLA_840, HLA_DBSI	CO/BO: Status word monitoring 1 / ZSW monitor 1 Changeable: - Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r2197.1...13 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO/BO: Status word monitoring 1 / ZSW monitor 1 Changeable: - Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2534 Unit selection: - Expert list: 1 Default: -
r2197.1...13 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO/BO: Status word monitoring 1 / ZSW monitor 1 Changeable: - Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2534 Unit selection: - Expert list: 1 Default: -
r2198.4...12 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO/BO: Status word monitoring 2 / ZSW monitor 2 Changeable: - Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2536 Unit selection: - Expert list: 1 Default: -

r2198.4...12 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO/BO: Status word monitoring 2 / ZSW monitor 2 Changeable: - Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2536 Unit selection: - Expert list: 1 Default: -
r2198.4...12 VECTOR, VECTOR_AC	CO/BO: Status word monitoring 2 / ZSW monitor 2 Changeable: - Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2536 Unit selection: - Expert list: 1 Default: -
r2199.0...11 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO/BO: Status word monitoring 3 / ZSW monitor 3 Changeable: - Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2537 Unit selection: - Expert list: 1 Default: -
r2199.0...11 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO/BO: Status word monitoring 3 / ZSW monitor 3 Changeable: - Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2537 Unit selection: - Expert list: 1 Default: -
r2199.0...14 VECTOR, VECTOR_AC	CO/BO: Status word monitoring 3 / ZSW monitor 3 Changeable: - Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2537 Unit selection: - Expert list: 1 Default: -

p2200[0...n] SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	BI: Technology controller enable / Tec_ctrl enable Changeable: T Data type: Unsigned32 / Binary P group: Technology Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 7958 Unit selection: - Expert list: 1 Default: 0
p2201[0...n] SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	CO: Technology controller fixed value 1 / Tec_ctrl fix val1 Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: -200.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: 9_1 Scaling: PERCENT Max: 200.00 [%]	Access level: 2 Function plan: 7950, 7951 Unit selection: p0595 Expert list: 1 Default: 10.00 [%]
p2202[0...n] SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	CO: Technology controller fixed value 2 / Tec_ctr fix val 2 Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: -200.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: 9_1 Scaling: PERCENT Max: 200.00 [%]	Access level: 2 Function plan: 7950, 7951 Unit selection: p0595 Expert list: 1 Default: 20.00 [%]
p2203[0...n] SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	CO: Technology controller fixed value 3 / Tec_ctr fix val 3 Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: -200.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: 9_1 Scaling: PERCENT Max: 200.00 [%]	Access level: 2 Function plan: 7950, 7951 Unit selection: p0595 Expert list: 1 Default: 30.00 [%]

p2204[0...n]	CO: Technology controller fixed value 4 / Tec_ctr fix val 4		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: -200.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: 9_1 Scaling: PERCENT Max: 200.00 [%]	Access level: 2 Function plan: 7950, 7951 Unit selection: p0595 Expert list: 1 Default: 40.00 [%]

p2205[0...n]	CO: Technology controller fixed value 5 / Tec_ctr fix val 5		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: -200.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: 9_1 Scaling: PERCENT Max: 200.00 [%]	Access level: 2 Function plan: 7950 Unit selection: p0595 Expert list: 1 Default: 50.00 [%]

p2206[0...n]	CO: Technology controller fixed value 6 / Tec_ctr fix val 6		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: -200.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: 9_1 Scaling: PERCENT Max: 200.00 [%]	Access level: 2 Function plan: 7950 Unit selection: p0595 Expert list: 1 Default: 60.00 [%]

p2207[0...n]	CO: Technology controller fixed value 7 / Tec_ctr fix val 7		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: -200.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: 9_1 Scaling: PERCENT Max: 200.00 [%]	Access level: 2 Function plan: 7950 Unit selection: p0595 Expert list: 1 Default: 70.00 [%]

p2208[0...n]	CO: Technology controller fixed value 8 / Tec_ctr fix val 8		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: -200.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: 9_1 Scaling: PERCENT Max: 200.00 [%]	Access level: 2 Function plan: 7950 Unit selection: p0595 Expert list: 1 Default: 80.00 [%]

p2209[0...n]	CO: Technology controller fixed value 9 / Tec_ctr fix val 9		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: -200.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: 9_1 Scaling: PERCENT Max: 200.00 [%]	Access level: 2 Function plan: 7950 Unit selection: p0595 Expert list: 1 Default: 90.00 [%]

p2210[0...n]	CO: Technology controller fixed value 10 / Tec_ctr fix val 10		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: -200.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: 9_1 Scaling: PERCENT Max: 200.00 [%]	Access level: 2 Function plan: 7950 Unit selection: p0595 Expert list: 1 Default: 100.00 [%]

p2211[0...n]	CO: Technology controller fixed value 11 / Tec_ctr fix val 11		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: -200.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: 9_1 Scaling: PERCENT Max: 200.00 [%]	Access level: 2 Function plan: 7950 Unit selection: p0595 Expert list: 1 Default: 110.00 [%]

p2212[0...n]	CO: Technology controller fixed value 12 / Tec_ctr fix val 12		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: -200.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: 9_1 Scaling: PERCENT Max: 200.00 [%]	Access level: 2 Function plan: 7950 Unit selection: p0595 Expert list: 1 Default: 120.00 [%]
p2213[0...n]	CO: Technology controller fixed value 13 / Tec_ctr fix val 13		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: -200.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: 9_1 Scaling: PERCENT Max: 200.00 [%]	Access level: 2 Function plan: 7950 Unit selection: p0595 Expert list: 1 Default: 130.00 [%]
p2214[0...n]	CO: Technology controller fixed value 14 / Tec_ctr fix val 14		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: -200.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: 9_1 Scaling: PERCENT Max: 200.00 [%]	Access level: 2 Function plan: 7950 Unit selection: p0595 Expert list: 1 Default: 140.00 [%]
p2215[0...n]	CO: Technology controller fixed value 15 / Tec_ctr fix val 15		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: -200.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: 9_1 Scaling: PERCENT Max: 200.00 [%]	Access level: 2 Function plan: 7950 Unit selection: p0595 Expert list: 1 Default: 150.00 [%]

p2216[0...n] SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Technology controller fixed value selection method / Tec_ctrl FixVal sel Changeable: T Data type: Integer16 P group: Technology Not for motor type: - Min: 1	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2	Access level: 2 Function plan: 7950, 7951 Unit selection: - Expert list: 1 Default: 2
p2220[0...n] SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	BI: Technology controller fixed value selection bit 0 / Tec_ctrl sel bit 0 Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 7950, 7951 Unit selection: - Expert list: 1 Default: 0
p2221[0...n] SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	BI: Technology controller fixed value selection bit 1 / Tec_ctrl sel bit 1 Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 7950, 7951 Unit selection: - Expert list: 1 Default: 0
p2222[0...n] SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	BI: Technology controller fixed value selection bit 2 / Tec_ctrl sel bit 2 Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 7950, 7951 Unit selection: - Expert list: 1 Default: 0

p2223[0...n]	BI: Technology controller fixed value selection bit 3 / Tec_ctrl sel bit 3		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 7950, 7951 Unit selection: - Expert list: 1 Default: 0

r2224	CO: Technology controller fixed value effective / Tec_ctr FixVal eff		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: - Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: 9_1 Scaling: PERCENT Max: - [%]	Access level: 2 Function plan: 7950, 7951 Unit selection: p0595 Expert list: 1 Default: - [%]

r2225.0	CO/BO: Technology controller fixed value selection status word / Tec_ctr FixVal ZSW		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: - Data type: Unsigned16 P group: Technology Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r2229	Technology controller number actual / Tec_ctrl No. act		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: - Data type: Unsigned32 P group: Technology Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 7950 Unit selection: - Expert list: 1 Default: -

p2230[0...n] SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Technology controller motorized potentiometer configuration / Tec_ctrl mop config Changeable: T, U Data type: Unsigned32 P group: Technology Not for motor type: - Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 7954 Unit selection: - Expert list: 1 Default: 0000 0100 bin
r2231 SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Technology controller motorized potentiometer setpoint memory / Tec_ctrl mop mem Changeable: - Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: 9_1 Scaling: - Max: - [%]	Access level: 2 Function plan: 7954 Unit selection: p0595 Expert list: 1 Default: - [%]
p2235[0...n] SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	BI: Technology controller motorized potentiometer raise setpoint / Tec_ctrl mop raise Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 7954 Unit selection: - Expert list: 1 Default: 0
p2236[0...n] SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	BI: Technology controller motorized potentiometer lower setpoint / Tec_ctrl mop lower Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 7954 Unit selection: - Expert list: 1 Default: 0

p2237[0...n]	Technology controller motorized potentiometer maximum value / Tec_ctrl mop max		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: -200.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: 9_1 Scaling: - Max: 200.00 [%]	Access level: 2 Function plan: 7954 Unit selection: p0595 Expert list: 1 Default: 100.00 [%]

p2238[0...n]	Technology controller motorized potentiometer minimum value / Tec_ctrl mop min		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: -200.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: 9_1 Scaling: - Max: 200.00 [%]	Access level: 2 Function plan: 7954 Unit selection: p0595 Expert list: 1 Default: -100.00 [%]

p2240[0...n]	Technology controller motorized potentiometer starting value / Tec_ctrl mop start		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: -200.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: 9_1 Scaling: - Max: 200.00 [%]	Access level: 2 Function plan: 7954 Unit selection: p0595 Expert list: 1 Default: 0.00 [%]

r2245	CO: Technology controller mot. potentiometer setpoint before RFG / Tec_ctr mop befRFG		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: - Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: 9_1 Scaling: PERCENT Max: - [%]	Access level: 2 Function plan: 7954 Unit selection: p0595 Expert list: 1 Default: - [%]

p2247[0...n] SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Technology controller motorized potentiometer ramp-up time / Tec_ctr mop t_r-up Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: 0.0 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000.0 [s]	Access level: 2 Function plan: 7954 Unit selection: - Expert list: 1 Default: 10.0 [s]
p2248[0...n] SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Technology controller motorized potentiometer ramp-down time / Tec_ctrMop t_rdown Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: 0.0 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000.0 [s]	Access level: 2 Function plan: 7954 Unit selection: - Expert list: 1 Default: 10.0 [s]
r2250 SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	CO: Technology controller motorized potentiometer setpoint after RFG / Tec_ctr mop aftRFG Changeable: - Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: 9_1 Scaling: PERCENT Max: - [%]	Access level: 2 Function plan: 7954 Unit selection: p0595 Expert list: 1 Default: - [%]
p2252 SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Technology controller configuration / Tec_ctrl config Changeable: T, U Data type: Unsigned16 P group: Modulation Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0111 bin

p2253[0...n]	CI: Technology controller setpoint 1 / Tec_ctrl setp 1		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: Technology Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 2 Function plan: 7958 Unit selection: - Expert list: 1 Default: 0

p2254[0...n]	CI: Technology controller setpoint 2 / Tec_ctrl setp 2		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: Technology Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 7958 Unit selection: - Expert list: 1 Default: 0

p2255	Technology controller setpoint 1 scaling / Tec_ctrl set1 scal		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.00 [%]	Access level: 3 Function plan: 7958 Unit selection: - Expert list: 1 Default: 100.00 [%]

p2256	Technology controller setpoint 2 scaling / Tec_ctrl set2 scal		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.00 [%]	Access level: 3 Function plan: 7958 Unit selection: - Expert list: 1 Default: 100.00 [%]

p2257	Technology controller ramp-up time / Tec_ctrl t_ramp-up		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: 0.00 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 650.00 [s]	Access level: 2 Function plan: 7958 Unit selection: - Expert list: 1 Default: 1.00 [s]
p2258	Technology controller ramp-down time / Tec_ctrl t_ramp-dn		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: 0.00 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 650.00 [s]	Access level: 2 Function plan: 7958 Unit selection: - Expert list: 1 Default: 1.00 [s]
r2260	CO: Technology controller setpoint after ramp-function generator / Tec_ctr set aftRFG		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: - Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: 9_1 Scaling: PERCENT Max: - [%]	Access level: 2 Function plan: 7958 Unit selection: p0595 Expert list: 1 Default: - [%]
p2261	Technology controller setpoint filter time constant / Tec_ctrl set T		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 60.000 [s]	Access level: 3 Function plan: 7958 Unit selection: - Expert list: 1 Default: 0.000 [s]

r2262	CO: Technology controller setpoint after filter / Tec_ctr set aftFit		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: - Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: 9_1 Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: 7958 Unit selection: p0595 Expert list: 1 Default: - [%]
p2263	Technology controller type / Tec_ctrl type		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T Data type: Integer16 P group: Technology Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: 7958 Unit selection: - Expert list: 1 Default: 0
p2264[0...n]	CI: Technology controller actual value / Tec_ctrl act val		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: Technology Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 2 Function plan: 7958 Unit selection: - Expert list: 1 Default: 0
p2265	Technology controller actual value filter time constant / Tec_ctrl act T		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 60.000 [s]	Access level: 2 Function plan: 7958 Unit selection: - Expert list: 1 Default: 0.000 [s]

r2266	CO: Technology controller actual value after filter / Tec_ctr act aftFlt		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: - Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: 9_1 Scaling: PERCENT Max: - [%]	Access level: 2 Function plan: 7958 Unit selection: p0595 Expert list: 1 Default: - [%]

p2267	Technology controller upper limit actual value / Tec_ctrl u_lim act		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: -10000.00 [%]	Calculation: - Dynamic index: - Unit group: 9_1 Scaling: PERCENT Max: 10000.00 [%]	Access level: 3 Function plan: 7958 Unit selection: p0595 Expert list: 1 Default: 200.00 [%]

p2268	Technology controller lower limit actual value / Tec_ctrl l_lim act		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: -10000.00 [%]	Calculation: - Dynamic index: - Unit group: 9_1 Scaling: PERCENT Max: 10000.00 [%]	Access level: 3 Function plan: 7958 Unit selection: p0595 Expert list: 1 Default: -200.00 [%]

p2269	Technology controller gain actual value / Tech_ctrl gain act		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 500.00 [%]	Access level: 3 Function plan: 7958 Unit selection: - Expert list: 1 Default: 100.00 [%]

p2270	Technology controller actual value function / Tec_ctr ActVal fct		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: Integer16 P group: Technology Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 3 Function plan: 7958 Unit selection: - Expert list: 1 Default: 0
p2271	Technology controller actual value inversion (sensor type) / Tech_ctrl act inv		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T Data type: Integer16 P group: Technology Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: 7958 Unit selection: - Expert list: 1 Default: 0
r2272	CO: Technology controller actual value scaled / Tech_ctrl act scal		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: - Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: 9_1 Scaling: PERCENT Max: - [%]	Access level: 2 Function plan: 7958 Unit selection: p0595 Expert list: 1 Default: - [%]
r2273	CO: Technology controller system deviation / Tec_ctrl sys_dev		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: - Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: 9_1 Scaling: PERCENT Max: - [%]	Access level: 2 Function plan: 7958 Unit selection: p0595 Expert list: 1 Default: - [%]

p2274	Technology controller differentiation time constant / Tec_ctrl D comp T		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 60.000 [s]	Access level: 2 Function plan: 7958 Unit selection: - Expert list: 1 Default: 0.000 [s]
p2280	Technology controller proportional gain / Tec_ctrl Kp		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: 0.000	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.000	Access level: 2 Function plan: 7958 Unit selection: - Expert list: 1 Default: 1.000
p2285	Technology controller integral time / Tec_ctrl Tn		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 60.000 [s]	Access level: 2 Function plan: 7958 Unit selection: - Expert list: 1 Default: 0.000 [s]
p2286[0...n]	BI: Hold technology controller integrator / Tec_ctr integ hold		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T Data type: Unsigned32 / Binary P group: Technology Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 7958 Unit selection: - Expert list: 1 Default: 0

p2289[0...n] SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	CI: Technology controller pre-control signal / Tec_ctr prectr_sig Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: Technology Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 2 Function plan: 7958 Unit selection: - Expert list: 1 Default: 0
p2291 SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	CO: Technology controller maximum limiting / Tec_ctrl max_lim Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: -200.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: 200.00 [%]	Access level: 2 Function plan: 7958 Unit selection: - Expert list: 1 Default: 100.00 [%]
p2292 SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	CO: Technology controller minimum limiting / Tec_ctrl min_lim Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: -200.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: 200.00 [%]	Access level: 2 Function plan: 7958 Unit selection: - Expert list: 1 Default: 0.00 [%]
p2293 SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Technology controller ramp-up/ramp-down time / Tec_ctr t_RU/RD Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: 0.00 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.00 [s]	Access level: 3 Function plan: 7958 Unit selection: - Expert list: 1 Default: 1.00 [s]

r2294	CO: Technology controller output signal / Tec_ctrl outp_sig		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: - Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 2 Function plan: 7958 Unit selection: - Expert list: 1 Default: - [%]
p2295	CO: Technology controller output scaling / Tec_ctrl outp scal		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Technology Not for motor type: - Min: -100.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: 100.00 [%]	Access level: 3 Function plan: 7958 Unit selection: - Expert list: 1 Default: 100.00 [%]
p2296[0...n]	CI: Technology controller output scaling / Tec_ctrl outp scal		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: Technology Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 2 Function plan: 7958 Unit selection: - Expert list: 1 Default: 2295[0]
p2297[0...n]	CI: Technology controller maximum limit signal source / Tec_ctrMaxLimS_src		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: Technology Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 2 Function plan: 7958 Unit selection: - Expert list: 1 Default: 2291[0]

p2298[0...n]	CI: Technology controller minimum limit signal source / Tec_ctrl min_l s_s		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: Technology Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 2 Function plan: 7958 Unit selection: - Expert list: 1 Default: 2292[0]

p2299[0...n]	CI: Technology controller limit offset / Tech_ctrl lim offs		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: Technology Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: PERCENT Max: -	Access level: 2 Function plan: 7958 Unit selection: - Expert list: 1 Default: 0

p2306	Technology controller system deviation inversion / Tec_ctr SysDev inv		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T Data type: Integer16 P group: Technology Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: 7958 Unit selection: - Expert list: 1 Default: 0

r2349.0...13	CO/BO: Technology controller status word / Tec_ctrl ZSW		
SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: - Data type: Unsigned32 P group: Technology Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 7958 Unit selection: - Expert list: 1 Default: -

p2369	BI: Closed-loop cascade control, control word / Csc_ctrl STW		
VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: Unsigned32 / Binary P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p2502[0...n] SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	LR encoder assignment / Encoder assignment Changeable: C2(25) Data type: Integer16 P group: Closed loop position control Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 3	Access level: 1 Function plan: 4010 Unit selection: - Expert list: 1 Default: 1
p2503[0...n] SERVO (APC, APC, Position control, Position control), SERVO_840 (APC, APC, Position control, Position control), SERVO_AC (APC, APC, Position control, Position control), SERVO_DBSI (APC, APC, Position control, Position control), VECTOR (Position control), VECTOR_AC (Position control)	LR length unit LU per 10 mm / LU per 10 mm Changeable: C2(25) Data type: Unsigned32 P group: Closed loop position control Not for motor type: - Min: 1 [LU]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2147483647 [LU]	Access level: 1 Function plan: 4010 Unit selection: - Expert list: 1 Default: 10000 [LU]
p2504[0...n] SERVO (APC, APC, Lin, Lin, Lin, Position control), SERVO_840 (APC, APC, Lin, Lin, Lin, Position control), SERVO_AC (APC, APC, Lin, Lin, Lin, Position control), SERVO_DBSI (APC, APC, Lin, Lin, Lin, Position control)	LR motor/load motor distance / Mot/load motor dis Changeable: C2(25) Data type: Unsigned32 P group: Closed loop position control Not for motor type: - Min: 1	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1048576	Access level: 1 Function plan: 4010, 4704, 4711 Unit selection: - Expert list: 1 Default: 1

p2504[0...n]	LR motor/load motor revolutions / Mot/load motor rev		
SERVO (APC, APC, Position control, Position control), SERVO_840 (APC, APC, Position control, Position control), SERVO_AC (APC, APC, Position control, Position control), SERVO_DBSI (APC, APC, Position control, Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: C2(25) Data type: Unsigned32 P group: Closed loop position control Not for motor type: - Min: 1	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1048576	Access level: 1 Function plan: 4010, 4704, 4711 Unit selection: - Expert list: 1 Default: 1
p2505[0...n]	LR motor/load load revolutions / Mot/load load rev		
SERVO (APC, APC, Position control, Position control), SERVO_840 (APC, APC, Position control, Position control), SERVO_AC (APC, APC, Position control, Position control), SERVO_DBSI (APC, APC, Position control, Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: C2(25) Data type: Integer32 P group: Closed loop position control Not for motor type: - Min: -1048576	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1048576	Access level: 1 Function plan: 4010, 4704, 4711 Unit selection: - Expert list: 1 Default: 1
p2506[0...n]	LR length unit LU per load path / LU per load path		
SERVO (APC, APC, Lin, Lin, Lin, Position control, Position control), SERVO_840 (APC, APC, Lin, Lin, Lin, Position control, Position control), SERVO_AC (APC, APC, Lin, Lin, Lin, Position control, Position control), SERVO_DBSI (APC, APC, Lin, Lin, Lin, Position control, Position control)	Changeable: C2(25) Data type: Unsigned32 P group: Closed loop position control Not for motor type: - Min: 1 [LU]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2147483647 [LU]	Access level: 1 Function plan: 4010 Unit selection: - Expert list: 1 Default: 10000 [LU]

p2506[0...n]	LR length unit LU per load revolution / LU per load rev		
SERVO (APC, APC, Position control, Position control), SERVO_840 (APC, APC, Position control, Position control), SERVO_AC (APC, APC, Position control, Position control), SERVO_DBSI (APC, APC, Position control, Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: C2(25) Data type: Unsigned32 P group: Closed loop position control Not for motor type: - Min: 1 [LU]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2147483647 [LU]	Access level: 1 Function plan: 4010 Unit selection: - Expert list: 1 Default: 10000 [LU]
p2507[0...n]	LR absolute encoder adjustment status / Abs_enc_adj stat		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T, U Data type: Integer16 P group: Closed loop position control Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 3	Access level: 1 Function plan: 4010 Unit selection: - Expert list: 1 Default: 1
p2508[0...3]	BI: LR activate reference mark search / Ref_mark act		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T Data type: Unsigned32 / Binary P group: Closed loop position control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 4010 Unit selection: - Expert list: 1 Default: 0
p2509[0...3]	BI: LR activate measuring probe evaluation / MT_eval act		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T Data type: Unsigned32 / Binary P group: Closed loop position control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 4010 Unit selection: - Expert list: 1 Default: 0

p2510[0...3]	BI: LR selecting measuring probe evaluation / MT_eval select		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T	Calculation: -	Access level: 1
	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: 3615, 4010
	P group: Closed loop position control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: -	Max: -	Default: 0

p2511[0...3]	BI: LR measuring probe evaluation edge / MT_eval edge		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T	Calculation: -	Access level: 1
	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: 3615, 4010
	P group: Closed loop position control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: -	Max: -	Default: 0

p2512[0...3]	BI: LR pos. actual value preprocessing activate corr. value (edge) / ActVal_prepCorrAct		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T	Calculation: -	Access level: 1
	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: 4010, 4015
	P group: Closed loop position control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: -	Max: -	Default: 0

p2513[0...3]	CI: LR Position actual value preprocessing corrective value / Act val_prep corr		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T	Calculation: -	Access level: 1
	Data type: Unsigned32 / Integer32	Dynamic index: -	Function plan: 4010, 4015
	P group: Closed loop position control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: -	Max: -	Default: 0

p2514[0...3]	BI: LR activate position actual value setting / s_act setting act		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T	Calculation: -	Access level: 1
	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: 4010
	P group: Closed loop position control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: -	Max: -	Default: 0

p2515[0...3] SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	CI: LR position actual setting setting value / s_act set setVal Changeable: T Data type: Unsigned32 / Integer32 P group: Closed loop position control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 4010 Unit selection: - Expert list: 1 Default: 0
p2516[0...3] SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	CI: LR position offset / Position offset Changeable: T Data type: Unsigned32 / Integer32 P group: Closed loop position control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 4010 Unit selection: - Expert list: 1 Default: 0
p2517[0...2] SERVO (Dig IO, Position control), SERVO_840 (Dig IO, Position control), SERVO_DBSI (Dig IO, Position control)	LR direct measuring probe 1 / Direct MT 1 Changeable: T, U Data type: Integer16 P group: Closed loop position control Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 51	Access level: 3 Function plan: 4010 Unit selection: - Expert list: 1 Default: 0
p2517[0...2] SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	LR direct measuring probe 1 / Direct MT 1 Changeable: T, U Data type: Integer16 P group: Closed loop position control Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 18	Access level: 3 Function plan: 4010 Unit selection: - Expert list: 1 Default: 0
p2518[0...2] SERVO (Dig IO, Position control), SERVO_840 (Dig IO, Position control), SERVO_DBSI (Dig IO, Position control)	LR direct measuring probe 2 / Direct MT 2 Changeable: T, U Data type: Integer16 P group: Closed loop position control Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 51	Access level: 3 Function plan: 4010 Unit selection: - Expert list: 1 Default: 0

p2518[0...2]	LR direct measuring probe 2 / Direct MT 2		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T, U Data type: Integer16 P group: Closed loop position control Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 18	Access level: 3 Function plan: 4010 Unit selection: - Expert list: 1 Default: 0
p2519[0...n]	LR position actual value preprocessing config. DDS changeover / s_act config DDS		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T, U Data type: Integer16 P group: Closed loop position control Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 1
r2520[0...2]	CO: LR Position actual value preprocessing encoder control word / ActVal_prep STW		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: - Data type: Unsigned16 P group: Closed loop position control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 4010 Unit selection: - Expert list: 1 Default: -
r2521[0...3]	CO: LR position actual value / s_act		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: - Data type: Integer32 P group: Closed loop position control Not for motor type: - Min: - [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [LU]	Access level: 1 Function plan: 4010 Unit selection: - Expert list: 1 Default: - [LU]
r2522[0...3]	CO: LR velocity actual value / v_act		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: - Data type: Integer32 P group: Closed loop position control Not for motor type: - Min: - [1000 LU/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [1000 LU/min]	Access level: 1 Function plan: 4010 Unit selection: - Expert list: 1 Default: - [1000 LU/min]

r2523[0...3] SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	CO: LR measured value / Measured value Changeable: - Data type: Integer32 P group: Closed loop position control Not for motor type: - Min: - [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [LU]	Access level: 1 Function plan: 4010 Unit selection: - Expert list: 1 Default: - [LU]
r2524 SERVO (Lin, Position control), SERVO_840 (Lin, Position control), SERVO_AC (Lin, Position control), SERVO_DBSI (Lin, Position control)	CO: LR LU/mm / LU/mm Changeable: - Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: - [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [LU]	Access level: 1 Function plan: 3630, 4010 Unit selection: - Expert list: 1 Default: - [LU]
r2524 SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	CO: LR LU/revolution / LU/revolution Changeable: - Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: - [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [LU]	Access level: 1 Function plan: 3630, 4010 Unit selection: - Expert list: 1 Default: - [LU]
p2525[0...n] SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	CO: LR encoder adjustment offset / Enc_adj offset Changeable: T Data type: Unsigned32 P group: Closed loop position control Not for motor type: - Min: 0 [LU]	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 4294967295 [LU]	Access level: 4 Function plan: 4010 Unit selection: - Expert list: 1 Default: 0 [LU]
r2526.0...9 SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	CO/BO: LR status word / ZSW Changeable: - Data type: Unsigned16 P group: Closed loop position control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -

r2527.0...2	CO/BO: LR actual value sensing status word encoder 1 / ActValSensZSW enc1		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: - Data type: Unsigned16 P group: Closed loop position control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r2528.0...2	CO/BO: LR actual value sensing status word encoder 2 / ActValSensZSW enc2		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: - Data type: Unsigned16 P group: Closed loop position control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r2529.0...2	CO/BO: LR actual value sensing status word encoder 3 / ActValSensZSW enc3		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: - Data type: Unsigned16 P group: Closed loop position control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
p2530	CI: LR position setpoint / s_set		
SERVO (EPOS, Position control, Position control), SERVO_840 (EPOS, Position control, Position control), SERVO_AC (EPOS, Position control, Position control), SERVO_DBSI (EPOS, Position control, Position control), VECTOR (EPOS, Position control, Position control), VECTOR_AC (EPOS, Position control, Position control)	Changeable: T Data type: Unsigned32 / Integer32 P group: Closed loop position control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 4015, 4020 Unit selection: - Expert list: 1 Default: 0

p2531	Cl: LR velocity setpoint / v_set		
SERVO (EPOS, Position control, Position control), SERVO_840 (EPOS, Position control, Position control), SERVO_AC (EPOS, Position control, Position control), SERVO_DBSI (EPOS, Position control, Position control), VECTOR (EPOS, Position control, Position control), VECTOR_AC (EPOS, Position control, Position control)	Changeable: T Data type: Unsigned32 / Integer32 P group: Closed loop position control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 4015 Unit selection: - Expert list: 1 Default: 0
p2532	Cl: LR position actual value / s_act		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T Data type: Unsigned32 / Integer32 P group: Closed loop position control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4015, 4020, 4025 Unit selection: - Expert list: 1 Default: 2521[0]
p2533[0...n]	LR position setpoint filter time constant / s_set_filt T		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T, U Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000.00 [ms]	Access level: 1 Function plan: 4015 Unit selection: - Expert list: 1 Default: 0.00 [ms]
p2534[0...n]	LR velocity pre-control factor / v_prectrl fact		
SERVO (Lin, Position control), SERVO_840 (Lin, Position control), SERVO_AC (Lin, Position control), SERVO_DBSI (Lin, Position control)	Changeable: T, U Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 200.00 [%]	Access level: 1 Function plan: 4015, 4025 Unit selection: - Expert list: 1 Default: 0.00 [%]

p2534[0...n]	LR speed pre-control factor / n_prectrl fact		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T, U Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 200.00 [%]	Access level: 1 Function plan: 4015, 4025 Unit selection: - Expert list: 1 Default: 0.00 [%]
p2535[0...n]	LR velocity pre-control balancing filter dead time / v_prectrlFilt t_dead		
SERVO (Lin, Position control), SERVO_840 (Lin, Position control), SERVO_AC (Lin, Position control), SERVO_DBSI (Lin, Position control)	Changeable: T, U Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: 0.00	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2.00	Access level: 1 Function plan: 4015 Unit selection: - Expert list: 1 Default: 0.00
p2535[0...n]	LR speed pre-control balancing filter dead time / n_prectrlFilt t_dead		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T, U Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: 0.00	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2.00	Access level: 1 Function plan: 4015 Unit selection: - Expert list: 1 Default: 0.00
p2536[0...n]	LR velocity pre-control balancing filter PT1 / v_prectrl filt PT1		
SERVO (Lin, Position control), SERVO_840 (Lin, Position control), SERVO_AC (Lin, Position control), SERVO_DBSI (Lin, Position control)	Changeable: T, U Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00 [ms]	Access level: 1 Function plan: 4015 Unit selection: - Expert list: 1 Default: 0.00 [ms]
p2536[0...n]	LR speed pre-control symmetrizing filter PT1 / n_prectrl filt PT1		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T, U Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00 [ms]	Access level: 1 Function plan: 4015 Unit selection: - Expert list: 1 Default: 0.00 [ms]

p2537	CI: LR position controller adaptation / Adaptation		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: -	Access level: 1 Function plan: 4015 Unit selection: - Expert list: 1 Default: 1
p2538[0...n]	LR proportional gain / Kp		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T, U Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: 0.000 [1000 rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 300.000 [1000 rpm]	Access level: 1 Function plan: 4015 Unit selection: - Expert list: 1 Default: 1.000 [1000 rpm]
p2539[0...n]	LR integral time / Tn		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T, U Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100000.00 [ms]	Access level: 1 Function plan: 4015 Unit selection: - Expert list: 1 Default: 0.00 [ms]
p2540	CO: LR position controller output velocity limit / LR_outp v_lim		
SERVO (Lin, Position control), SERVO_840 (Lin, Position control), SERVO_AC (Lin, Position control), SERVO_DBSI (Lin, Position control)	Changeable: T, U Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: 0.000 [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: 1000.000 [m/min]	Access level: 3 Function plan: 4015 Unit selection: p0505 Expert list: 1 Default: 1000.000 [m/min]
p2540	CO: LR position controller output speed limit / LR_outp n_lim		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T, U Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: 0.000 [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: 210000.000 [rpm]	Access level: 3 Function plan: 4015 Unit selection: p0505 Expert list: 1 Default: 210000.000 [rpm]

p2541	CI: LR position controller output velocity limit signal source / LR_out v_lim S_src		
SERVO (Lin, Position control), SERVO_840 (Lin, Position control), SERVO_AC (Lin, Position control), SERVO_DBSI (Lin, Position control)	Changeable: T	Calculation: -	Access level: 1
	Data type: Unsigned32 / FloatingPoint32	Dynamic index: -	Function plan: 4015
	P group: Closed loop position control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: p2000	Expert list: 1
	Min: -	Max: -	Default: 2540[0]

p2541	CI: LR position controller output speed limit signal source / LR_out n_lim S_src		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T	Calculation: -	Access level: 1
	Data type: Unsigned32 / FloatingPoint32	Dynamic index: -	Function plan: 4015
	P group: Closed loop position control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: p2000	Expert list: 1
	Min: -	Max: -	Default: 2540[0]

p2542	LR standstill window / Standstill window		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T, U	Calculation: -	Access level: 1
	Data type: Unsigned32	Dynamic index: -	Function plan: 4020
	P group: Closed loop position control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: 0 [LU]	Max: 2147483647 [LU]	Default: 200 [LU]

p2543	LR standstill monitoring time / t_standstill monit		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T, U	Calculation: -	Access level: 1
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 4020
	P group: Closed loop position control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: 0.00 [ms]	Max: 100000.00 [ms]	Default: 200.00 [ms]

p2544	LR positioning window / Pos_window		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T, U	Calculation: -	Access level: 1
	Data type: Unsigned32	Dynamic index: -	Function plan: 4020
	P group: Closed loop position control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: 0 [LU]	Max: 2147483647 [LU]	Default: 40 [LU]

p2545	LR positioning monitoring time / t_pos_monit		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T, U Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100000.00 [ms]	Access level: 1 Function plan: 4020 Unit selection: - Expert list: 1 Default: 1000.00 [ms]
p2546[0...n]	LR dynamic following error monitoring tolerance / s_delta_monit tol		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T, U Data type: Unsigned32 P group: Closed loop position control Not for motor type: - Min: 0 [LU]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2147483647 [LU]	Access level: 1 Function plan: 4025 Unit selection: - Expert list: 1 Default: 1000 [LU]
p2547	LR cam switching position 1 / Cam position 1		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T, U Data type: Integer32 P group: Closed loop position control Not for motor type: - Min: -2147483648 [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147483647 [LU]	Access level: 1 Function plan: 4025 Unit selection: - Expert list: 1 Default: 0 [LU]
p2548	LR cam switching position 2 / Cam position 2		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T, U Data type: Integer32 P group: Closed loop position control Not for motor type: - Min: -2147483648 [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147483647 [LU]	Access level: 1 Function plan: 4025 Unit selection: - Expert list: 1 Default: 0 [LU]
p2549	BI: LR enable 1 / Enable 1		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T Data type: Unsigned32 / Binary P group: Closed loop position control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 4015 Unit selection: - Expert list: 1 Default: 899.2

p2550	BI: LR enable 2 / Enable 2		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T Data type: Unsigned32 / Binary P group: Closed loop position control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 4015 Unit selection: - Expert list: 1 Default: 0
p2551	BI: LR setpoint signal fixed / Mess setp fixed		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T Data type: Unsigned32 / Binary P group: Closed loop position control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 4020 Unit selection: - Expert list: 1 Default: 0
p2552	BI: LR signal travel to fixed stop active / Signal TfS act		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T Data type: Unsigned32 / Binary P group: Closed loop position control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 4025 Unit selection: - Expert list: 1 Default: 0
p2553	BI: LR signal fixed stop reached / Signal fixed stop		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T Data type: Unsigned32 / Binary P group: Closed loop position control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 4025 Unit selection: - Expert list: 1 Default: 0
p2554	BI: LR signal traversing command active / Sig trav_cmnd act		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T Data type: Unsigned32 / Binary P group: Closed loop position control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 4020 Unit selection: - Expert list: 1 Default: 0

p2555	Cl: LR LU/revolution LU/mm / LU/rev LU/mm		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4015 Unit selection: - Expert list: 1 Default: 2524[0]
r2556	CO: LR position setpoint after setpoint smoothing / s_set after interp		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: - Data type: Integer32 P group: Closed loop position control Not for motor type: - Min: - [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [LU]	Access level: 1 Function plan: 4015 Unit selection: - Expert list: 1 Default: - [LU]
r2557	CO: LR position controller input system deviation / LR_inp sys dev		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: - Data type: Integer32 P group: Closed loop position control Not for motor type: - Min: - [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [LU]	Access level: 1 Function plan: 4015 Unit selection: - Expert list: 1 Default: - [LU]
r2558	CO: LR position controller output P component / LR_outp P comp		
SERVO (Lin, Position control), SERVO_840 (Lin, Position control), SERVO_AC (Lin, Position control), SERVO_DBSI (Lin, Position control)	Changeable: - Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 1 Function plan: 4015 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r2558	CO: LR position controller output P component / LR_outp P comp		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: - Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 1 Function plan: 4015 Unit selection: p0505 Expert list: 1 Default: - [rpm]

r2559	CO: LR position controller output I component / LR_outp I comp		
SERVO (Lin, Position control), SERVO_840 (Lin, Position control), SERVO_AC (Lin, Position control), SERVO_DBSI (Lin, Position control)	Changeable: - Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 1 Function plan: 4015 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r2559	CO: LR position controller output I component / LR_outp I comp		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: - Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 1 Function plan: 4015 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r2560	CO: LR velocity setpoint / v_set		
SERVO (Lin, Position control), SERVO_840 (Lin, Position control), SERVO_AC (Lin, Position control), SERVO_DBSI (Lin, Position control)	Changeable: - Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 1 Function plan: 4015 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r2560	CO: LR speed setpoint / n_set		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: - Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 1 Function plan: 4015 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r2561	CO: LR velocity pre-control value / v_prectrl val		
SERVO (Lin, Position control), SERVO_840 (Lin, Position control), SERVO_AC (Lin, Position control), SERVO_DBSI (Lin, Position control)	Changeable: - Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 1 Function plan: 4015 Unit selection: p0505 Expert list: 1 Default: - [m/min]

r2561	CO: LR speed pre-control value / n_prectrl val		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: - Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 1 Function plan: 4015 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r2562	CO: LR velocity setpoint total / v_set total		
SERVO (Lin, Position control), SERVO_840 (Lin, Position control), SERVO_AC (Lin, Position control), SERVO_DBSI (Lin, Position control)	Changeable: - Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 1 Function plan: 4015 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r2562	CO: LR total speed setpoint / n_set total		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: - Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 1 Function plan: 4015 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r2563	CO: LR following error dynamic model / Follow error dyn		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: - Data type: Integer32 P group: Closed loop position control Not for motor type: - Min: - [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [LU]	Access level: 1 Function plan: 4025 Unit selection: - Expert list: 1 Default: - [LU]
r2564	CO: LR force pre-control value / F_prectrl val		
SERVO (Lin, Position control), SERVO_840 (Lin, Position control), SERVO_AC (Lin, Position control), SERVO_DBSI (Lin, Position control)	Changeable: - Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: - [N]	Calculation: - Dynamic index: - Unit group: 8_1 Scaling: p2003 Max: - [N]	Access level: 1 Function plan: 4015 Unit selection: p0505 Expert list: 1 Default: - [N]

r2564	CO: LR torque pre-control value / M_prectrl val		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: - Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: - [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: p2003 Max: - [Nm]	Access level: 1 Function plan: 4015 Unit selection: p0505 Expert list: 1 Default: - [Nm]
r2565	CO: LR following error actual / Following err act		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: - Data type: Integer32 P group: Closed loop position control Not for motor type: - Min: - [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [LU]	Access level: 1 Function plan: 4015 Unit selection: - Expert list: 1 Default: - [LU]
r2566	LR velocity input pre-control / v_inp_prectrl		
SERVO (Lin, Position control), SERVO_840 (Lin, Position control), SERVO_AC (Lin, Position control), SERVO_DBSI (Lin, Position control)	Changeable: - Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 1 Function plan: 4015 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r2566	LR speed input pre-control / n_inp_prectrl		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: - Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 1 Function plan: 4015 Unit selection: p0505 Expert list: 1 Default: - [rpm]
p2567[0...n]	LR force pre-control mass / F_prectrl mass		
SERVO (Lin, Position control), SERVO_840 (Lin, Position control), SERVO_AC (Lin, Position control), SERVO_DBSI (Lin, Position control)	Changeable: T, U Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: 0.000000 [kg]	Calculation: - Dynamic index: DDS, p0180 Unit group: 27_1 Scaling: - Max: 100000.000000 [kg]	Access level: 3 Function plan: 4015 Unit selection: p0100 Expert list: 1 Default: 1.000000 [kg]

p2567[0...n] SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	LR torque pre-control moment of inertia / M_prectr M_inertia Changeable: T, U Data type: FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: 0.000000 [kgm²]	Calculation: - Dynamic index: DDS, p0180 Unit group: 25_1 Scaling: - Max: 100000.000000 [kgm²]	Access level: 3 Function plan: 4015 Unit selection: p0100 Expert list: 1 Default: 0.159155 [kgm²]
p2568 SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	BI: EPOS STOP cam activation / STOP cam act Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3630 Unit selection: - Expert list: 1 Default: 0
p2569 SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	BI: EPOS STOP cam minus / STOP cam minus Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3630 Unit selection: - Expert list: 1 Default: 1
p2570 SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	BI: EPOS STOP cam plus / STOP cam plus Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3630 Unit selection: - Expert list: 1 Default: 1
p2571 SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	EPOS maximum velocity / v_max Changeable: T, U Data type: Unsigned32 P group: Basic positioner Not for motor type: - Min: 1 [1000 LU/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 40000000 [1000 LU/min]	Access level: 1 Function plan: 3630 Unit selection: - Expert list: 1 Default: 30000 [1000 LU/min]
p2572 SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	EPOS maximum acceleration / a_max Changeable: T Data type: Unsigned32 P group: Basic positioner Not for motor type: - Min: 1 [1000 LU/s²]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2000000 [1000 LU/s²]	Access level: 1 Function plan: 3630 Unit selection: - Expert list: 1 Default: 100 [1000 LU/s²]

p2573	EPOS maximum deceleration / -a_max		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 P group: Basic positioner Not for motor type: - Min: 1 [1000 LU/s²]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2000000 [1000 LU/s²]	Access level: 1 Function plan: 3630 Unit selection: - Expert list: 1 Default: 100 [1000 LU/s²]
p2574	EPOS jerk limiting / Jerk lim		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: Unsigned32 P group: Basic positioner Not for motor type: - Min: 1 [1000 LU/s³]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100000000 [1000 LU/s³]	Access level: 1 Function plan: 3635 Unit selection: - Expert list: 1 Default: 10000 [1000 LU/s³]
p2575	BI: EPOS jerk limiting activation / Jerk limit act		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3635 Unit selection: - Expert list: 1 Default: 0
p2576	EPOS modulo correction modulo range / Modulo corr range		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 P group: Basic positioner Not for motor type: - Min: 1 [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147482647 [LU]	Access level: 1 Function plan: 3635 Unit selection: - Expert list: 1 Default: 360000 [LU]
p2577	BI: EPOS modulo correction activation / Modulo corr act		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3630, 3635 Unit selection: - Expert list: 1 Default: 0
p2578	CI: EPOS software limit switch minus signal source / SW limSw Min S_src		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Integer32 P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3630 Unit selection: - Expert list: 1 Default: 2580[0]

p2579	CI: EPOS software limit switch plus signal source / SW limSwPlus S_src		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Integer32 P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3630 Unit selection: - Expert list: 1 Default: 2581[0]
p2580	CO: EPOS software limit switch minus / SW limSwitch minus		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: Integer32 P group: Basic positioner Not for motor type: - Min: -2147482648 [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147482647 [LU]	Access level: 1 Function plan: 3630 Unit selection: - Expert list: 1 Default: -2147482648 [LU]
p2581	CO: EPOS software limit switch plus / SW lim switch plus		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: Integer32 P group: Basic positioner Not for motor type: - Min: -2147482648 [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147482647 [LU]	Access level: 1 Function plan: 3630 Unit selection: - Expert list: 1 Default: 2147482647 [LU]
p2582	BI: EPOS software limit switch activation / SW lim sw act		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3630 Unit selection: - Expert list: 1 Default: 0
p2583	EPOS backlash compensation / Backlash comp		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: Integer32 P group: Basic positioner Not for motor type: - Min: -200000 [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 200000 [LU]	Access level: 1 Function plan: 3635 Unit selection: - Expert list: 1 Default: 0 [LU]
p2584	EPOS functions configuration / EPOS fct. config		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin

p2585	EPOS jog 1 setpoint velocity / Jog 1 v_set		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: Integer32 P group: Basic positioner Not for motor type: - Min: -40000000 [1000 LU/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 40000000 [1000 LU/min]	Access level: 1 Function plan: 3610 Unit selection: - Expert list: 1 Default: -300 [1000 LU/min]
p2586	EPOS jog 2 setpoint velocity / Jog 2 v_set		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: Integer32 P group: Basic positioner Not for motor type: - Min: -40000000 [1000 LU/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 40000000 [1000 LU/min]	Access level: 1 Function plan: 3610 Unit selection: - Expert list: 1 Default: 300 [1000 LU/min]
p2587	EPOS jog 1 traversing distance / Jog 1 distance		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: Unsigned32 P group: Basic positioner Not for motor type: - Min: 0 [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147482647 [LU]	Access level: 1 Function plan: 3610 Unit selection: - Expert list: 1 Default: 1000 [LU]
p2588	EPOS jog 2 traversing distance / Jog 2 distance		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: Unsigned32 P group: Basic positioner Not for motor type: - Min: 0 [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147482647 [LU]	Access level: 1 Function plan: 3610 Unit selection: - Expert list: 1 Default: 1000 [LU]
p2589	BI: EPOS jog 1 signal source / Jog 1 S_src		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3610, 3625 Unit selection: - Expert list: 1 Default: 0
p2590	BI: EPOS jog 2 signal source / Jog 2 S_src		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3610, 3625 Unit selection: - Expert list: 1 Default: 0

p2591 SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	BI: EPOS jogging incremental / Jog incr Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3610 Unit selection: - Expert list: 1 Default: 0
p2593 SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	CI: EPOS LU/revolution LU/mm / LU/rev LU/mm Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 3630 Unit selection: - Expert list: 1 Default: 2524[0]
p2594[0...2] SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	CI: EPOS Maximum velocity externally limited / v_Max ext lim Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 3630 Unit selection: - Expert list: 1 Default: 0
p2595 SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	BI: EPOS referencing start / Ref start Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3612, 3625, 3614 Unit selection: - Expert list: 1 Default: 0
p2596 SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	BI: EPOS set reference point / Set ref_pt Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3612 Unit selection: - Expert list: 1 Default: 0
p2597 SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	BI: EPOS referencing type selection / Ref_typ select Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3612, 3614, 3625 Unit selection: - Expert list: 1 Default: 0

p2598[0...3]	CI: EPOS reference point coordinate signal source / Ref_pt coord S_src		
SERVO (EPOS, Position control, Position control), SERVO_840 (EPOS, Position control, Position control), SERVO_AC (EPOS, Position control, Position control), SERVO_DBSI (EPOS, Position control, Position control), VECTOR (EPOS, Position control, Position control), VECTOR_AC (EPOS, Position control, Position control)	Changeable: T Data type: Unsigned32 / Integer32 P group: Closed loop position control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3612, 3614 Unit selection: - Expert list: 1 Default: [0] 2599[0] [1] 0 [2] 0 [3] 0

p2599	CO: EPOS reference point coordinate value / Ref_pt coord val		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T, U Data type: Integer32 P group: Closed loop position control Not for motor type: - Min: -2147482648 [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147482647 [LU]	Access level: 1 Function plan: 3612 Unit selection: - Expert list: 1 Default: 0 [LU]

p2600	EPOS search for reference reference point offset / Ref_pt offset		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: Integer32 P group: Basic positioner Not for motor type: - Min: -2147482648 [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147482647 [LU]	Access level: 1 Function plan: 3612 Unit selection: - Expert list: 1 Default: 0 [LU]

p2601	EPOS flying referencing inner window / Inner window		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: Integer32 P group: Basic positioner Not for motor type: - Min: 0 [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147482647 [LU]	Access level: 1 Function plan: 3614 Unit selection: - Expert list: 1 Default: 0 [LU]

p2602	EPOS flying referencing outer window / Outer window		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: Integer32 P group: Basic positioner Not for motor type: - Min: 0 [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147482647 [LU]	Access level: 1 Function plan: 3614 Unit selection: - Expert list: 1 Default: 0 [LU]

p2603	EPOS flying referencing, positioning mode relative / Pos_mode relative		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: Integer32 P group: Basic positioner Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 1 Function plan: 3635 Unit selection: - Expert list: 1 Default: 1
p2604	BI: EPOS search for reference start direction / Srch for ref dir		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3612 Unit selection: - Expert list: 1 Default: 0
p2605	EPOS search for reference approach velocity reference cam / v_appr ref_cam		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: Unsigned32 P group: Basic positioner Not for motor type: - Min: 1 [1000 LU/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 40000000 [1000 LU/min]	Access level: 1 Function plan: 3612 Unit selection: - Expert list: 1 Default: 5000 [1000 LU/min]
p2606	EPOS search for reference reference cam maximum distance / Ref_cam max s		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: Unsigned32 P group: Basic positioner Not for motor type: - Min: 0 [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147482647 [LU]	Access level: 1 Function plan: 3612 Unit selection: - Expert list: 1 Default: 2147482647 [LU]
p2607	EPOS search for reference reference cam present / Ref_cam pres		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: Unsigned8 P group: Basic positioner Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 1 Function plan: 3612 Unit selection: - Expert list: 1 Default: 1
p2608	EPOS search for reference approach velocity zero mark / v_appr ref_ZM		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: Unsigned32 P group: Basic positioner Not for motor type: - Min: 1 [1000 LU/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 40000000 [1000 LU/min]	Access level: 1 Function plan: 3612 Unit selection: - Expert list: 1 Default: 300 [1000 LU/min]

p2609	EPOS search for reference max distance ref cam and zero mark / Max s ref_cam ZM		
SERVO (EPOS),	Changeable: T, U	Calculation: -	Access level: 1
SERVO_840 (EPOS),	Data type: Unsigned32	Dynamic index: -	Function plan: 3612
SERVO_AC (EPOS),	P group: Basic positioner	Unit group: -	Unit selection: -
SERVO_DBSI (EPOS),	Not for motor type: -	Scaling: -	Expert list: 1
VECTOR (EPOS),	Min:	Max:	Default:
VECTOR_AC (EPOS)	0 [LU]	2147482647 [LU]	20000 [LU]

p2610	EPOS search for ref. tol. bandwidth for distance to zero mark / Tol_band to ZM		
SERVO (EPOS),	Changeable: T, U	Calculation: -	Access level: 1
SERVO_840 (EPOS),	Data type: Unsigned32	Dynamic index: -	Function plan: 3612
SERVO_AC (EPOS),	P group: Basic positioner	Unit group: -	Unit selection: -
SERVO_DBSI (EPOS),	Not for motor type: -	Scaling: -	Expert list: 1
VECTOR (EPOS),	Min:	Max:	Default:
VECTOR_AC (EPOS)	0 [LU]	2147482647 [LU]	2147482647 [LU]

p2611	EPOS search for reference approach velocity reference point / v_appr ref_pt		
SERVO (EPOS),	Changeable: T, U	Calculation: -	Access level: 1
SERVO_840 (EPOS),	Data type: Unsigned32	Dynamic index: -	Function plan: 3612
SERVO_AC (EPOS),	P group: Basic positioner	Unit group: -	Unit selection: -
SERVO_DBSI (EPOS),	Not for motor type: -	Scaling: -	Expert list: 1
VECTOR (EPOS),	Min:	Max:	Default:
VECTOR_AC (EPOS)	1 [1000 LU/min]	40000000 [1000 LU/min]	300 [1000 LU/min]

p2612	BI: EPOS search for reference reference cam / Ref_cam		
SERVO (EPOS),	Changeable: T	Calculation: -	Access level: 1
SERVO_840 (EPOS),	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: 3612
SERVO_AC (EPOS),	P group: Basic positioner	Unit group: -	Unit selection: -
SERVO_DBSI (EPOS),	Not for motor type: -	Scaling: -	Expert list: 1
VECTOR (EPOS),	Min:	Max:	Default:
VECTOR_AC (EPOS)	-	-	0

p2613	BI: EPOS search for reference reversing cam minus / Rev minus		
SERVO (EPOS),	Changeable: T	Calculation: -	Access level: 1
SERVO_840 (EPOS),	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: 3612
SERVO_AC (EPOS),	P group: Basic positioner	Unit group: -	Unit selection: -
SERVO_DBSI (EPOS),	Not for motor type: -	Scaling: -	Expert list: 1
VECTOR (EPOS),	Min:	Max:	Default:
VECTOR_AC (EPOS)	-	-	1

p2614	BI: EPOS search for reference reversing cam plus / Rev plus		
SERVO (EPOS),	Changeable: T	Calculation: -	Access level: 1
SERVO_840 (EPOS),	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: 3612
SERVO_AC (EPOS),	P group: Basic positioner	Unit group: -	Unit selection: -
SERVO_DBSI (EPOS),	Not for motor type: -	Scaling: -	Expert list: 1
VECTOR (EPOS),	Min:	Max:	Default:
VECTOR_AC (EPOS)	-	-	1

p2615	EPOS maximum number of traversing blocks / Trav_block qty max		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: C2(17) Data type: Unsigned8 P group: Basic positioner Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 64	Access level: 1 Function plan: 3616 Unit selection: - Expert list: 1 Default: 64
p2616[0...n]	EPOS traversing block block number / Trav_blk, blkNo.		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: Integer16 P group: Basic positioner Not for motor type: - Min: -1	Calculation: - Dynamic index: p2615 Unit group: - Scaling: - Max: 63	Access level: 1 Function plan: 3616 Unit selection: - Expert list: 1 Default: -1
p2617[0...n]	EPOS traversing block position / Trav_block pos		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: Integer32 P group: Basic positioner Not for motor type: - Min: -2147482648 [LU]	Calculation: - Dynamic index: p2615 Unit group: - Scaling: - Max: 2147482647 [LU]	Access level: 1 Function plan: 3616 Unit selection: - Expert list: 1 Default: 0 [LU]
p2618[0...n]	EPOS traversing block velocity / Trav_block v		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: Integer32 P group: Basic positioner Not for motor type: - Min: 1 [1000 LU/min]	Calculation: - Dynamic index: p2615 Unit group: - Scaling: - Max: 40000000 [1000 LU/min]	Access level: 1 Function plan: 3616 Unit selection: - Expert list: 1 Default: 600 [1000 LU/min]
p2619[0...n]	EPOS traversing block acceleration override / Trav_block a_over		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: FloatingPoint32 P group: Basic positioner Not for motor type: - Min: 1.0 [%]	Calculation: - Dynamic index: p2615 Unit group: - Scaling: - Max: 100.0 [%]	Access level: 1 Function plan: 3616 Unit selection: - Expert list: 1 Default: 100.0 [%]
p2620[0...n]	EPOS traversing deceleration override / Trav_block -a_over		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: FloatingPoint32 P group: Basic positioner Not for motor type: - Min: 1.0 [%]	Calculation: - Dynamic index: p2615 Unit group: - Scaling: - Max: 100.0 [%]	Access level: 1 Function plan: 3616 Unit selection: - Expert list: 1 Default: 100.0 [%]

p2621[0...n]	EPOS traversing block task / Trav_block task		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: Integer16 P group: Basic positioner Not for motor type: - Min: 1	Calculation: - Dynamic index: p2615 Unit group: - Scaling: - Max: 9	Access level: 1 Function plan: 3616 Unit selection: - Expert list: 1 Default: 1
p2622[0...n]	EPOS traversing block task parameter / Trav_blk task_par		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: Integer32 P group: Basic positioner Not for motor type: - Min: -2147483648	Calculation: - Dynamic index: p2615 Unit group: - Scaling: - Max: 2147483647	Access level: 1 Function plan: 3616 Unit selection: - Expert list: 1 Default: 0
p2623[0...n]	EPOS traversing block task mode / Trav_block mode		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: Unsigned16 P group: Basic positioner Not for motor type: - Min: 0	Calculation: - Dynamic index: p2615 Unit group: - Scaling: - Max: 65535	Access level: 1 Function plan: 3515, 3616 Unit selection: - Expert list: 1 Default: 0
p2624	EPOS traversing block sorting / Trav_block sort		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: Unsigned16 P group: Basic positioner Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 1 Function plan: 3616 Unit selection: - Expert list: 1 Default: 0
p2625	BI: EPOS traversing block selection bit 0 / Trav_blk sel bit 0		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3616, 3640 Unit selection: - Expert list: 1 Default: 0
p2626	BI: EPOS traversing block selection bit 1 / Trav_blk sel bit 1		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3616, 3640 Unit selection: - Expert list: 1 Default: 0

p2627	BI: EPOS traversing block selection bit 2 / Trav_blk sel bit 2		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3616, 3640 Unit selection: - Expert list: 1 Default: 0
p2628	BI: EPOS traversing block selection bit 3 / Trav_blk sel bit 3		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3616, 3640 Unit selection: - Expert list: 1 Default: 0
p2629	BI: EPOS traversing block selection bit 4 / Trav_blk sel bit 4		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3616, 3640 Unit selection: - Expert list: 1 Default: 0
p2630	BI: EPOS traversing block selection bit 5 / Trav_blk sel bit 5		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3616, 3640 Unit selection: - Expert list: 1 Default: 0
p2631	BI: EPOS activate traversing task (0 -> 1) / Trav_task act		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3616, 3625 Unit selection: - Expert list: 1 Default: 0
p2632	EPOS external block change evaluation / Ext BickChg eval		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Integer16 P group: Basic positioner Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 1 Function plan: 3615, 3616 Unit selection: - Expert list: 1 Default: 0

p2633	BI: EPOS external block change (0 -> 1) / Ext BickChg (0->1)		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3615 Unit selection: - Expert list: 1 Default: 0
p2634[0...n]	EPOS fixed stop maximum following error / Following err max		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T, U Data type: Unsigned32 P group: Closed loop position control Not for motor type: - Min: 0 [LU]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2147482647 [LU]	Access level: 1 Function plan: 3617, 4025 Unit selection: - Expert list: 1 Default: 1000 [LU]
p2635	EPOS fixed stop monitoring window / Fixed stop monit		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: T, U Data type: Unsigned32 P group: Closed loop position control Not for motor type: - Min: 0 [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147482647 [LU]	Access level: 1 Function plan: 3617, 4025 Unit selection: - Expert list: 1 Default: 100 [LU]
p2637	BI: EPOS fixed stop reached / Fixed stop reached		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3616, 3617 Unit selection: - Expert list: 1 Default: 2526.4
p2638	BI: EPOS fixed stop outside the monitoring window / Fixed stop outside		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 3616, 3617 Unit selection: - Expert list: 1 Default: 2526.5

p2639	BI: EPOS force limit reached / F_limit reached		
SERVO (EPOS, Lin), SERVO_840 (EPOS, Lin), SERVO_AC (EPOS, Lin), SERVO_DBSI (EPOS, Lin)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 3616 Unit selection: - Expert list: 1 Default: 1407.7
p2639	BI: EPOS torque limit reached / M_limit reached		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 3616 Unit selection: - Expert list: 1 Default: 1407.7
p2640	BI: EPOS intermediate stop (0 signal) / Intermediate stop		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3616, 3620, 3625 Unit selection: - Expert list: 1 Default: 0
p2641	BI: EPOS reject traversing task (0 signal) / Trav_task reject		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3616, 3620, 3625 Unit selection: - Expert list: 1 Default: 0
p2642	CI: EPOS direct setpoint input/MDI position setpoint / MDI s_set		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Integer32 P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3618 Unit selection: - Expert list: 1 Default: 2690[0]
p2643	CI: EPOS direct setpoint input/MDI velocity setpoint / MDI v_set		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Integer32 P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3618 Unit selection: - Expert list: 1 Default: 2691[0]

p2644	CI: EPOS direct setpoint input/MDI acceleration override / MDI a_over		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: -	Access level: 1 Function plan: 3618 Unit selection: - Expert list: 1 Default: 2692[0]
p2645	CI: EPOS direct setpoint input/MDI deceleration override / MDI -a_over		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: -	Access level: 1 Function plan: 3618 Unit selection: - Expert list: 1 Default: 2693[0]
p2646	CI: EPOS velocity override / v_over		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: -	Access level: 1 Function plan: 3630 Unit selection: - Expert list: 1 Default: 1
p2647	BI: EPOS direct setpoint input/MDI selection / MDI selection		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3620, 3625, 3640 Unit selection: - Expert list: 1 Default: 0
p2648	BI: EPOS direct setpoint input/MDI positioning type / MDI pos_type		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3620 Unit selection: - Expert list: 1 Default: 0
p2649	BI: EPOS direct setpoint input/MDI transfer type selection / MDI trans_type sel		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3620 Unit selection: - Expert list: 1 Default: 0

p2650	BI: EPOS direct setpoint input/MDI setpoint acceptance edge / MDI setp_accept		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3620 Unit selection: - Expert list: 1 Default: 0
p2651	BI: EPOS direct setpoint input/MDI direction selection, positive / MDI dir_sel pos		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3620 Unit selection: - Expert list: 1 Default: 0
p2652	BI: EPOS direct setpoint input/MDI direction selection negative / MDI dir_sel neg		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3620 Unit selection: - Expert list: 1 Default: 0
p2653	BI: EPOS direct setpoint input/MDI setting-up selection / MDI setting-up sel		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3620 Unit selection: - Expert list: 1 Default: 0
p2654	CI: EPOS direct setpoint input/MDI mode adaptation / MDI mode adapt		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Integer16 P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3620 Unit selection: - Expert list: 1 Default: 0
p2655[0...1]	BI: EPOS select tracking mode / Sel tracking mode		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3635 Unit selection: - Expert list: 1 Default: [0] 1 [1] 2526.7

p2656	BI: EPOS enable basic positioner / EPOS enable		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 3635 Unit selection: - Expert list: 1 Default: 2526.3
p2657	CI: EPOS position actual value/position setting value / Pos act/set value		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Integer32 P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 3610, 3616, 3620, 3635 Unit selection: - Expert list: 1 Default: 2521[0]
p2658	BI: EPOS position actual value valid feedback signal / Pos valid feedback		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 3635 Unit selection: - Expert list: 1 Default: 2526.0
p2659	BI: EPOS referencing active feedback signal / Ref act fdbk		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 3612 Unit selection: - Expert list: 1 Default: 2526.1
p2660	CI: EPOS measured value referencing / Meas val ref		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Integer32 P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 3612, 3614 Unit selection: - Expert list: 1 Default: 2523[0]
p2661	BI: EPOS measured value valid feedback signal / MeasVal valid fdbk		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 3612, 3614, 3615 Unit selection: - Expert list: 1 Default: 2526.2

p2662	BI: EPOS adjustment value valid feedback signal / Adj val valid FS		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2526.9
p2663	BI: EPOS clamping active feedback signal / Clamping active FS		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T Data type: Unsigned32 / Binary P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 3616 Unit selection: - Expert list: 1 Default: 2526.8
r2665	CO: EPOS position setpoint / s_set		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: - Data type: Integer32 P group: Basic positioner Not for motor type: - Min: - [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [LU]	Access level: 1 Function plan: 3635 Unit selection: - Expert list: 1 Default: - [LU]
r2666	CO: EPOS velocity setpoint / v_set		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: - Data type: Integer32 P group: Basic positioner Not for motor type: - Min: - [1000 LU/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [1000 LU/min]	Access level: 1 Function plan: 3635 Unit selection: - Expert list: 1 Default: - [1000 LU/min]
r2667	CO: EPOS backlash compensation value / Backlash value		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: - Data type: Integer32 P group: Basic positioner Not for motor type: - Min: - [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [LU]	Access level: 1 Function plan: 3635 Unit selection: - Expert list: 1 Default: - [LU]
r2669	CO: EPOS actual operating mode / Op mode act		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: - Data type: Integer32 P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3625, 3630 Unit selection: - Expert list: 1 Default: -

r2670.0...15	CO/BO: EPOS status word active traversing block / ZSW act trav_block		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: - Data type: Unsigned32 P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3615, 3625, 3650 Unit selection: - Expert list: 1 Default: -
r2671	CO: EPOS actual position setpoint / s_set act		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: - Data type: Integer32 P group: Basic positioner Not for motor type: - Min: - [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [LU]	Access level: 1 Function plan: 3610, 3616, 3620 Unit selection: - Expert list: 1 Default: - [LU]
r2672	CO: EPOS actual velocity setpoint / v_set act		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: - Data type: Integer32 P group: Basic positioner Not for motor type: - Min: - [1000 LU/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [1000 LU/min]	Access level: 1 Function plan: 3610, 3612, 3616, 3620 Unit selection: - Expert list: 1 Default: - [1000 LU/min]
r2673	CO: EPOS actual acceleration override / a_over act		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: - Data type: FloatingPoint32 P group: Basic positioner Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%]	Access level: 1 Function plan: 3610, 3612, 3616, 3620 Unit selection: - Expert list: 1 Default: - [%]
r2674	CO: EPOS actual deceleration override / -a_over act		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: - Data type: FloatingPoint32 P group: Basic positioner Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%]	Access level: 1 Function plan: 3610, 3612, 3616, 3620 Unit selection: - Expert list: 1 Default: - [%]

r2675	CO: EPOS actual task / Task act		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: - Data type: Integer16 P group: Basic positioner Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 9	Access level: 1 Function plan: 3616 Unit selection: - Expert list: 1 Default: -
r2676	CO: EPOS actual task parameter / Task para act		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: - Data type: Integer32 P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3616 Unit selection: - Expert list: 1 Default: -
r2677	CO: EPOS actual task mode / Task mode act		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: - Data type: Unsigned16 P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3616 Unit selection: - Expert list: 1 Default: -
r2678	CO: EPOS external block change actual position / Ext BlckChg s_act		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: - Data type: Integer32 P group: Basic positioner Not for motor type: - Min: - [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [LU]	Access level: 1 Function plan: 3615, 3616, 3620 Unit selection: - Expert list: 1 Default: - [LU]
r2680	CO: EPOS clearance reference cam and zero mark / Clearance cam/ZM		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: - Data type: Integer32 P group: Basic positioner Not for motor type: - Min: - [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [LU]	Access level: 1 Function plan: 3612 Unit selection: - Expert list: 1 Default: - [LU]
r2681	CO: EPOS velocity override effective / v_over effective		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: - Data type: FloatingPoint32 P group: Basic positioner Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%]	Access level: 1 Function plan: 3630 Unit selection: - Expert list: 1 Default: - [%]

r2682	CO: EPOS residual distance to go / Residual distance		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: - Data type: Integer32 P group: Basic positioner Not for motor type: - Min: - [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [LU]	Access level: 1 Function plan: 3635 Unit selection: - Expert list: 1 Default: - [LU]
r2683.0...14	CO/BO: EPOS status word 1 / POS_ZSW1		
SERVO (Lin, Position control), SERVO_840 (Lin, Position control), SERVO_AC (Lin, Position control), SERVO_DBSI (Lin, Position control)	Changeable: - Data type: Unsigned16 P group: Closed loop position control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3645 Unit selection: - Expert list: 1 Default: -
r2683.0...14	CO/BO: EPOS status word 1 / POS_ZSW1		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: - Data type: Unsigned16 P group: Closed loop position control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3645 Unit selection: - Expert list: 1 Default: -
r2684.0...15	CO/BO: EPOS status word 2 / POS_ZSW2		
SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	Changeable: - Data type: Unsigned16 P group: Closed loop position control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 3646 Unit selection: - Expert list: 1 Default: -
r2685	CO: EPOS corrective value / Correction value		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: - Data type: Integer32 P group: Basic positioner Not for motor type: - Min: - [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [LU]	Access level: 1 Function plan: 3635 Unit selection: - Expert list: 1 Default: - [LU]

r2686[0...1] SERVO (EPOS, Lin), SERVO_840 (EPOS, Lin), SERVO_AC (EPOS, Lin), SERVO_DBSI (EPOS, Lin)	CO: EPOS force limit effective / F_limit eff Changeable: - Data type: FloatingPoint32 P group: Basic positioner Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%]	Access level: 3 Function plan: 3616, 3617 Unit selection: - Expert list: 1 Default: - [%]
r2686[0...1] SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	CO: EPOS torque limiting effective / M_limit eff Changeable: - Data type: FloatingPoint32 P group: Basic positioner Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%]	Access level: 3 Function plan: 3616, 3617 Unit selection: - Expert list: 1 Default: - [%]
r2687 SERVO (EPOS, Lin), SERVO_840 (EPOS, Lin), SERVO_AC (EPOS, Lin), SERVO_DBSI (EPOS, Lin)	CO: EPOS force setpoint / F_set Changeable: - Data type: FloatingPoint32 P group: Basic positioner Not for motor type: - Min: - [N]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [N]	Access level: 3 Function plan: 3616, 3617 Unit selection: - Expert list: 1 Default: - [N]
r2687 SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	CO: EPOS torque setpoint / M_set Changeable: - Data type: FloatingPoint32 P group: Basic positioner Not for motor type: - Min: - [Nm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Nm]	Access level: 3 Function plan: 3616, 3617 Unit selection: - Expert list: 1 Default: - [Nm]
p2688 SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	EPOS position feedback signal tolerance window / Pos_FS tol Changeable: T, U Data type: Unsigned32 P group: Basic positioner Not for motor type: - Min: 0 [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147482647 [LU]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 40 [LU]
r2689[0...1] SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	CO: EPOS position feedback signal display / Pos_FS display Changeable: - Data type: Unsigned32 P group: Basic positioner Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 3616 Unit selection: - Expert list: 1 Default: -

p2690	CO: EPOS position fixed setpoint / Pos fixed value		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: Integer32 P group: Basic positioner Not for motor type: - Min: -2147482648 [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147482647 [LU]	Access level: 1 Function plan: 3618 Unit selection: - Expert list: 1 Default: 0 [LU]
p2691	CO: EPOS velocity fixed setpoint / v fixed value		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: Unsigned32 P group: Basic positioner Not for motor type: - Min: 1 [1000 LU/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 40000000 [1000 LU/min]	Access level: 1 Function plan: 3618 Unit selection: - Expert list: 1 Default: 600 [1000 LU/min]
p2692	CO: EPOS acceleration override, fixed setpoint / a_over fixed val		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: FloatingPoint32 P group: Basic positioner Not for motor type: - Min: 0.100 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.000 [%]	Access level: 1 Function plan: 3618 Unit selection: - Expert list: 1 Default: 100.000 [%]
p2693	CO: EPOS deceleration override, fixed setpoint / -a_over fixed val		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: T, U Data type: FloatingPoint32 P group: Basic positioner Not for motor type: - Min: 0.100 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.000 [%]	Access level: 1 Function plan: 3618 Unit selection: - Expert list: 1 Default: 100.000 [%]
p2694	CI: LR supplementary setpoint position / Suppl setp pos		
SERVO (EPOS, Position control, Position control), SERVO_840 (EPOS, Position control, Position control), SERVO_AC (EPOS, Position control, Position control), SERVO_DBSI (EPOS, Position control, Position control), VECTOR (EPOS, Position control, Position control), VECTOR_AC (EPOS, Position control, Position control)	Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0

p2695	CI: LR supplementary setpoint velocity / Suppl setp vel		
SERVO (EPOS, Position control, Position control), SERVO_840 (EPOS, Position control, Position control), SERVO_AC (EPOS, Position control, Position control), SERVO_DBSI (EPOS, Position control, Position control), VECTOR (EPOS, Position control, Position control), VECTOR_AC (EPOS, Position control, Position control)	Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed loop position control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
r2696	CO: EPOS position setpoint fine resolution / s_set fine res		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: - Data type: FloatingPoint32 P group: Basic positioner Not for motor type: - Min: - [LU]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [LU]	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: - [LU]
r2697	CO: EPOS velocity setpoint fine resolution / v_set fine res		
SERVO (EPOS), SERVO_840 (EPOS), SERVO_AC (EPOS), SERVO_DBSI (EPOS), VECTOR (EPOS), VECTOR_AC (EPOS)	Changeable: - Data type: FloatingPoint32 P group: Basic positioner Not for motor type: - Min: - [1000 LU/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [1000 LU/min]	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: - [1000 LU/min]
r2700	CO: Reference speed/reference frequency / n_ref/f_ref		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r2700	CO: Reference velocity/reference frequency actual / v_ref/f_ref act		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -

r2700 A_INF, A_INF_840, B_INF, B_INF_840, R_INF	CO: Reference frequency / f_ref Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r2700 S_INF, S_INF_840	CO: Reference frequency actual / f_ref act Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r2700 ENC (Lin_enc), ENC_840 (Lin_enc)	CO: Reference velocity/reference frequency actual / v_ref/f_ref act Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r2701 HLA, HLA_840, HLA_DBSI	CO: Reference voltage / Reference voltage Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r2701 A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	CO: Reference voltage / Reference voltage Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r2702	CO: Reference current / Reference current		
A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r2703	CO: Reference torque / Reference torque		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r2703	CO: Reference force actual / Ref force cur		
HLA, HLA_840, HLA_DBSI, SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r2704	CO: Reference power / Reference power		
A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r2705	CO: Reference angle / Reference angle		
A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r2706	CO: Reference temperature / Reference temp		
A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM120, TM150, TM31, TM41, VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r2707	CO: Reference acceleration / Ref accel		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p2720[0...n]	Load gear configuration / Load gear config		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(1, 4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
p2721[0...n]	Load gear rotary absolute encoder revolutions virtual / Abs rot rev		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(1, 4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 4194303	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p2722[0...n]	Load gear position tracking tolerance window / Pos track tol		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(1, 4) Data type: FloatingPoint32 P group: Encoder Not for motor type: - Min: 0.00	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 4294967300.00	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00

r2723[0...n] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Load gear absolute value / Load gear abs_val Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 4010, 4704 Unit selection: - Expert list: 1 Default: -
r2724[0...n] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Load gear position difference / Load gear pos diff Changeable: - Data type: Integer32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
p2730[0...3] SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	BI: LR pos. actual value preprocessing activate neg. corr. (edge) / ActV_prep neg corr Changeable: T Data type: Unsigned32 / Binary P group: Closed loop position control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 4010, 4015 Unit selection: - Expert list: 1 Default: 0
p2733[0...n] SERVO (Position control), SERVO_840 (Position control), SERVO_AC (Position control), SERVO_DBSI (Position control), VECTOR (Position control), VECTOR_AC (Position control)	CO: LR encoder adjustment DDS / Enc_adjust DDS Changeable: T Data type: Unsigned8 P group: Closed loop position control Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 255	Access level: 4 Function plan: 4010 Unit selection: - Expert list: 1 Default: 0
p2810[0...1] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BI: AND logic operation inputs / AND inputs Changeable: T Data type: Unsigned32 / Binary P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2634 Unit selection: - Expert list: 1 Default: 0

r2811.0 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO/BO: AND logic operation result / AND result Changeable: - Data type: Unsigned32 P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2634 Unit selection: - Expert list: 1 Default: -
p2816[0...1] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BI: OR logic operation inputs / OR inputs Changeable: T Data type: Unsigned32 / Binary P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2634 Unit selection: - Expert list: 1 Default: 0
r2817.0 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO/BO: OR logic operation result / OR result Changeable: - Data type: Unsigned32 P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2634 Unit selection: - Expert list: 1 Default: -
p2822[0...3] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BI: NOT logic operation input / NOT input Changeable: T Data type: Unsigned32 / Binary P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2634 Unit selection: - Expert list: 1 Default: 0
r2823.0...3 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO/BO: NOT logic operation result / NOT result Changeable: - Data type: Unsigned32 P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2634 Unit selection: - Expert list: 1 Default: -
p2900[0...n] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Fixed value 1 [%] / Fixed value 1 [%] Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -10000.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: PERCENT Max: 10000.00 [%]	Access level: 3 Function plan: 1021 Unit selection: - Expert list: 1 Default: 0.00 [%]

p2900	CO: Fixed value 1 [%] / Fixed value 1 [%]		
A_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), A_INF_840 (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), R_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -10000.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: 10000.00 [%]	Access level: 3 Function plan: 1021 Unit selection: - Expert list: 1 Default: 0.00 [%]
p2901[0...n]	CO: Fixed value 2 [%] / Fixed value 2 [%]		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -10000.00 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: PERCENT Max: 10000.00 [%]	Access level: 3 Function plan: 1021 Unit selection: - Expert list: 1 Default: 0.00 [%]
p2901	CO: Fixed value 2 [%] / Fixed value 2 [%]		
A_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), A_INF_840 (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), R_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -10000.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: 10000.00 [%]	Access level: 3 Function plan: 1021 Unit selection: - Expert list: 1 Default: 0.00 [%]

r2902[0...14] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Fixed values [%] / Fixed values [%] Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 1 Function plan: 1021 Unit selection: - Expert list: 1 Default: - [%]
p2930[0...n] HLA, HLA_840, HLA_DBSI	CO: Fixed value F [N] / Fixed value F [N] Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: REL Min: -100000.00 [N]	Calculation: - Dynamic index: DDS, p0180 Unit group: 8_1 Scaling: p2003 Max: 100000.00 [N]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: 0.00 [N]
p2930[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Fixed value M [Nm] / Fixed value M [Nm] Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: REL Min: -100000.00 [Nm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 7_1 Scaling: p2003 Max: 100000.00 [Nm]	Access level: 3 Function plan: 1021 Unit selection: p0505 Expert list: 1 Default: 0.00 [Nm]
p2930[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Fixed value F [N] / Fixed value F [N] Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: REL Min: -100000.00 [N]	Calculation: - Dynamic index: DDS, p0180 Unit group: 8_1 Scaling: p2003 Max: 100000.00 [N]	Access level: 3 Function plan: 1021 Unit selection: p0505 Expert list: 1 Default: 0.00 [N]
r2969[0...6] VECTOR (n/M), VECTOR_AC (n/M)	Flux model value display / Psi_mod val displ Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: ASM, PMSM, SESM, REL Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p3016 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	MotId torque constant identified / kT ident Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: ASM, SESM, REL Min: 0.00 [Nm/A]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: 28_1 Scaling: - Max: 100.00 [Nm/A]	Access level: 3 Function plan: - Unit selection: p0100 Expert list: 1 Default: 0.00 [Nm/A]

p3016	Motld force constant identified / kT ident	
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: ASM, SESM, REL Min: 0.00 [N/Arms]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: 29_1 Scaling: - Max: 1000.00 [N/Arms]
		Access level: 3 Function plan: - Unit selection: p0100 Expert list: 1 Default: 0.00 [N/Arms]

p3017	Motld voltage constant identified / kE ident	
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: ASM, SESM, REL Min: 0.0 [Vrms]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 10000.0 [Vrms]
		Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [Vrms]

p3017	Motld voltage constant identified / kE ident	
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: ASM, SESM, REL Min: 0.0 [Vrms s/m]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 1000.0 [Vrms s/m]
		Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [Vrms s/m]

p3020	Motld magnetizing current identified / I_mag ident	
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: SESM, REL Min: 0.000 [Arms]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 5000.000 [Arms]
		Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [Arms]

p3027	Motld optimum load angle identified / phi_load opt ident	
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: ASM, SESM, REL Min: 0.0 [°]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 135.0 [°]
		Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [°]

p3028	Motld reluctance torque constant identified / kT_reluct ident	
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: ASM, SESM, REL Min: -1000.00 [mH]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 1000.00 [mH]
		Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [mH]

p3028 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	MotId reluctance force constant identified / kT_reluct ident Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: ASM, SESM, REL Min: -1000.00 [mH]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 1000.00 [mH]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [mH]
p3030 HLA, HLA_840, HLA_DBSI	ChId factor plane adaptation positive / ChId pl_adap pos Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 10.00 [%]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 200.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100.00 [%]
p3030 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	MotId angular commutation offset identified / Ang_com offset Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: -180.00 [°]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 180.00 [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [°]
p3031 HLA, HLA_840, HLA_DBSI	ChId factor plane adaptation negative / ChId pl_adap neg Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 10 [%]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 200 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100 [%]
p3031 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	MotId encoder inversion actual value identified / EnclnvActVal ident Changeable: T, U Data type: Unsigned16 P group: Motor identification Not for motor type: - Min: -	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
p3031 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	MotId encoder inversion actual value identified / EnclnvActVal ident Changeable: T, U Data type: Unsigned16 P group: Motor identification Not for motor type: - Min: -	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin

p3033 HLA, HLA_840, HLA_DBSI	Chld transition point compensation Q1 positive zero range / Chld tr pt Q1 pos Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.01 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 95.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.01 [%]
p3034 HLA, HLA_840, HLA_DBSI	ChID transition point compensation U1 positive zero range / Chld tr pt U1 pos Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 95.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [%]
p3035 HLA, HLA_840, HLA_DBSI	ChID transition point compensation rounding 1 pos. zero range / Chld TrPtRnd 1 pos Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 30.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [%]
p3036 HLA, HLA_840, HLA_DBSI	Chld transition point compensation Q1 negative zero range / Chld tr pt Q1 neg Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.01 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 95.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.01 [%]
p3037 HLA, HLA_840, HLA_DBSI	Chld transition point compensation U1 negative zero range / Chld tr pt U1 neg Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 95.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [%]
p3038 HLA, HLA_840, HLA_DBSI	Chld transition point compensation rounding 1 neg. zero range / Chld TrPtRnd 1 neg Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 30.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [%]

p3039 HLA, HLA_840, HLA_DBSI	Chld transition point compensation Q2 positive / Chld tr pt Q2 pos Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.02 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 95.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 10.00 [%]
p3040 HLA, HLA_840, HLA_DBSI	Chld transition point compensation U2 positive / Chld tr pt U2 pos Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 95.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 10.00 [%]
p3041 HLA, HLA_840, HLA_DBSI	Chld transition point compensation rounding 2 positive / Chld TrPtRnd 2 pos Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.00 [%]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 30.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [%]
p3041 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motld moment of inertia identified / M_inertia ident Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: REL Min: 0.000000 [kgm ²]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: 25_1 Scaling: - Max: 100000.000000 [kgm ²]	Access level: 3 Function plan: - Unit selection: p0100 Expert list: 1 Default: 0.000000 [kgm ²]
p3041 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Motld motor mass identified / Mot mass ident Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: REL Min: 0.000000 [kg]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: 27_1 Scaling: - Max: 10000.000000 [kg]	Access level: 3 Function plan: - Unit selection: p0100 Expert list: 1 Default: 0.000000 [kg]
p3042 HLA, HLA_840, HLA_DBSI	Chld transition point compensation Q2 negative / Chld tr pt Q2 neg Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.00 [%]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 95.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [%]

p3042	MotId load moment of inertia identified / Load mom ident
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.00000 [kgm²]
	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: 25_1 Scaling: - Max: 100000.00000 [kgm²]
	Access level: 3 Function plan: - Unit selection: p0100 Expert list: 1 Default: 0.00000 [kgm²]

p3042	MotId load mass identified / Load mass ident
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.00000 [kg]
	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: 27_1 Scaling: - Max: 10000.00000 [kg]
	Access level: 3 Function plan: - Unit selection: p0100 Expert list: 1 Default: 0.00000 [kg]

p3043	ChId transition point compensation U2 negative / ChId tr pt U2 neg
HLA, HLA_840, HLA_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.00 [%]
	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 95.00 [%]
	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [%]

p3044	ChId transition point compensation rounding 2 negative / ChId TrPtRnd 2 neg
HLA, HLA_840, HLA_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.00 [%]
	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 30.00 [%]
	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [%]

p3045	ChId transition point compensation Q3 positive saturation / ChId TrPt Q3 pos S
HLA, HLA_840, HLA_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.20 [%]
	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 100.00 [%]
	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100.00 [%]

p3045	MotId force characteristic kT1 identified / kT1 ident
SERVO (Ext M_ctrl, Lin), SERVO_840 (Ext M_ctrl, Lin), SERVO_AC (Ext M_ctrl, Lin), SERVO_DBSI (Ext M_ctrl, Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: ASM, SESM, REL Min: -340.28235E36 [N/Arms]
	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 340.28235E36 [N/Arms]
	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [N/Arms]

p3045 SERVO (Ext M_ctrl), SERVO_840 (Ext M_ctrl), SERVO_AC (Ext M_ctrl), SERVO_DBSI (Ext M_ctrl)	Motld torque characteristic kT1 identified / kT1 ident Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: ASM, SESM, REL Min: -340.28235E36 [Nm/A]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 340.28235E36 [Nm/A]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [Nm/A]
p3046 HLA, HLA_840, HLA_DBSI	Chld transition point compensation U3 positive saturation / Chld TrPt U3 pos S Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.20 [%]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 100.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100.00 [%]
p3046 SERVO (Ext M_ctrl, Lin), SERVO_840 (Ext M_ctrl, Lin), SERVO_AC (Ext M_ctrl, Lin), SERVO_DBSI (Ext M_ctrl, Lin)	Motld force characteristic kT3 identified / kT3 ident Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: ASM, SESM, REL Min: -	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p3046 SERVO (Ext M_ctrl), SERVO_840 (Ext M_ctrl), SERVO_AC (Ext M_ctrl), SERVO_DBSI (Ext M_ctrl)	Motld torque characteristic kT3 identified / kT3 ident Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: ASM, SESM, REL Min: -	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p3047 HLA, HLA_840, HLA_DBSI	Chld transition point compensation Q3 negative saturation / Chld TrPt Q3 neg S Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.20 [%]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 100.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100.00 [%]
p3047 SERVO (Ext M_ctrl, Lin), SERVO_840 (Ext M_ctrl, Lin), SERVO_AC (Ext M_ctrl, Lin), SERVO_DBSI (Ext M_ctrl, Lin)	Motld force characteristic kT5 identified / kT5 ident Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: ASM, SESM, REL Min: -	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

p3047 SERVO (Ext M_ctrl), SERVO_840 (Ext M_ctrl), SERVO_AC (Ext M_ctrl), SERVO_DBSI (Ext M_ctrl)	MotId torque characteristic kT5 identified / kT5 ident Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: ASM, SESM, REL Min: -	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p3048 HLA, HLA_840, HLA_DBSI	ChId transition point compensation U3 negative saturation / ChId TrPt U3 neg S Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.20 [%]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 100.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100.00 [%]
p3048 SERVO (Ext M_ctrl, Lin), SERVO_840 (Ext M_ctrl, Lin), SERVO_AC (Ext M_ctrl, Lin), SERVO_DBSI (Ext M_ctrl, Lin)	MotId force characteristic kT7 identified / kT7 ident Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: ASM, SESM, REL Min: -	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p3048 SERVO (Ext M_ctrl), SERVO_840 (Ext M_ctrl), SERVO_AC (Ext M_ctrl), SERVO_DBSI (Ext M_ctrl)	MotId torque characteristic kT7 identified / kT7 ident Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: ASM, SESM, REL Min: -	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p3049[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	MotId Speed at start of field weakening identified / ident Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.00000 [rpm]	Calculation: CALC_MOD_ALL Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 210000.00000 [rpm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00000 [rpm]
p3049[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	MotId Speed at start of field weakening identified / v_Fieldweak ident Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.00000 [m/min]	Calculation: CALC_MOD_ALL Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 1300.00000 [m/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00000 [m/min]

p3050[0...n]	MotorId stator resistance identified / R_stator ident		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U	Calculation: CALC_MOD_ALL	Access level: 3
	Data type: FloatingPoint32	Dynamic index: MDS, p0130	Function plan: -
	P group: Motor identification	Unit group: 16_1	Unit selection: p0349
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00000 [ohm]	2000.00000 [ohm]	0.00000 [ohm]

p3054[0...n]	MotId rotor resistance identified / R_rotor ident		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U	Calculation: CALC_MOD_ALL	Access level: 3
	Data type: FloatingPoint32	Dynamic index: MDS, p0130	Function plan: -
	P group: Motor identification	Unit group: 16_1	Unit selection: p0349
	Not for motor type: PMSM, REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00000 [ohm]	300.00000 [ohm]	0.00000 [ohm]

p3056[0...n]	MotId stator leakage inductance identified / L_stator leak		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U	Calculation: CALC_MOD_ALL	Access level: 3
	Data type: FloatingPoint32	Dynamic index: MDS, p0130	Function plan: -
	P group: Motor identification	Unit group: 15_1	Unit selection: p0349
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00000 [mH]	1000.00000 [mH]	0.00000 [mH]

p3058[0...n]	MotId rotor leakage inductance identified / L_rotor leak		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U	Calculation: CALC_MOD_ALL	Access level: 3
	Data type: FloatingPoint32	Dynamic index: MDS, p0130	Function plan: -
	P group: Motor identification	Unit group: 15_1	Unit selection: p0349
	Not for motor type: PMSM, REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00000 [mH]	1000.00000 [mH]	0.00000 [mH]

p3060[0...n]	MotId magnetizing inductance identified / MotId Lh ident		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U	Calculation: CALC_MOD_ALL	Access level: 3
	Data type: FloatingPoint32	Dynamic index: MDS, p0130	Function plan: -
	P group: Motor identification	Unit group: 15_1	Unit selection: p0349
	Not for motor type: PMSM, REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00000 [mH]	10000.00000 [mH]	0.00000 [mH]

p3070	MotId voltage emulation error final value identified / U_err final ident		
SERVO (Ext M_ctrl), SERVO_840 (Ext M_ctrl), SERVO_AC (Ext M_ctrl), SERVO_DBSI (Ext M_ctrl)	Changeable: T, U	Calculation: CALC_MOD_ALL	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Motor identification	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.000 [V]	100.000 [V]	0.000 [V]

p3071 SERVO (Ext M_ctrl), SERVO_840 (Ext M_ctrl), SERVO_AC (Ext M_ctrl), SERVO_DBSI (Ext M_ctrl)	Motld voltage emulation error current offset identified / U_error I_offset Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.000 [A] Max: 100.000 [A]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [A]
p3072 SERVO (Ext M_ctrl), SERVO_840 (Ext M_ctrl), SERVO_AC (Ext M_ctrl), SERVO_DBSI (Ext M_ctrl)	Motld voltage emulation error semiconductor voltage identified / U_error_semi ident Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.000 [V] Max: 10.000 [V]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [V]
p3075 HLA, HLA_840, HLA_DBSI	Chld velocity controller loop gain / Chld v loop_gain Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.0 [mm/Vmin] Max: 20000.0 [mm/Vmin]	Calculation: - Dynamic index: - Unit group: - Scaling: - Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [mm/Vmin]
p3080 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motld flux controller P gain identified / Flux ctrl Kp ident Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: PMSM, REL Min: 0.0 [A/Vs] Max: 999999.0 [A/Vs]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [A/Vs]
p3081 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motld flux controller integral time identified / Flux ctrl Tn ident Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: PMSM, REL Min: 0 [ms] Max: 10000 [ms]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0 [ms]
p3082 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motld current controller P gain identified / I_ctrl Kp ident Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: REL Min: 0.000 [V/A] Max: 100000.000 [V/A]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: 18_1 Scaling: - Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: 0.000 [V/A]

p3083 HLA, HLA_840, HLA_DBSI	Chld maximum positive velocity / Chld v_max pos Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.000 [m/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1300.000 [m/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [m/min]
p3083 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	MotId current controller integral time identified / I_ctrl Tn ident Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: REL Min: 0.00 [ms]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 1000.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [ms]
p3086 HLA, HLA_840, HLA_DBSI	Chld maximum negative velocity / Chld v_max neg Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: -1300.000 [m/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 0.000 [m/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [m/min]
p3088 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	MotId Motor model changeover speed operation with encoder ident. / MotMod n_chgSnsorI Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.00000 [rpm]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 210000.00000 [rpm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00000 [rpm]
p3088 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	MotId Motor model changeover vel. operat. with encod. ident. / v_chg Ident encod Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.00000 [m/min]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 1300.00000 [m/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00000 [m/min]
p3090[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	PolID elasticity-based configuration / PolID el config Changeable: T, U Data type: Unsigned16 P group: Motor identification Not for motor type: - Min: -	Calculation: CALC_MOD_CON Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin

p3091[0...n]	PolID elasticity-based ramp time / PolID el t_ramp	
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.0 [ms]	Calculation: CALC_MOD_CON Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 1000.0 [ms]
		Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 250.0 [ms]

p3092[0...n]	PolID elasticity-based wait time / PolID el t_wait	
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.0 [ms]	Calculation: CALC_MOD_CON Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 1000.0 [ms]
		Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100.0 [ms]

p3093[0...n]	PolID elasticity-based measurement number / PolID el meas	
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: Unsigned16 P group: Motor identification Not for motor type: - Min: 6	Calculation: CALC_MOD_CON Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 56
		Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 12

p3094[0...n]	PolID elasticity-based deflection expected / PolID el defl exp	
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.0000 [°]	Calculation: CALC_MOD_CON Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 90.0000 [°]
		Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0030 [°]

p3094[0...n]	PolID elasticity-based deflection expected / PolID el defl exp	
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.0000 [mm]	Calculation: CALC_MOD_CON Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 90.0000 [mm]
		Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0030 [mm]

p3095[0...n]	PolID elasticity-based deflection permissible / PolID el defl exp	
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.0000 [°]	Calculation: CALC_MOD_CON Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 90.0000 [°]
		Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1.0000 [°]

p3095[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	PolID elasticity-based deflection permissible / PolID el defl exp Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.0000 [mm]	Calculation: CALC_MOD_CON Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 90.0000 [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1.0000 [mm]
p3096[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	PolID elasticity-based current / PolID el curr Changeable: T, U Data type: FloatingPoint32 P group: Motor identification Not for motor type: - Min: 0.000 [Arms]	Calculation: CALC_MOD_CON Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 20000.000 [Arms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [Arms]
r3097.0...31 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	BO: PolID elasticity-based status / PolID el status Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p3100 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	RTC time stamp mode / RTC t_stamp mode Changeable: T, U Data type: Unsigned16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2
p3101[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Setting UTC time / Set UTC time Changeable: T, U Data type: Unsigned32 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
r3102[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Displaying UTC time / Display UTC time Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

p3103 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	UTC synchronization process / UTC sync_process Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 99	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p3104 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	BI: UTC PING synchronization / UTC PING sync Changeable: T, U Data type: Unsigned32 / Binary P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p3105[0...3] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	NTP server IP address / NTP IP addr Changeable: T, U Data type: Unsigned8 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p3106 CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	NTP time zone / Time zone Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 38	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 14
r3107[0...3] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	UTC synchronization time out of tolerance / UTC t_sync out tol Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r3108[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	UTC synchronization deviation / UTC sync_dev Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

p3109 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	UTC synchronization tolerance / UTC sync tol Changeable: T, U Data type: Unsigned16 P group: - Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100 [ms]
p3110 All objects	External fault 3 switch-on delay / Ext fault 3 t_on Changeable: T, U Data type: Unsigned16 P group: Messages Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000 [ms]	Access level: 3 Function plan: 2546 Unit selection: - Expert list: 1 Default: 0 [ms]
p3111 CU_I_840, CU_LINK, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HUB, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM54F_MA, TM54F_SL	BI: External fault 3 enable / Ext fault 3 enab Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2546 Unit selection: - Expert list: 1 Default: 1
p3111[0...n] A_INF, B_INF, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	BI: External fault 3 enable / Ext fault 3 enab Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
p3111[0...n] A_INF_840, B_INF_840, S_INF_840	BI: External fault 3 enable / Ext fault 3 enab Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 3405.2

p3112 CU_I_840, CU_LINK, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HUB, TB30, _ TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM54F_MA, TM54F_SL	BI: External fault 3 enable negated / Ext flt 3 enab neg Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min:	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2546 Unit selection: - Expert list: 1 Default: 0
p3112[0...n] A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	BI: External fault 3 enable negated / Ext flt 3 enab neg Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
r3113.0...15 All objects	CO/BO: NAMUR message bit bar / NAMUR bit bar Changeable: - Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r3114.9...11 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	CO/BO: Messages status word global / Msg ZSW global Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r3115[0...63] All objects	Fault drive object initiating / F DO initiating Changeable: - Data type: Integer32 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8050, 8060 Unit selection: - Expert list: 1 Default: -

p3116	BI: Suppress automatic acknowledgment / Ackn suppress		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: T, U Data type: Unsigned32 / Binary P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p3117	Change safety message type / Ch. SI mess type		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: C1(1) Data type: Unsigned32 P group: Messages Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
r3120[0...63]	Component fault / Comp fault		
All objects	Changeable: - Data type: Unsigned32 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8060 Unit selection: - Expert list: 1 Default: -
r3121[0...63]	Component alarm / Comp alarm		
All objects	Changeable: - Data type: Unsigned32 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8065 Unit selection: - Expert list: 1 Default: -
r3122[0...63]	Diagnostic attribute fault / Diag_attr fault		
All objects	Changeable: - Data type: Unsigned32 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8060 Unit selection: - Expert list: 1 Default: -
r3123[0...63]	Diagnostic attribute alarm / Diag_attr alarm		
All objects	Changeable: - Data type: Unsigned32 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8065 Unit selection: - Expert list: 1 Default: -

r3131 All objects	CO: Actual fault value / Act fault val Changeable: - Data type: Integer32 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8060 Unit selection: - Expert list: 1 Default: -
r3132 All objects	CO: Actual component number / Comp_no act Changeable: - Data type: Integer32 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8060 Unit selection: - Expert list: 1 Default: -
p3135 A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Suppress active fault / Supp act fit Changeable: T, U Data type: Unsigned32 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: 8060 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
p3201[0...n] VECTOR, VECTOR_AC	Excitation current outside the tolerance threshold value / I_exc n Tol thresh Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: ASM, PMSM, REL, RESM Min: 0.1 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.0 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 10.0 [%]
p3202[0...n] VECTOR, VECTOR_AC	Excitation current outside the tolerance hysteresis / I_exc n Tol hyst Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: ASM, PMSM, REL, RESM Min: 0.1 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.0 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 10.0 [%]

p3203[0...n] VECTOR, VECTOR_AC	Excitation current outside the tolerance delay time / I_{exc n} Tol t_{del} Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: ASM, PMSM, REL, RESM Min: 0.0 [s] Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.0 [s] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1.0 [s]
p3204[0...n] VECTOR, VECTOR_AC	Flux outside the tolerance threshold value / Flux n tol thresh Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: ASM, PMSM, REL, RESM Min: 0.1 [%] Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.0 [%] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 10.0 [%]
p3205[0...n] VECTOR, VECTOR_AC	Flux outside the tolerance hysteresis / Flux n tol hyst Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: ASM, PMSM, REL, RESM Min: 0.1 [%] Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 50.0 [%] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 10.0 [%]
p3206[0...n] VECTOR, VECTOR_AC	Flux outside tolerance delay time / Flux n tol t_{del} Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: ASM, PMSM, REL, RESM Min: 0.0 [s] Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.0 [s] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 5.0 [s]
p3207[0...n] VECTOR, VECTOR_AC	Zero current signal threshold value / I_{0_sig} thresh Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: ASM, PMSM, REL, RESM Min: 0.01 [Arms] Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 6_2 Scaling: - Max: 10000.00 [Arms] Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: 1.00 [Arms]
p3208[0...n] VECTOR, VECTOR_AC	Zero current signal hysteresis / I_{0_sig} hyst Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: ASM, PMSM, REL, RESM Min: 0.01 [Arms] Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 6_2 Scaling: - Max: 10000.00 [Arms] Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: 1.00 [Arms]

p3209[0...n] VECTOR, VECTOR_AC	Zero current signal delay time / I_0_sig t_del Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: ASM, PMSM, REL, RESM Min: 0.00 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.00 [s]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.02 [s]
p3233[0...n] SERVO (Ext msg), SERVO_840 (Ext msg), SERVO_AC (Ext msg), SERVO_DBSI (Ext msg), VECTOR (Ext msg), VECTOR_AC (Ext msg)	Torque actual value filter time constant / M_act_filt T Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000000 [ms]	Access level: 3 Function plan: 8013 Unit selection: - Expert list: 1 Default: 0 [ms]
p3235 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Phase failure signal motor monitoring time / Ph_fail t_monit Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2000 [ms]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 320 [ms]
p3236[0...n] VECTOR, VECTOR_AC	Speed threshold value 7 / n_thresh val 7 Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: REL Min: 0.00 [rpm]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 3000.00 [rpm]	Access level: 3 Function plan: 8012 Unit selection: p0505 Expert list: 1 Default: 100.00 [rpm]
p3237[0...n] VECTOR, VECTOR_AC	Hysteresis speed 7 / n_hysteresis 7 Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: 0.00 [rpm]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 200.00 [rpm]	Access level: 3 Function plan: 8012 Unit selection: p0505 Expert list: 1 Default: 2.00 [rpm]
p3238[0...n] VECTOR, VECTOR_AC	OFF delay n_act_motor model = n_act external / t_del n_a = n_ext Changeable: T, U Data type: FloatingPoint32 P group: Messages Not for motor type: REL Min: 0.0 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.0 [s]	Access level: 3 Function plan: 8012 Unit selection: - Expert list: 1 Default: 3.0 [s]

p3240[0...n]	CI: I2t input value signal source / I2t in_value s_src		
VECTOR (Ext msg),	Changeable: T	Calculation: -	Access level: 4
VECTOR_AC (Ext msg)	Data type: Unsigned32 / FloatingPoint32	Dynamic index: CDS, p0170	Function plan: 8022
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: ASM, PMSM, REL, RESM	Scaling: PERCENT	Expert list: 1
	Min:	Max:	Default:
	-	-	0
p3241[0...n]	Permissible I2t continuous value / Perm I2t cont val		
VECTOR (Ext msg),	Changeable: T, U	Calculation: -	Access level: 4
VECTOR_AC (Ext msg)	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 8022
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: ASM, PMSM, REL, RESM	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	10.00 [%]	200.00 [%]	100.00 [%]
p3242[0...n]	I2t maximum duration / I2t max_dur		
VECTOR (Ext msg),	Changeable: T, U	Calculation: -	Access level: 4
VECTOR_AC (Ext msg)	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 8022
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: ASM, PMSM, REL, RESM	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [s]	3600.00 [s]	0.00 [s]
p3243[0...n]	I2t alarm threshold / I2t alarm thresh		
VECTOR (Ext msg),	Changeable: T, U	Calculation: -	Access level: 4
VECTOR_AC (Ext msg)	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 8022
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: ASM, PMSM, REL, RESM	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [%]	99.90 [%]	50.00 [%]
r3244	CO: Actual I2t integrator value / Act I2t integ_val		
VECTOR (Ext msg),	Changeable: -	Calculation: -	Access level: 3
VECTOR_AC (Ext msg)	Data type: FloatingPoint32	Dynamic index: -	Function plan: 8022
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: ASM, PMSM, REL, RESM	Scaling: PERCENT	Expert list: 1
	Min:	Max:	Default:
	- [%]	- [%]	- [%]
p3290	Variable signaling function start / Var sig start		
HLA, HLA_840,	Changeable: T, U	Calculation: -	Access level: 3
HLA_DBSI, SERVO,	Data type: Unsigned8	Dynamic index: -	Function plan: 5301
SERVO_840,	P group: -	Unit group: -	Unit selection: -
SERVO_AC,	Not for motor type: -	Scaling: -	Expert list: 1
SERVO_DBSI	Min:	Max:	Default:
	-	-	0010 bin

p3291 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CI: Variable signaling function signal source / Var sig S_src Changeable: T, U Data type: Unsigned32 / Integer16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 5301 Unit selection: - Expert list: 1 Default: 0
p3292 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Variable signaling function signal source address / Var sig S_src addr Changeable: T, U Data type: Unsigned32 P group: - Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 4 Function plan: 5301 Unit selection: - Expert list: 1 Default: 0000 hex
p3293 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Variable signaling function signal source data type / Var sig S_src type Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 7	Access level: 4 Function plan: 5301 Unit selection: - Expert list: 1 Default: 0
r3294 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	BO: Variable signaling function output signal / Var sig outp_sig Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 5301 Unit selection: - Expert list: 1 Default: -
p3295 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Variable signaling function threshold value / Var sig thresh_val Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: -340.28235E36	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 340.28235E36	Access level: 3 Function plan: 5301 Unit selection: - Expert list: 1 Default: 0.000
p3296 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Variable signaling function hysteresis / Var sig hyst Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.000	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 340.28235E36	Access level: 3 Function plan: 5301 Unit selection: - Expert list: 1 Default: 0.000

p3297 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Variable signaling function pickup delay / Var sig t_pickup Changeable: T, U Data type: Unsigned16 P group: - Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000 [ms]	Access level: 3 Function plan: 5301 Unit selection: - Expert list: 1 Default: 0 [ms]
p3298 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Variable signaling function dropout delay / Var sig t_dropout Changeable: T, U Data type: Unsigned16 P group: - Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000 [ms]	Access level: 3 Function plan: 5301 Unit selection: - Expert list: 1 Default: 0 [ms]
p3299 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Variable signaling function sampling time / Var sig t_sample Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: 1.000 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4.000 [ms]	Access level: 3 Function plan: 5301 Unit selection: - Expert list: 1 Default: 4.000 [ms]
p3320[0...n] VECTOR, VECTOR_AC	Fluid flow machine power point 1 / Fluid_mach P1 Changeable: T, U Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: 0.00	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 25.00
p3321[0...n] VECTOR, VECTOR_AC	Fluid flow machine speed point 1 / Fluid_mach n1 Changeable: T, U Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: 0.00	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0.00
p3322[0...n] VECTOR, VECTOR_AC	Fluid flow machine power point 2 / Fluid_mach P2 Changeable: T, U Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: 0.00	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 50.00

p3323[0...n] VECTOR, VECTOR_AC	Fluid flow machine speed point 2 / Fluid_mach n2 Changeable: T, U Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: 0.00	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 25.00
p3324[0...n] VECTOR, VECTOR_AC	Fluid flow machine power point 3 / Fluid_mach P3 Changeable: T, U Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: 0.00	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 77.00
p3325[0...n] VECTOR, VECTOR_AC	Fluid flow machine speed point 3 / Fluid_mach n3 Changeable: T, U Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: 0.00	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 50.00
p3326[0...n] VECTOR, VECTOR_AC	Fluid flow machine power point 4 / Fluid_mach P4 Changeable: T, U Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: 0.00	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 92.00
p3327[0...n] VECTOR, VECTOR_AC	Fluid flow machine speed point 4 / Fluid_mach n4 Changeable: T, U Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: 0.00	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 75.00
p3328[0...n] VECTOR, VECTOR_AC	Fluid flow machine power point 5 / Fluid_mach P5 Changeable: T, U Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: 0.00	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 100.00

p3329[0...n] VECTOR, VECTOR_AC	Fluid flow machine speed point 5 / Fluid_mach n5 Changeable: T, U Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: 0.00	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 100.00
p3400 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed configuration word / INF config_word Changeable: T Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 8940 Unit selection: - Expert list: 1 Default: 0000 1010 bin
r3402 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed internal state / INF state int Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 12	Access level: 2 Function plan: 8832, 8932 Unit selection: - Expert list: 1 Default: -
r3402 B_INF, B_INF_840	Infeed status internal BIC / INF state int Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6	Access level: 2 Function plan: 8932 Unit selection: - Expert list: 1 Default: -
r3405.0...7 A_INF, A_INF_840, R_INF, S_INF, S_INF_840, SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl)	CO/BO: Infeed status word / Inf ZSW Changeable: - Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 8828, 8928 Unit selection: - Expert list: 1 Default: -

r3405.1...8 VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	CO/BO: Status word DC link control / ZSW Vdc_ctrl Changeable: - Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r3405.7 B_INF, B_INF_840	CO/BO: Infeed status word / Inf ZSW Changeable: - Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
p3409 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed line frequency setting / INF f_line_mode Changeable: T Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
p3410 A_INF_840, S_INF_840	Infeed identification method / INF Ident_type Changeable: C2(1), T Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 5	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p3410 A_INF, R_INF, S_INF	Infeed identification method / INF Ident_type Changeable: C2(1), T Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 5	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 5
r3411[0...1] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed identified inductance / INF L ident Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mH]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: - [mH]

r3412[0...1] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed DC link capacitance identified / INF C_DClink ident Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [mF]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mF]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: - [mF]
r3414[0...1] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed line supply inductance identified / INF t_line ident Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mH]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: - [mH]
p3415[0...1] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed excitation current L identification / INF I_exc L-ident Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 1.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 75.00 [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 20.00 [%]
p3416 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed excitation amplitude C identification / INF exc_amp C_Id Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.10 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20.00 [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 2.00 [%]
p3417 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed excitation frequency C identification / INF f_exc C_ID Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 10.00 [Hz]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 200.00 [Hz]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 50.00 [Hz]
p3421 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed inductance / INF L Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.001 [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2000.000 [mH]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1.000 [mH]

p3422 A_INF, A_INF_840, R_INF, S_INF, S_INF_840, SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl)	Infeed DC link capacitance / INF C_DCL Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.20 [mF]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2000.00 [mF]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2.00 [mF]
p3422 VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	DC link capacitance total / C_DC tot Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.20 [mF]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2000.00 [mF]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2.00 [mF]
p3424 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed line supply inductance / INF L_line Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.001 [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.000 [mH]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.001 [mH]
p3425[0...3] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed control loop parameter scaling / INF par scal Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 1.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.00 [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 100.00 [%]
p3440 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Smart Mode configuration / Smart Mode config Changeable: T Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0001 bin

p3441[0...1] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Smart Mode Vdc ctrl Kp/Tn / SLM Vdc_ctrl Kp/Tn Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [%] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.00 [%] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100.00 [%]
p3442[0...1] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Smart Mode smoothing times / SLM t_smooth Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [ms] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20.00 [ms] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: [0] 0.25 [ms] [1] 1.00 [ms]
p3443[0...1] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Smart Mode line commutation current threshold values / SLM line com I_thr Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [%] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.00 [%] Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: [0] 100.00 [%] [1] 200.00 [%]
p3444[0...3] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Smart Mode voltages / SLM voltages Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [%] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 105.00 [%] Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: [0] 90.00 [%] [1] 100.50 [%] [2] 70.00 [%] [3] 70.00 [%]
r3445[0...1] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Smart Mode voltages display / SLM voltages disp Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [V] Calculation: - Dynamic index: - Unit group: 5_2 Scaling: p2001 Max: - [V] Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [V]

r3446[0...2] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Smart Mode currents / SLM currents Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [A]	Calculation: - Dynamic index: - Unit group: 6_4 Scaling: p2002 Max: - [A]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [A]
r3447 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Smart Mode OFF angle / SLM phi_OFF Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°]	Calculation: - Dynamic index: - Unit group: - Scaling: p2005 Max: - [°]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [°]
p3448[0...1] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Smart Mode inductance/DC link capacitance / SLM L/C Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 10.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000.00 [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: [0] 110.00 [%] [1] 100.00 [%]
r3452 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed PLL status / INF PLL status Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 7	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p3457[0...2] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed PLL supplementary settings / INF PLL suppl_set Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 300.00 [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [%]

p3458[0...1] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed PLL smoothing time / INF PLL t_smooth Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 1.0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.0 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: [0] 23.1 [ms] [1] 9.1 [ms]
r3460 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed PLL system deviation / INF PLL sys_dev Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [°]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [°]
r3461 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed PLL system deviation after filtering / INF PLL sys_dev sm Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [°]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [°]
p3462[0...2] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed phase failure detection times / INF ph_fail_det t Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000.00 [s]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: [0] 0.00 [s] [1] 3.00 [s] [2] 60.00 [s]
p3463 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed phase failure detection line supply angle change / INF ph_fail phi Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -180.0 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 180.0 [°]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 15.0 [°]

p3465[0...5] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed current symmetry monitoring thresholds / INF I_sym thresh Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.0 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 200.0 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: [0] 60.0 [%] [1] 100.0 [%] [2] 25.0 [%] [3] 90.0 [%] [4] 100.0 [%] [5] 12.5 [%]
r3466[0...2] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	CO: Infeed phase current rms value smoothed / INF I_ph rms sm Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [Arms]
r3467[0...3] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	CO: Infeed current alpha/beta / INF I a/b Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [A]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [A]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [A]
r3468[0...5] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	CO: Infeed voltage alpha/beta / INF U a/b Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [V]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [V]
p3469[0...n] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Latch delay time correction, zero crossover detection / t_latch corr PLL Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -10000.0 [μs]	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 10000.0 [μs]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [μs]

r3470 A_INF, A_INF_840, R_INF	CO: Infeed active current filter / INF I_act filter Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [Arms]
r3471 A_INF, A_INF_840, R_INF	CO: Infeed reactive current filter / INF I_reactiveFilt Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [Arms]
p3472[0...4] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Line supply PLL line supply voltage smoothing time / Line PLL U_l t_sm Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 1.0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 30000.0 [ms]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: [0] 200.0 [ms] [1] 100.0 [ms] [2] 5000.0 [ms] [3] 8.0 [ms] [4] 8.0 [ms]
p3473[0...3] A_INF (cos phi), A_INF_840 (cos phi), R_INF (cos phi)	CI: cos phi display current signal source / cos phi I S_src Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2002 Max: -	Access level: 3 Function plan: 8951 Unit selection: - Expert list: 1 Default: [0] 3467[0] [1] 3467[1] [2] 3467[2] [3] 3467[3]
p3474[0...3] A_INF (cos phi), A_INF_840 (cos phi), R_INF (cos phi)	CI: cos phi display voltage signal source / cos phi U S_src Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: -	Access level: 3 Function plan: 8951 Unit selection: - Expert list: 1 Default: [0] 3468[0] [1] 3468[1] [2] 3468[2] [3] 3468[3]

p3475[0...1]	cos phi display configuration / cos phi config		
A_INF (cos phi), A_INF_840 (cos phi), R_INF (cos phi)	Changeable: T Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 8951 Unit selection: - Expert list: 1 Default: 0000 bin

p3476[0...1]	cos phi display smoothing time / cos phi t_smooth		
A_INF (cos phi), A_INF_840 (cos phi), R_INF (cos phi)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2000.00 [ms]	Access level: 3 Function plan: 8951 Unit selection: - Expert list: 1 Default: 200.00 [ms]

r3477[0...1]	CO: cos phi display actual value sign / cosphi actVal sign		
A_INF (cos phi), A_INF_840 (cos phi), R_INF (cos phi)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: -	Access level: 3 Function plan: 8951 Unit selection: - Expert list: 1 Default: -

r3478[0...1]	CO: cos phi display absolute actual value / cos phi actVal abs		
A_INF (cos phi), A_INF_840 (cos phi), R_INF (cos phi)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: -	Access level: 3 Function plan: 8951 Unit selection: - Expert list: 1 Default: -

p3479[0...1]	cos phi display current measurement dead time / cosphi I_m t_dead		
A_INF (cos phi), A_INF_840 (cos phi), R_INF (cos phi)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -10000.000 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000.000 [μs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 620.000 [μs]

p3480	Infeed modulation depth limit / INF mod_depth lim		
A_INF, A_INF_840, R_INF	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 50.0 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 110.0 [%]	Access level: 3 Function plan: 8940 Unit selection: - Expert list: 1 Default: 97.0 [%]

p3481 A_INF, A_INF_840, R_INF	Infeed standby controller dynamic response / INF res_ctrl dyn Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.0 [ms] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.0 [ms]	Access level: 4 Function plan: 8940 Unit selection: - Expert list: 1 Default: 7.5 [ms]
r3485 A_INF, A_INF_840, R_INF	Infeed standby controller output / INF res_ctrl outp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [V] Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: - [V]	Access level: 3 Function plan: 8940 Unit selection: - Expert list: 1 Default: - [V]
p3490 A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	Infeed delay time OFF1 command / INF t_del OFF1 Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.0 [ms] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000000.0 [ms]	Access level: 2 Function plan: 8732, 8832, 8932 Unit selection: - Expert list: 1 Default: 0.0 [ms]
p3491 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed I-offset measurement monitoring time / INF I_offs t_monit Changeable: T Data type: FloatingPoint32 P group: Commands Not for motor type: - Min: 0 [ms] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65000 [ms]	Access level: 4 Function plan: 8832, 8932 Unit selection: - Expert list: 1 Default: 2000 [ms]
p3492 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Infeed, line supply undervoltage delay time / INF U_line t_del Changeable: T Data type: FloatingPoint32 P group: Commands Not for motor type: - Min: 0 [s] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 300 [s]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0 [s]
r3496[0...1] A_INF (cos phi), A_INF_840 (cos phi), R_INF (cos phi)	CO: cos phi display actual value / cosphi disp ActVal Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 8951 Unit selection: - Expert list: 1 Default: -

p3508 A_INF, A_INF_840, R_INF	Infeed step-up factor maximum / Step-up factor max Changeable: T Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 1.60	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3.00	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 1.60
p3510 A_INF, A_INF_840, R_INF, SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl)	Infeed DC link voltage setpoint / INF Vdc setp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 100.00 [V]	Calculation: - Dynamic index: - Unit group: 5_2 Scaling: p2001 Max: 1600.00 [V]	Access level: 2 Function plan: 8910, 8940 Unit selection: p0505 Expert list: 1 Default: 600.00 [V]
p3510 VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	DC link voltage setpoint / Vdc setp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 100.00 [V]	Calculation: - Dynamic index: - Unit group: 5_2 Scaling: p2001 Max: 1600.00 [V]	Access level: 2 Function plan: 7960 Unit selection: p0505 Expert list: 1 Default: 600.00 [V]
p3511 A_INF, A_INF_840, R_INF, SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl)	CI: Infeed DC link voltage supplementary setpoint / INF Vdc Z_set Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: -	Access level: 3 Function plan: 8940 Unit selection: - Expert list: 1 Default: 0
p3511 VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	CI: DC link voltage supplementary setpoint / Vdc Z_set Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: -	Access level: 3 Function plan: 7960 Unit selection: - Expert list: 1 Default: 0

p3513 SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl)	BI: Voltage-controlled operation inhibit / U_ctrl op inhib Changeable: T, U Data type: Unsigned32 / Binary P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8940 Unit selection: - Expert list: 1 Default: 0
p3513 VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	BI: Voltage-controlled operation inhibit / U_ctrl op inhib Changeable: T, U Data type: Unsigned32 / Binary P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 7960 Unit selection: - Expert list: 1 Default: 1
p3513 A_INF, A_INF_840, R_INF	BI: Voltage-controlled operation inhibit / U_ctrl op inhib Changeable: T, U Data type: Unsigned32 / Binary P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8940 Unit selection: - Expert list: 1 Default: 0
p3514 A_INF, A_INF_840, R_INF	Infeed supplementary active current steady-state / INF I_sup_eff stat Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -2000.00 [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: - Max: 2000.00 [Arms]	Access level: 3 Function plan: 8940 Unit selection: p0505 Expert list: 1 Default: 0.00 [Arms]
p3515 A_INF, A_INF_840, R_INF	CI: Infeed supplementary active current / INF I_suppl act Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2002 Max: -	Access level: 3 Function plan: 8940 Unit selection: - Expert list: 1 Default: 0
p3516 A_INF, A_INF_840, R_INF	Infeed current distribution factor / INF I_distr_factor Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.00 [%]	Access level: 3 Function plan: 8940 Unit selection: - Expert list: 1 Default: 100.00 [%]

r3517 A_INF, A_INF_840, R_INF, SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl)	CO: Infeed active current controller unlimited setpoint / INF I_act ctrl set Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 8940 Unit selection: p0505 Expert list: 1 Default: - [Arms]
r3517 VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	CO: DC link controller active current setpoint / Vdc I_act set Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 6220, 7960 Unit selection: p0505 Expert list: 1 Default: - [Arms]
p3519[0...3] A_INF, A_INF_840, R_INF, SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl)	CI: Infeed pre-control power (scaled) / INF prectrl P scal Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: r2004 Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p3519[0...3] VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	CI: DC link pre-control power (scaled) / Vdc prectrl P scal Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: r2004 Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p3520[0...3] A_INF, A_INF_840, R_INF, SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl)	CI: Infeed pre-control power (not scaled) / INF prctr P n Scal Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0

p3520[0...3] VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	CI: DC link pre-control power (not scaled) / Vdc pre-ctrl P Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 7960 Unit selection: - Expert list: 1 Default: 0
p3521[0...3] A_INF, A_INF_840, R_INF, SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl)	Infeed pre-control power scaling / INF prectrl P scal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -100000.00000 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: 100000.00000 [%]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 100.00000 [%]
p3521[0...3] VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	DC link pre-control power scaling / Vdc prectrl P scal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -100000.00000 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: 100000.00000 [%]	Access level: 2 Function plan: 7960 Unit selection: - Expert list: 1 Default: 100.00000 [%]
r3522[0...4] SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	CO: DC link voltage control precontrol display / Vdc_ctr prectrl dis Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [kW]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [kW]	Access level: 4 Function plan: 7960 Unit selection: - Expert list: 1 Default: - [kW]
r3522 A_INF, A_INF_840, R_INF	CO: Infeed pre-control power display / INF prectrl P_disp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [kW]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [kW]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [kW]

p3523[0...3] SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl)	Infeed pre-control power smoothing / INF pre-ctrl P sm Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000 [ms]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0 [ms]
p3523[0...3] VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	DC link pre-control power smoothing / Vdc pre-ctrl P sm Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000 [ms]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0 [ms]
p3524[0...2] A_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Line transf, Suppl cl- loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), A_INF_840 (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Line transf, Suppl cl- loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), R_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Line transf, Suppl cl- loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl)	CI: Infeed reactive/apparent power limit scaling / I_re/app_lim scal Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 8945 Unit selection: - Expert list: 1 Default: 1

p3525	Infeed inductive reactive current limit / I_{re_lim ind}		
A_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), A_INF_840 (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl), R_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: -100.00 [%]	Max: 0.00 [%]	Default: -100.00 [%]
p3526	Infeed capacitive reactive current limit / I_{re_lim cap}		
A_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), A_INF_840 (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl), R_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: 0.00 [%]	Max: 100.00 [%]	Default: 100.00 [%]

p3527	Infeed absolute apparent current limit / I_app_lim_abs		
A_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), A_INF_840 (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), R_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.00 [%]	Access level: 3 Function plan: 8940 Unit selection: - Expert list: 1 Default: 100.00 [%]
p3528	CI: Infeed current limit motoring scaling / INF I_lim mot scal		
A_INF, A_INF_840, R_INF	Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 8940 Unit selection: - Expert list: 1 Default: 1
p3529	CI: Infeed current limit regenerative scaling / INF I_lim gen scal		
A_INF, A_INF_840, R_INF	Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 8940 Unit selection: - Expert list: 1 Default: 1
p3530	Infeed current limit motoring / INF I_lim mot		
A_INF, A_INF_840, R_INF	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 1.00 [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: - Max: 100000.00 [Arms]	Access level: 3 Function plan: 8940 Unit selection: p0505 Expert list: 1 Default: 10000.00 [Arms]

p3531 A_INF, A_INF_840, R_INF	Infeed current limit regenerative / INF I_limit regen Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -100000.00 [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: - Max: -1.00 [Arms]	Access level: 3 Function plan: 8940 Unit selection: p0505 Expert list: 1 Default: -10000.00 [Arms]
p3532 A_INF, A_INF_840, R_INF	BI: Infeed inhibit motoring / INF mot mode inhib Changeable: T Data type: Unsigned32 / Binary P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8920 Unit selection: - Expert list: 1 Default: 0
p3533 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	BI: Infeed inhibit generator mode / INF gen mode inhib Changeable: T Data type: Unsigned32 / Binary P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8820, 8920 Unit selection: - Expert list: 1 Default: 0
r3534 A_INF, A_INF_840, R_INF	Infeed line filter maximum current / INF filter I_max Changeable: - Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Arms]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: - [Arms]

r3535[0...4] A_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), A_INF_840 (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl), R_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl)	CO: Infeed current limit display / INF I_lim displ Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Arms]	Access level: 3 Function plan: 8945 Unit selection: - Expert list: 1 Default: - [Arms]
r3536.0...4 A_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), A_INF_840 (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl), R_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl)	BO: Infeed current limit status display / INF I_lim stat dis Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2002 Max: -	Access level: 3 Function plan: 8945 Unit selection: - Expert list: 1 Default: -
r3554[0...1] SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl), VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Vdc controller output / INF Vdc_ctrl outp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 2 Function plan: 7960 Unit selection: p0505 Expert list: 1 Default: - [Arms]

r3554[0...1]	Infeed Vdc controller output / INF Vdc_ctrl outp		
A_INF, A_INF_840, R_INF	Changeable: -	Calculation: -	Access level: 2
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 8940
	P group: Closed-loop control	Unit group: 6_2	Unit selection: p0505
	Not for motor type: -	Scaling: p2002	Expert list: 1
	Min:	Max:	Default:
	- [Arms]	- [Arms]	- [Arms]

p3555[0...5]	Infeed Vdc controller integral component fast intervention / Vdc_ctr I-compFast		
A_INF, A_INF_840, R_INF, S_INF, S_INF_840	Changeable: T	Calculation: -	Access level: 4
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [%]	200.00 [%]	[0] 2.00 [%]
			[1] 102.00 [%]
			[2] 0.00 [%]
			[3] 5.00 [%]
			[4] 100.00 [%]
			[5] 0.00 [%]

p3560	Infeed Vdc controller proportional gain / INF Vdc_ctrl Kp		
A_INF, A_INF_840, R_INF, SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl)	Changeable: T, U	Calculation: -	Access level: 2
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 8940
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.01 [%]	1000.00 [%]	100.00 [%]

p3560	Vdc controller proportional gain / Vdc_ctrl Kp		
VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U	Calculation: -	Access level: 2
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 7960
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.01 [%]	1000.00 [%]	100.00 [%]

p3561	CI: Infeed Vdc controller proportional gain scaling / INF Vdc ctr Kpscal		
A_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), A_INF_840 (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), R_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl)	Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 8940 Unit selection: - Expert list: 1 Default: 1
p3562	Infeed Vdc controller integral time / INF Vdc_ctrl Tn		
A_INF, A_INF_840, R_INF, SERVO (Tech_ctrl), SERVO_840 (Tech_ctrl), SERVO_AC (Tech_ctrl), SERVO_DBSI (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.10 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100000.00 [%]	Access level: 2 Function plan: 8940 Unit selection: - Expert list: 1 Default: 100.00 [%]
p3562	Vdc controller integral time / Vdc_ctrl Tn		
VECTOR (Tech_ctrl), VECTOR_AC (Tech_ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.10 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100000.00 [%]	Access level: 2 Function plan: 7960 Unit selection: - Expert list: 1 Default: 100.00 [%]
p3564	Infeed Vdc monitor time constant / INF Vdc monit T		
A_INF, A_INF_840, R_INF	Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.0 [ms]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0.2 [ms]

p3566 A_INF, A_INF_840, R_INF	Infeed Vdc ramp duration / INF Vdc t_ramp Changeable: T Data type: FloatingPoint32 P group: Commands Not for motor type: - Min: 40 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000 [ms]	Access level: 2 Function plan: 8932 Unit selection: - Expert list: 1 Default: 100 [ms]
p3570 A_INF (Master/Slave), A_INF_840 (Master/ Slave), R_INF (Master/ Slave)	CI: Master/slave active current setpoint / I_act_setp Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2002 Max: -	Access level: 3 Function plan: 8940 Unit selection: - Expert list: 1 Default: 3573[0]
p3571[0...3] A_INF (Master/Slave), A_INF_840 (Master/ Slave), R_INF (Master/ Slave)	CI: Master/slave active current setpoint multiplexer input / I_act multi inp Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2002 Max: -	Access level: 3 Function plan: 8948 Unit selection: - Expert list: 1 Default: 0
p3572 A_INF (Master/Slave), A_INF_840 (Master/ Slave), R_INF (Master/ Slave)	CI: Master/slave active current setpoint multiplexer selection / I_act multi sel Changeable: T Data type: Unsigned32 / Integer16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8948 Unit selection: - Expert list: 1 Default: 0
r3573 A_INF (Master/Slave), A_INF_840 (Master/ Slave), R_INF (Master/ Slave)	CO: Master/slave active current setpoint multiplexer output / I_act multi outp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 8948 Unit selection: p0505 Expert list: 1 Default: - [Arms]

p3574[0...3]	Master/slave DC link voltage monitoring / Vdc monitoring		
A_INF (Master/Slave), A_INF_840 (Master/ Slave), R_INF (Master/ Slave)	Changeable: C2(1), T Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: -60 [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 60 [V]	Access level: 3 Function plan: 8948 Unit selection: - Expert list: 1 Default: [0] 20 [V] [1] -20 [V] [2] 5 [V] [3] -5 [V]
r3575.0...2	BO: Master/slave DC link voltage monitoring status / Vdc monit status		
A_INF (Master/Slave), A_INF_840 (Master/ Slave), R_INF (Master/ Slave)	Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8948 Unit selection: - Expert list: 1 Default: -
p3576[0...5]	Master/slave current distribution factor multiplexer input / I_dist_factor inp		
A_INF (Master/Slave), A_INF_840 (Master/ Slave), R_INF (Master/ Slave)	Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.00 [%]	Access level: 3 Function plan: 8948 Unit selection: - Expert list: 1 Default: 100.00 [%]
p3577	CI: Master/slave current distribution factor multiplexer selection / I_dist_factor sel		
A_INF (Master/Slave), A_INF_840 (Master/ Slave), R_INF (Master/ Slave)	Changeable: T Data type: Unsigned32 / Integer16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 8948 Unit selection: - Expert list: 1 Default: 0
r3578	CO: Master/slave current distribution factor multiplexer output / I_dist_factor outp		
A_INF (Master/Slave), A_INF_840 (Master/ Slave), R_INF (Master/ Slave)	Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%]	Access level: 3 Function plan: 8948 Unit selection: - Expert list: 1 Default: - [%]

p3579 A_INF (Master/Slave), A_INF_840 (Master/ Slave), R_INF (Master/ Slave)	CI: Master/Slave current distribution factor / I_dist_factor Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 8940 Unit selection: - Expert list: 1 Default: 3578[0]
r3602 A_INF, A_INF_840, R_INF	Infeed control status / INF ctrl state Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p3603 A_INF, A_INF_840, R_INF	Infeed current pre-control factor D component / INF I_ctrl D-comp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 500.00 [%]	Access level: 3 Function plan: 8946 Unit selection: - Expert list: 1 Default: 100.00 [%]
p3604 A_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Line transf, Suppl cl- loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), A_INF_840 (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Line transf, Suppl cl- loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), R_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Line transf, Suppl cl- loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl)	CI: Infeed current pre-control factor D component scaling / INF I_ctrl D scale Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1

r3606 A_INF, A_INF_840, R_INF	Infeed active current controller system deviation / INF I_act ctrl dev Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 2 Function plan: 8946 Unit selection: p0505 Expert list: 1 Default: - [Arms]
r3608 A_INF, A_INF_840, R_INF	Infeed reactive current controller system deviation / INF I_reactvCtrDev Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 2 Function plan: 8946 Unit selection: p0505 Expert list: 1 Default: - [Arms]
p3610 A_INF, A_INF_840, R_INF	Infeed reactive current fixed setpoint / INF I_reactv F_set Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -10000.0 [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: - Max: 10000.0 [Arms]	Access level: 2 Function plan: 8910, 8946 Unit selection: p0505 Expert list: 1 Default: 0.0 [Arms]
p3611 A_INF, A_INF_840, R_INF	CI: Infeed reactive current supplementary setpoint / INF I_react Z_set Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2002 Max: -	Access level: 2 Function plan: 8946 Unit selection: - Expert list: 1 Default: 0
p3612 A_INF (Dyn. grid support), R_INF (Dyn. grid support)	CI: Infeed reactive power precontrol / INF P_react prectr Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: r2004 Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p3614[0...2] A_INF, A_INF_840, R_INF	Infeed current actual value filter smoothing time / INF I_act t_sm Changeable: T, U Data type: FloatingPoint32 P group: Commands Not for motor type: - Min: 0.000 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2.000 [ms]	Access level: 3 Function plan: 8950 Unit selection: - Expert list: 1 Default: 0.000 [ms]

p3615	Infeed current controller P gain / INF I_ctrl Kp		
A_INF, A_INF_840, R_INF	Changeable: T, U	Calculation: -	Access level: 2
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 8946
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: 0.00 [%]	Max: 1000.00 [%]	Default: 100.00 [%]
p3616	CI: Infeed current controller P gain scaling / INF I_ctrl Kp scal		
A_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Line transf, Suppl cl- loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), A_INF_840 (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Line transf, Suppl cl- loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), R_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Line transf, Suppl cl- loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl)	Changeable: T	Calculation: -	Access level: 3
	Data type: Unsigned32 / FloatingPoint32	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: PERCENT	Expert list: 1
	Min: -	Max: -	Default: 1
p3617	Infeed current controller integral time / INF I_ctrl Tn		
A_INF, A_INF_840, R_INF	Changeable: T, U	Calculation: -	Access level: 2
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 8946
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: 0.10 [%]	Max: 100000.00 [%]	Default: 100.00 [%]
r3618	Infeed active current controller integral component / INF I_act_ctrl Tn		
A_INF, A_INF_840, R_INF	Changeable: -	Calculation: -	Access level: 2
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 8946
	P group: Closed-loop control	Unit group: 5_1	Unit selection: p0505
	Not for motor type: -	Scaling: p2001	Expert list: 1
	Min: - [Vrms]	Max: - [Vrms]	Default: - [Vrms]

r3619 A_INF, A_INF_840, R_INF	Infeed reactive current controller integral component / INF I_reactv_ctrTn Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: 5_1 Scaling: p2001 Max: - [Vrms]	Access level: 2 Function plan: 8946 Unit selection: p0505 Expert list: 1 Default: - [Vrms]
p3620 A_INF, A_INF_840, R_INF	Infeed current controller adaptation lower switch-in threshold / INF I_adpt thr low Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 40.00 [%]
p3622 A_INF, A_INF_840, R_INF	Infeed current controller adaptation reduction factor / INF I_adapt factor Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.01 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 85.00 [%]
p3624[0...1] A_INF, A_INF_840, R_INF	Infeed harmonics controller order / INF harm_ctr order Changeable: T Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: 5	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: 13	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: [0] 5 [1] 7
p3625[0...1] A_INF, A_INF_840, R_INF	Infeed harmonics controller scaling / INF harm_ctrl scal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.0 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: 300.0 [%]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 100.0 [%]
r3626[0...1] A_INF, A_INF_840, R_INF	Infeed harmonics control output / INF harm_ctrl outp Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: 5_1 Scaling: - Max: - [Vrms]	Access level: 2 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [Vrms]

r3632 A_INF, A_INF_840, R_INF	Infeed input voltage Vsd (active component) / INF U_inp Vsd Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: 5_1 Scaling: p2001 Max: - [Vrms]	Access level: 3 Function plan: 8910, 8946, 8950 Unit selection: p0505 Expert list: 1 Default: - [Vrms]
r3633 A_INF, A_INF_840, R_INF	Infeed input voltage Vsqr (reactive component) / INF U_inp Vsqr Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: 5_1 Scaling: p2001 Max: - [Vrms]	Access level: 3 Function plan: 8910, 8946, 8950 Unit selection: p0505 Expert list: 1 Default: - [Vrms]
r3635 A_INF, A_INF_840, R_INF	CO: Infeed input voltage angle / INF U_inp angle Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [°]	Access level: 2 Function plan: 8950 Unit selection: - Expert list: 1 Default: - [°]
p3636[0...2] A_INF (Dyn. grid support), R_INF (Dyn. grid support)	CI: Negative phase-sequence system controller phase current scaling / Neg_sys_ctr ph sc Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0

r3637[0...3]	CO: Negative phase-sequence system controller current setpoint / Neg_seq_ctrl I_set		
A_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), A_INF_840 (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), R_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 7987 Unit selection: p0505 Expert list: 1 Default: - [Arms]
r3638[0...3]	CO: Negative phase-sequence system controller current actual value / Neg_seq ctr I_act		
A_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), A_INF_840 (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), R_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 7987 Unit selection: p0505 Expert list: 1 Default: - [Arms]

p3639[0...3]	Negative phase-sequence system controller scaling values / Neg_sys_ctrl scal		
A_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), A_INF_840 (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), R_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 7987
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: 0.00 [%]	Max: 300.00 [%]	Default:
			[0] 100.00 [%]
			[1] 0.10 [%]
			[2] 200.00 [%]
			[3] 1.00 [%]
p3640	Negative phase-sequence system controller configuration / Neg_sys ctr config		
A_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), A_INF_840 (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl), R_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: 7987
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: -	Max: -	Default: 0000 bin

p3641[0...1]	CI: Negative phase-sequence system controller setpoint pointer / Neg_seq ctrl setp		
A_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), A_INF_840 (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), R_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl)	Changeable: T	Calculation: -	Access level: 4
	Data type: Unsigned32 / FloatingPoint32	Dynamic index: -	Function plan: 7987
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: p2002	Expert list: 1
	Min: -	Max: -	Default: 0
r3642[0...1]	CO: Negative phase-sequence system controller manipulated variable / NegSeqCtr ManipVar		
A_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), A_INF_840 (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), R_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl)	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 7987
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: - [V]	Max: - [V]	Default: - [V]

r3643[0...1] Neg phase-sequence system controller DC link voltage correction / NegSeqCtr Vdc corr

A_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), A_INF_840 (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), R_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [V]	Access level: 3 Function plan: 7987 Unit selection: - Expert list: 1 Default: - [V]

p3645 Neg phase-seq system controller Vdc actual value filter damping / NegSysCtr FiltDamp

A_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), A_INF_840 (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), R_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.000	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.300

r3646[0...1]	Negative phase-sequence system controller integral component / neg_sys_ctrl int		
A_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), A_INF_840 (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), R_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl)	Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: 5_1 Scaling: p2001 Max: - [Vrms]	Access level: 3 Function plan: 7987 Unit selection: p0505 Expert list: 1 Default: - [Vrms]
p3647[0...2]	Negative phase-sequence system controller phase asymmetry / Neg_seq ctrl asym		
A_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl, Suppl cl-loop ctrl), A_INF_840 (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl), R_INF (Dyn. grid support, Dyn. grid support, Line transf, Line transf, Line transf, Suppl cl-loop ctrl, Suppl cl-loop ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 300.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: [0] 15.00 [%] [1] 10.00 [%] [2] 50.00 [%]
r3648[0...1]	CO: Transformer DC component controller current actual value / Tr DC_ctrl I_act		
A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 7987 Unit selection: p0505 Expert list: 1 Default: - [Arms]

p3649 A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Transformer DC component controller integral time / Tr DC_ctrl Tn Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 300.00 [%]	Access level: 3 Function plan: 7987 Unit selection: - Expert list: 1 Default: 100.00 [%]
p3650 A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Transformer DC component controller proportional gain / Tr DC_ctrl Kp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 300.00 [%]	Access level: 3 Function plan: 7987 Unit selection: - Expert list: 1 Default: 0.00 [%]
p3651 A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Transformer DC component controller limiting / Tr DC_ctrl lim Changeable: T, U Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: 2.0 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10.0 [%]	Access level: 3 Function plan: 7987 Unit selection: - Expert list: 1 Default: 5.0 [%]
r3652[0...1] A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	CO: Transformer DC component controller manipulated variable / Tr DC_ctrl man_var Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: - [V]	Access level: 3 Function plan: 7987 Unit selection: - Expert list: 1 Default: - [V]
p3654 A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Transformer DC component controller PT2 limit frequency / Tr DC_ctrl PT2 f Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.40 [Hz]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10.00 [Hz]	Access level: 3 Function plan: 7987 Unit selection: - Expert list: 1 Default: 10.00 [Hz]
p3660[0...n] VECTOR, VECTOR_AC	VSM input line supply voltage voltage scaler / VSM inp U_scaler Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: p0150 Unit group: - Scaling: PERCENT Max: 100000.00 [%]	Access level: 3 Function plan: 9880 Unit selection: - Expert list: 1 Default: 0.00 [%]

p3660 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	VSM input line supply voltage voltage scaler / VSM inp U_scaler Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [%] Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: 100000.00 [%] Access level: 3 Function plan: 9880 Unit selection: - Expert list: 1 Default: 0.00 [%]
r3661[0...n] VECTOR, VECTOR_AC	CO: VSM input line supply voltage u1 - u2 / VSM inp u1-u2 Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [V] Calculation: - Dynamic index: p0150 Unit group: 5_3 Scaling: p2001 Max: - [V] Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [V]
r3661 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	CO: VSM input line supply voltage u1 - u2 / VSM inp u1-u2 Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [V] Calculation: - Dynamic index: - Unit group: 5_3 Scaling: p2001 Max: - [V] Access level: 3 Function plan: 8850, 8950, 9880 Unit selection: p0505 Expert list: 1 Default: - [V]
r3662[0...n] VECTOR, VECTOR_AC	CO: VSM input line supply voltage u2 - u3 / VSM inp u2-u3 Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [V] Calculation: - Dynamic index: p0150 Unit group: 5_3 Scaling: p2001 Max: - [V] Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [V]
r3662 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	CO: VSM input line supply voltage u2 - u3 / VSM inp u2-u3 Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [V] Calculation: - Dynamic index: - Unit group: 5_3 Scaling: p2001 Max: - [V] Access level: 3 Function plan: 8850, 8950, 9880 Unit selection: p0505 Expert list: 1 Default: - [V]
r3664[0...n] VECTOR, VECTOR_AC	CO: VSM temperature evaluation status / VSM temp status Changeable: - Data type: Unsigned16 P group: Terminals Not for motor type: - Min: - Calculation: - Dynamic index: p0150 Unit group: - Scaling: - Max: - Access level: 3 Function plan: 9886 Unit selection: - Expert list: 1 Default: -

r3664.0...1 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	BO: VSM temperature evaluation status / VSM temp status Changeable: - Data type: Unsigned16 P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9886 Unit selection: - Expert list: 1 Default: -
p3665[0...n] VECTOR, VECTOR_AC	VSM temperature evaluation sensor type / VSM TempSensorType Changeable: T Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: p0150 Unit group: - Scaling: - Max: 6	Access level: 3 Function plan: 9886 Unit selection: - Expert list: 1 Default: 0
p3665[0...n] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	VSM temperature evaluation sensor type / VSM TempSensorType Changeable: T Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: p0140 Unit group: - Scaling: - Max: 6	Access level: 3 Function plan: 9886 Unit selection: - Expert list: 1 Default: 0
r3666[0...n] VECTOR, VECTOR_AC	CO: VSM temperature actual value / VSM Temp_ActVal Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: p0150 Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: 9886 Unit selection: p0505 Expert list: 1 Default: - [°C]
r3666 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	CO: VSM temperature actual value / VSM Temp_ActVal Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: - Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: 9886 Unit selection: p0505 Expert list: 1 Default: - [°C]
p3667[0...n] VECTOR, VECTOR_AC	VSM overtemperature alarm threshold / VSM T A thresh Changeable: T Data type: FloatingPoint32 P group: - Not for motor type: - Min: -100.00 [°C]	Calculation: - Dynamic index: p0150 Unit group: 21_1 Scaling: p2006 Max: 301.00 [°C]	Access level: 3 Function plan: 9886 Unit selection: p0505 Expert list: 1 Default: 150.00 [°C]

p3667 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	VSM line filter overtemperature alarm threshold / VSM filt temp thr Changeable: T Data type: FloatingPoint32 P group: - Not for motor type: - Min: -100 [°C]	Calculation: - Dynamic index: - Unit group: 21_1 Scaling: p2006 Max: 301 [°C]	Access level: 3 Function plan: 9886 Unit selection: p0505 Expert list: 1 Default: 150 [°C]
p3668[0...n] VECTOR, VECTOR_AC	VSM overtemperature shutdown threshold / VSM T F_thresh Changeable: T Data type: FloatingPoint32 P group: - Not for motor type: - Min: -100.00 [°C]	Calculation: - Dynamic index: p0150 Unit group: 21_1 Scaling: p2006 Max: 301.00 [°C]	Access level: 3 Function plan: 9886 Unit selection: p0505 Expert list: 1 Default: 180.00 [°C]
p3668 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	VSM line filter overtemperature shutdown threshold / VSM filt_T F_thres Changeable: T Data type: FloatingPoint32 P group: - Not for motor type: - Min: -100 [°C]	Calculation: - Dynamic index: - Unit group: 21_1 Scaling: p2006 Max: 301 [°C]	Access level: 3 Function plan: 9886 Unit selection: p0505 Expert list: 1 Default: 180 [°C]
p3669[0...n] VECTOR, VECTOR_AC	VSM overtemperature hysteresis / VSM T hyst Changeable: T Data type: FloatingPoint32 P group: - Not for motor type: - Min: 1.00 [K]	Calculation: - Dynamic index: p0150 Unit group: 21_2 Scaling: p2006 Max: 50.00 [K]	Access level: 3 Function plan: 9886 Unit selection: p0505 Expert list: 1 Default: 3.00 [K]
p3669 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	VSM line filter overtemperature hysteresis / VSM filt T hyst Changeable: T Data type: FloatingPoint32 P group: - Not for motor type: - Min: 1.0 [K]	Calculation: - Dynamic index: - Unit group: - Scaling: p2006 Max: 50.0 [K]	Access level: 4 Function plan: 9886 Unit selection: - Expert list: 1 Default: 3.0 [K]
p3670[0...n] VECTOR, VECTOR_AC	VSM 10 V input CT gain / VSM CT_gain Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.000 [A]	Calculation: - Dynamic index: p0150 Unit group: - Scaling: p2002 Max: 1000.000 [A]	Access level: 3 Function plan: 9880 Unit selection: - Expert list: 1 Default: 1.000 [A]

p3670 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	VSM 10 V input CT gain / VSM CT_gain Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.000 [A] Calculation: - Dynamic index: - Unit group: - Scaling: p2002 Max: 1000.000 [A] Access level: 3 Function plan: 9880 Unit selection: - Expert list: 1 Default: 1.000 [A]
r3671[0...n] VECTOR, VECTOR_AC	CO: VSM 10 V input CT 1 actual value / VSM CT 1 I_act Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [A] Calculation: - Dynamic index: p0150 Unit group: - Scaling: p2002 Max: - [A] Access level: 3 Function plan: 9880 Unit selection: - Expert list: 1 Default: - [A]
r3671 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	CO: VSM 10 V input CT 1 actual value / VSM CT 1 I_act Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [A] Calculation: - Dynamic index: - Unit group: - Scaling: p2002 Max: - [A] Access level: 3 Function plan: 9880 Unit selection: - Expert list: 1 Default: - [A]
r3672[0...n] VECTOR, VECTOR_AC	CO: VSM 10 V input CT 2 actual value / VSM CT 2 I_act Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [A] Calculation: - Dynamic index: p0150 Unit group: - Scaling: p2002 Max: - [A] Access level: 3 Function plan: 9880 Unit selection: - Expert list: 1 Default: - [A]
r3672 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	CO: VSM 10 V input CT 2 actual value / VSM CT 2 I_act Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [A] Calculation: - Dynamic index: - Unit group: - Scaling: p2002 Max: - [A] Access level: 3 Function plan: 9880 Unit selection: - Expert list: 1 Default: - [A]
r3673[0...n] VECTOR, VECTOR_AC	CO: VSM 10 V input 1 actual value / VSM inp 1 U_act Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [V] Calculation: - Dynamic index: p0150 Unit group: - Scaling: p2001 Max: - [V] Access level: 3 Function plan: 9880 Unit selection: - Expert list: 1 Default: - [V]

r3673 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	CO: VSM 10 V input 1 actual value / VSM inp 1 U_act Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: - [V]	Access level: 3 Function plan: 9880 Unit selection: - Expert list: 1 Default: - [V]
r3674[0...n] VECTOR, VECTOR_AC	CO: VSM 10 V input 2 actual value / VSM inp 2 U_act Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [V]	Calculation: - Dynamic index: p0150 Unit group: - Scaling: p2001 Max: - [V]	Access level: 3 Function plan: 9880 Unit selection: - Expert list: 1 Default: - [V]
r3674 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	CO: VSM 10 V input 2 actual value / VSM inp 2 U_act Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: - [V]	Access level: 3 Function plan: 9880 Unit selection: - Expert list: 1 Default: - [V]
p3676 A_INF, A_INF_840, R_INF, S_INF, S_INF_840	VSM line filter capacitance alarm threshold / VSMfilt C A_thresh Changeable: T Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.00 [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [%]
r3677[0...2] A_INF, A_INF_840, R_INF, S_INF, S_INF_840	CO: VSM line filter capacitance / VSM filt C Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [µF]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [µF]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [µF]
p3678[0...1] A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Filter monitoring threshold values / Filter monit thr Changeable: C2(1) Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000.00 [%]	Access level: 3 Function plan: 7991 Unit selection: - Expert list: 1 Default: [0] 0.00 [%] [1] 0.00 [%]

p3679[0...1] A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Transformer filter monitoring times / Filter monit times Changeable: C2(1) Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 40.00 [ms]	Access level: 3 Function plan: 7991 Unit selection: - Expert list: 1 Default: [0] 20.00 [ms] [1] 0.50 [ms]
p3680 B_INF, B_INF_840	BI: Braking Module internal inhibit / BM int inhib Changeable: T Data type: Unsigned32 / Binary P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p3681 B_INF, B_INF_840	BI: Activating Braking Module internal DC link fast discharge / BM intDCdischg act Changeable: T Data type: Unsigned32 / Binary P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p3682 B_INF, B_INF_840	Braking Module internal DC link fast discharge delay time / BM int DC dischg t Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 500 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4294967295 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1000 [ms]
p3683 B_INF, B_INF_840	Braking Module internal activation threshold brake chopper / BM int act thresh Changeable: C2(1) Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 110.00 [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 780.00 [V]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 760.00 [V]
r3685 B_INF, B_INF_840	BO: Digital Braking Module: Pre-alarm I2t shutdown / Dig BM A I2t shutd Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r3686 B_INF, B_INF_840	BO: Digital Braking Module fault / Dig BM fault Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r3687 B_INF, B_INF_840	BO: Digital Braking Module pre-alarm overtemperature / Dig BM A overtemp Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r3688 B_INF, B_INF_840	BO: Braking Module internal overtemperature shutdown / BM int temp shutd Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r3689 B_INF, B_INF_840	BO: Digital Braking Module Uce fault / Dig BM Uce fault Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p3700 SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	AVS/APC configuration / APC config Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 7012 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
p3701 SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC encoder selection / APC enc sel Changeable: C1(4) Data type: Integer16 P group: Data sets Not for motor type: - Min: 2	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2

p3702[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC load speed/motor speed weighting / APC n_load/mot wt Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -10.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1.000
p3704[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC filter activation / APC filter act Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 7012 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
p3705[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC filter type / APC filter type Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 7012 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
p3706[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC sub-sampling filter 2.x / APC sub-samp. 2.x Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: REL Min: 1	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 64	Access level: 3 Function plan: 7012 Unit selection: - Expert list: 1 Default: 1
p3707[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC sub-sampling filter 3.x / APC sub-samp. 3.x Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: REL Min: 1	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 64	Access level: 3 Function plan: 7012 Unit selection: - Expert list: 1 Default: 1
p3708[0...n] SERVO (APC, Lin), SERVO_840 (APC, Lin), SERVO_AC (APC, Lin), SERVO_DBSI (APC, Lin)	APC velocity actual value smoothing time encoder 2 / APC v_act t_sm 2 Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 50.00 [ms]	Access level: 3 Function plan: 4711 Unit selection: - Expert list: 1 Default: 0.00 [ms]

p3708[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC speed actual value smoothing time encoder 2 / APC n_act t_sm 2 Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 50.00 [ms]	Access level: 3 Function plan: 4711 Unit selection: - Expert list: 1 Default: 0.00 [ms]
p3709[0...n] SERVO (APC, Lin), SERVO_840 (APC, Lin), SERVO_AC (APC, Lin), SERVO_DBSI (APC, Lin)	AVS/APC velocity actual value smoothing time encoder 3 / APC v_act t_sm 3 Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 50.00 [ms]	Access level: 3 Function plan: 4711 Unit selection: - Expert list: 1 Default: 0.00 [ms]
p3709[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	AVS/APC speed act value smoothing time encoder3/ w/o load sensor / APC n_act t_sm 3 Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 50.00 [ms]	Access level: 3 Function plan: 4711 Unit selection: - Expert list: 1 Default: 0.00 [ms]
p3711[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC filter 1.1 denominator natural frequency / APC Filt1.1 fn_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 7012 Unit selection: - Expert list: 1 Default: 2000.0 [Hz]
p3712[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC filter 1.1 denominator damping / APC Filt 1.1 D_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.050	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 7012 Unit selection: - Expert list: 1 Default: 0.700
p3713[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC filter 1.1 numerator natural frequency / APC Filt 1 fn_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 7012 Unit selection: - Expert list: 1 Default: 2000.0 [Hz]

p3714[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC filter 1.1 numerator damping / APC Filt 1.1 D_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 7012 Unit selection: - Expert list: 1 Default: 0.700
p3721[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC filter 2.1 denominator natural frequency / APC Filt2.1 fn_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 7012 Unit selection: - Expert list: 1 Default: 2000.0 [Hz]
p3722[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC filter 2.1 denominator damping / APC Filt 2.1 D_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.050	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 7012 Unit selection: - Expert list: 1 Default: 0.700
p3723[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC filter 2.1 numerator natural frequency / APC Filt2.1 fn_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 7012 Unit selection: - Expert list: 1 Default: 2000.0 [Hz]
p3724[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC filter 2.1 numerator damping / APC Filt 2.1 D_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 7012 Unit selection: - Expert list: 1 Default: 0.700
p3726[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC filter 2.2 denominator natural frequency / APC Filt2.2 fn_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 7012 Unit selection: - Expert list: 1 Default: 2000.0 [Hz]

p3727[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC filter 2.2 denominator damping / APC Filt 2.2 D_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.050	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 7012 Unit selection: - Expert list: 1 Default: 0.700
p3728[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC filter 2.2 numerator natural frequency / APC Filt2.2 fn_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 7012 Unit selection: - Expert list: 1 Default: 2000.0 [Hz]
p3729[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC filter 2.2 numerator damping / APC Filt 2.2 D_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 7029 Unit selection: - Expert list: 1 Default: 0.700
p3731[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC filter 3.1 denominator natural frequency / APC Filt3.1 fn_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 7012 Unit selection: - Expert list: 1 Default: 2000.0 [Hz]
p3732[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC filter 3.1 denominator damping / APC Filt 3.1 D_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.050	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 7012 Unit selection: - Expert list: 1 Default: 0.700
p3733[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC filter 3.1 numerator natural frequency / APC Filt3.1 fn_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 7012 Unit selection: - Expert list: 1 Default: 2000.0 [Hz]

p3734[0...n]	APC filter 3.1 numerator damping / APC Filt 3.1 D_num		
SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7012
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.000	Max: 10.000	Default: 0.700

p3736[0...n]	APC filter 3.2 denominator natural frequency / APC Filt3.2 fn_den		
SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7012
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.5 [Hz]	Max: 16000.0 [Hz]	Default: 2000.0 [Hz]

p3737[0...n]	APC filter 3.2 denominator damping / APC Filt 3.2 D_den		
SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7012
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.050	Max: 10.000	Default: 0.700

p3738[0...n]	APC filter 3.2 numerator natural frequency / APC Filt3.2 fn_num		
SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7012
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.5 [Hz]	Max: 16000.0 [Hz]	Default: 2000.0 [Hz]

p3739[0...n]	APC filter 3.2 numerator damping / APC Filt 3.2 D_num		
SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7012
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.000	Max: 10.000	Default: 0.700

p3740[0...n]	APC torque setpoint filter 1 denominator natural frequency / APC M flt 1 fn_den		
SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.5 [Hz]	Max: 16000.0 [Hz]	Default: 2000.0 [Hz]

p3741[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC torque setpoint filter 1 denominator damping / APC M fit 1 D_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.001	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.700
p3742[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC torque setpoint filter 1 numerator natural frequency / APC M fit 1 fn_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2000.0 [Hz]
p3743[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC torque setpoint filter 1 numerator damping / APC M fit 1 D_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.700
p3744[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC torque setpoint filter 2 denominator natural frequency / APC M fit 2 fn_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2000.0 [Hz]
p3745[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC torque setpoint filter 2 denominator damping / APC M fit 2 D_den Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.001	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.700
p3746[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC torque setpoint filter 2 numerator natural frequency / APC M fit 2 fn_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2000.0 [Hz]

p3747[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC torque setpoint filter 2 numerator damping / APC M filt 2 D_num Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.700
p3748[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC velocity input scaling / APC v_input scale Changeable: T, U Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: -1000000.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000000.000	Access level: 3 Function plan: 7012 Unit selection: - Expert list: 1 Default: 1.000
p3749[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	CI: APC velocity actual value external input / APC v_act ext inp Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 7012 Unit selection: - Expert list: 1 Default: 0
p3750[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	CI: APC acceleration sensor input / APC accel input Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: p2007 Max: -	Access level: 2 Function plan: 7012 Unit selection: - Expert list: 1 Default: 0
p3751[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	AVS/APC acceleration sensor high pass time constant / APC accel DT1 T Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.00 [ms]	Access level: 2 Function plan: 7012 Unit selection: - Expert list: 1 Default: 100.00 [ms]
p3752[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	AVS controller preassignment natural oscillation frequency / APC preassign fn Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.0 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000.0 [Hz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [Hz]

p3753[0...n]	APC torque setpoint preassignment natural oscillation frequency / APC M_filt def fn		
SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	Changeable: T	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.0 [Hz]	1000.0 [Hz]	0.0 [Hz]

p3754[0...n]	APC torque setpoint filter preassignment gain / APC M_filt def V		
SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	Changeable: T	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.0	2.0	0.0

p3760[0...n]	APC load velocity controller 1 P gain / APC v_load ctr1 Kp		
SERVO (APC, Lin), SERVO_840 (APC, Lin), SERVO_AC (APC, Lin), SERVO_DBSI (APC, Lin)	Changeable: T, U	Calculation: CALC_MOD_CON	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7012
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-100.000	100.000	0.000

p3760[0...n]	APC load speed controller 1 P gain / APC n_load ctr1 Kp		
SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	Changeable: T, U	Calculation: CALC_MOD_CON	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7012
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-100.000	100.000	0.000

p3761[0...n]	AVS/APC load velocity controller 1 derivative action time / APC v_load ctr1 Tv		
SERVO (APC, Lin), SERVO_840 (APC, Lin), SERVO_AC (APC, Lin), SERVO_DBSI (APC, Lin)	Changeable: T, U	Calculation: CALC_MOD_CON	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7012
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-500.00 [ms]	500.00 [ms]	0.00 [ms]

p3761[0...n]	AVS/APC load speed controller 1 rate time / APC n_load ctr1 Tv		
SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	Changeable: T, U	Calculation: CALC_MOD_CON	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7012
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-500.00 [ms]	500.00 [ms]	0.00 [ms]

p3765[0...n] SERVO (APC, Lin), SERVO_840 (APC, Lin), SERVO_AC (APC, Lin), SERVO_DBSI (APC, Lin)	APC load velocity controller 2 P gain / APC v_load ctr2 Kp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -100.000	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.000	Access level: 2 Function plan: 7012 Unit selection: - Expert list: 1 Default: 0.000
p3765[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC load speed controller 2 P gain / APC n_load ctr2 Kp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -100.000	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.000	Access level: 2 Function plan: 7012 Unit selection: - Expert list: 1 Default: 0.000
p3766[0...n] SERVO (APC, Lin), SERVO_840 (APC, Lin), SERVO_AC (APC, Lin), SERVO_DBSI (APC, Lin)	APC load velocity controller 2 rate time / APC v_load ctr2 Tv Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -500.00 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 500.00 [ms]	Access level: 2 Function plan: 7012 Unit selection: - Expert list: 1 Default: 0.00 [ms]
p3766[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC load speed controller 2 rate time / APC n_load ctr2 Tv Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -500.00 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 500.00 [ms]	Access level: 2 Function plan: 7012 Unit selection: - Expert list: 1 Default: 0.00 [ms]
p3767[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC differential position high pass time constant / APC s_Dif DT1 T Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.00 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.00 [ms]	Access level: 2 Function plan: 7013 Unit selection: - Expert list: 1 Default: 100.00 [ms]
p3768[0...n] SERVO (APC, Lin), SERVO_840 (APC, Lin), SERVO_AC (APC, Lin), SERVO_DBSI (APC, Lin)	APC differential position gain factor / APC s_dif Kp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -50000.00 [Nm/rad]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: 49_1 Scaling: - Max: 50000.00 [Nm/rad]	Access level: 2 Function plan: 7013 Unit selection: p0505 Expert list: 1 Default: 0.00 [Nm/rad]

p3768[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC differential position gain factor / APC s_dif Kp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: -50000.00 [Nm/rad]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: 49_1 Scaling: - Max: 50000.00 [Nm/rad]	Access level: 2 Function plan: 7013 Unit selection: p0505 Expert list: 1 Default: 0.00 [Nm/rad]
r3769 SERVO (APC, Lin), SERVO_840 (APC, Lin), SERVO_AC (APC, Lin), SERVO_DBSI (APC, Lin)	CO: APC differential position force setpoint / APC s_dif F_set Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [N]	Calculation: - Dynamic index: - Unit group: 8_1 Scaling: p2003 Max: - [N]	Access level: 2 Function plan: 5040, 7013 Unit selection: p0505 Expert list: 1 Default: - [N]
r3769 SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	CO: APC differential position torque setpoint / APC s_dif M_set Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: p2003 Max: - [Nm]	Access level: 2 Function plan: 5040, 7013 Unit selection: p0505 Expert list: 1 Default: - [Nm]
r3770 SERVO (APC, Lin), SERVO_840 (APC, Lin), SERVO_AC (APC, Lin), SERVO_DBSI (APC, Lin)	CO: APC load velocity / APC v_load Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 4711, 7012 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r3770 SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	CO: APC load speed / APC n_load Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 4711, 7012 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r3771[0...1] SERVO (APC, Lin), SERVO_840 (APC, Lin), SERVO_AC (APC, Lin), SERVO_DBSI (APC, Lin)	CO: APC velocity actual value / APC v_act Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 4711, 5040, 5042 Unit selection: p0505 Expert list: 1 Default: - [m/min]

r3771[0...1] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	CO: APC speed actual value / APC n_act Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 4711, 5040, 5042 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r3772[0...1] SERVO (APC, Lin), SERVO_840 (APC, Lin), SERVO_AC (APC, Lin), SERVO_DBSI (APC, Lin)	APC filter branch 2 display values / APC branch 2 val Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 7012 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r3772[0...1] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC filter branch 2 display values / APC branch 2 val Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 7012 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r3773[0...1] SERVO (APC, Lin), SERVO_840 (APC, Lin), SERVO_AC (APC, Lin), SERVO_DBSI (APC, Lin)	APC filter branch 3 display values / APC branch 3 val Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 7012 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r3773[0...1] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC filter branch 3 display values / APC branch 3 val Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 7012 Unit selection: p0505 Expert list: 1 Default: - [rpm]
p3774[0...n] SERVO (APC, Lin), SERVO_840 (APC, Lin), SERVO_AC (APC, Lin), SERVO_DBSI (APC, Lin)	APC differential speed gain factor / APC n_dif Kp Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -10000000.00 [Ns/m]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: 24_2 Scaling: - Max: 10000000.00 [Ns/m]	Access level: 2 Function plan: 7013 Unit selection: p0505 Expert list: 1 Default: 0.00 [Ns/m]

p3774[0...n]	APC differential speed gain factor / APC n_dif Kp		
SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -10000000.00 [Nms/rad]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: 17_1 Scaling: - Max: 10000000.00 [Nms/rad]	Access level: 2 Function plan: 7013 Unit selection: p0505 Expert list: 1 Default: 0.00 [Nms/rad]

r3777[0...1]	CO: APC filter branch 1 display values / APC branch 1 val		
SERVO (APC, Lin), SERVO_840 (APC, Lin), SERVO_AC (APC, Lin), SERVO_DBSI (APC, Lin)	Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 7012 Unit selection: p0505 Expert list: 1 Default: - [m/min]

r3777[0...1]	CO: APC filter branch 1 display values / APC branch 1 val		
SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	Changeable: - Data type: FloatingPoint32 P group: Setpoints Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 7012 Unit selection: p0505 Expert list: 1 Default: - [rpm]

p3778[0...n]	APC velocity limit / APC v_limit		
SERVO (APC, Lin), SERVO_840 (APC, Lin), SERVO_AC (APC, Lin), SERVO_DBSI (APC, Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [m/min]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: 4_1 Scaling: - Max: 1000.00 [m/min]	Access level: 2 Function plan: 7012 Unit selection: p0505 Expert list: 1 Default: 1000.00 [m/min]

p3778[0...n]	APC speed limit / APC n_limit		
SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [rpm]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.00 [rpm]	Access level: 2 Function plan: 7012 Unit selection: p0505 Expert list: 1 Default: 210000.00 [rpm]

p3779[0...n]	APC velocity limit monitoring time / APC v_limit t		
SERVO (APC, Lin), SERVO_840 (APC, Lin), SERVO_AC (APC, Lin), SERVO_DBSI (APC, Lin)	Changeable: T, U Data type: Unsigned32 P group: Closed-loop control Not for motor type: REL Min: 0 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000000 [ms]	Access level: 2 Function plan: 7012 Unit selection: - Expert list: 1 Default: 0 [ms]

p3779[0...n] SERVO (APC), SERVO_840 (APC), SERVO_AC (APC), SERVO_DBSI (APC)	APC speed limit monitoring time / APC n_limit t Changeable: T, U Data type: Unsigned32 P group: Closed-loop control Not for motor type: REL Min: 0 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000000 [ms]	Access level: 2 Function plan: 7012 Unit selection: - Expert list: 1 Default: 0 [ms]
p3800[0...n] VECTOR, VECTOR_AC	Sync-line-drive activation / Sync act Changeable: T Data type: Integer16 P group: Functions Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: 7020 Unit selection: - Expert list: 1 Default: 0
p3801[0...n] VECTOR, VECTOR_AC	Sync-line-drive drive object number / Sync DO_no Changeable: T Data type: Unsigned16 P group: Functions Not for motor type: - Min: 1	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 62	Access level: 2 Function plan: 7020 Unit selection: - Expert list: 1 Default: 1
p3802[0...n] VECTOR, VECTOR_AC	BI: Sync-line-drive enable / Sync enable Changeable: T Data type: Unsigned32 / Binary P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: CDS, p0170 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 7020 Unit selection: - Expert list: 1 Default: 0
r3803.0 VECTOR, VECTOR_AC	CO/BO: Sync-line-drive control word / Sync STW Changeable: - Data type: Unsigned32 P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r3804 VECTOR, VECTOR_AC	CO: Sync-line-drive target frequency / Sync f_target Changeable: - Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: - [Hz]	Calculation: - Dynamic index: - Unit group: - Scaling: p2000 Max: - [Hz]	Access level: 2 Function plan: 3030, 7020 Unit selection: - Expert list: 1 Default: - [Hz]

r3805 VECTOR, VECTOR_AC	CO: Sync-line-drive frequency difference / Sync f_diff Changeable: - Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: - [Hz]	Calculation: - Dynamic index: - Unit group: - Scaling: p2000 Max: - [Hz]	Access level: 2 Function plan: 7020 Unit selection: - Expert list: 1 Default: - [Hz]
p3806[0...n] VECTOR, VECTOR_AC	Sync-line-drive frequency difference threshold value / Sync f_diff thresh Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: 0.00 [Hz]	Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1.00 [Hz]	Access level: 2 Function plan: 7020 Unit selection: - Expert list: 1 Default: 0.10 [Hz]
r3808 VECTOR, VECTOR_AC	CO: Sync-line-drive phase difference / Sync phase diff Changeable: - Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: - [°]	Calculation: - Dynamic index: - Unit group: - Scaling: p2005 Max: - [°]	Access level: 2 Function plan: 7020 Unit selection: - Expert list: 1 Default: - [°]
p3809[0...n] VECTOR, VECTOR_AC	Sync-line-drive phase setpoint / Sync phase setp Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: -180.00 [°]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 179.90 [°]	Access level: 2 Function plan: 7020 Unit selection: - Expert list: 1 Default: 0.00 [°]
p3811[0...n] VECTOR, VECTOR_AC	Sync-line-drive frequency limiting / Sync f_lim Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: 0.00 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1.00 [Hz]	Access level: 2 Function plan: 7020 Unit selection: - Expert list: 1 Default: 0.20 [Hz]
r3812 VECTOR, VECTOR_AC	CO: Sync-line-drive correction frequency / Sync f_corr Changeable: - Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: - [Hz]	Calculation: - Dynamic index: - Unit group: - Scaling: p2000 Max: - [Hz]	Access level: 2 Function plan: 3080, 7020 Unit selection: - Expert list: 1 Default: - [Hz]

p3813[0...n] VECTOR, VECTOR_AC	Sync-line-drive phase synchronism threshold value / Sync Ph_sync thrsh Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: 1.00 [°] Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 20.00 [°] Access level: 2 Function plan: 7020 Unit selection: - Expert list: 1 Default: 2.00 [°]
r3814 VECTOR, VECTOR_AC	CO: Sync-line-drive voltage difference / Sync U_diff Changeable: - Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: - [Vrms] Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: - [Vrms] Access level: 2 Function plan: 7020 Unit selection: - Expert list: 1 Default: - [Vrms]
p3815[0...n] VECTOR, VECTOR_AC	Sync-line-drive voltage difference threshold value / Sync U_diff thresh Changeable: T, U Data type: FloatingPoint32 P group: Functions Not for motor type: - Min: 0.00 [%] Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 20.00 [%] Access level: 2 Function plan: 7020 Unit selection: - Expert list: 1 Default: 10.00 [%]
r3819.0...7 VECTOR, VECTOR_AC	CO/BO: Sync-line-drive status word / Sync ZSW Changeable: - Data type: Unsigned32 P group: Functions Not for motor type: - Min: - Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - Access level: 2 Function plan: 7020 Unit selection: - Expert list: 1 Default: -
p3820[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Friction characteristic value n0 / Friction n0 Changeable: T Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: 0.00 [rpm] Calculation: CALC_MOD_LIM_REF Dynamic index: DDS, p0180 Unit group: 3_1 Scaling: - Max: 210000.00 [rpm] Access level: 2 Function plan: 7010 Unit selection: p0505 Expert list: 1 Default: 15.00 [rpm]

p3820[0...n]	Friction characteristic value v0 / Friction v0		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T	Calculation: CALC_MOD_LIM_REF	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7010
	P group: Functions	Unit group: 4_1	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.00 [m/min]	Max: 21000.00 [m/min]	Default: 1.50 [m/min]

p3821[0...n]	Friction characteristic value n1 / Friction n1		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T	Calculation: CALC_MOD_LIM_REF	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7010
	P group: Functions	Unit group: 3_1	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.00 [rpm]	Max: 210000.00 [rpm]	Default: 30.00 [rpm]

p3821[0...n]	Friction characteristic value v1 / Friction v1		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T	Calculation: CALC_MOD_LIM_REF	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7010
	P group: Functions	Unit group: 4_1	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.00 [m/min]	Max: 21000.00 [m/min]	Default: 3.00 [m/min]

p3822[0...n]	Friction characteristic value n2 / Friction n2		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T	Calculation: CALC_MOD_LIM_REF	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7010
	P group: Functions	Unit group: 3_1	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.00 [rpm]	Max: 210000.00 [rpm]	Default: 60.00 [rpm]

p3822[0...n]	Friction characteristic value v2 / Friction v2		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T	Calculation: CALC_MOD_LIM_REF	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7010
	P group: Functions	Unit group: 4_1	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.00 [m/min]	Max: 21000.00 [m/min]	Default: 6.00 [m/min]

p3823[0...n]	Friction characteristic value n3 / Friction n3		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T	Calculation: CALC_MOD_LIM_REF	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7010
	P group: Functions	Unit group: 3_1	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.00 [rpm]	Max: 210000.00 [rpm]	Default: 120.00 [rpm]
p3823[0...n]	Friction characteristic value v3 / Friction v3		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T	Calculation: CALC_MOD_LIM_REF	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7010
	P group: Functions	Unit group: 4_1	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.00 [m/min]	Max: 21000.00 [m/min]	Default: 12.00 [m/min]
p3824[0...n]	Friction characteristic value n4 / Friction n4		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T	Calculation: CALC_MOD_LIM_REF	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7010
	P group: Functions	Unit group: 3_1	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.00 [rpm]	Max: 210000.00 [rpm]	Default: 150.00 [rpm]
p3824[0...n]	Friction characteristic value v4 / Friction v4		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T	Calculation: CALC_MOD_LIM_REF	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7010
	P group: Functions	Unit group: 4_1	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.00 [m/min]	Max: 21000.00 [m/min]	Default: 15.00 [m/min]
p3825[0...n]	Friction characteristic value n5 / Friction n5		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T	Calculation: CALC_MOD_LIM_REF	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7010
	P group: Functions	Unit group: 3_1	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.00 [rpm]	Max: 210000.00 [rpm]	Default: 300.00 [rpm]

p3825[0...n]	Friction characteristic value v5 / Friction v5		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T	Calculation: CALC_MOD_LIM_REF	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7010
	P group: Functions	Unit group: 4_1	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.00 [m/min]	Max: 21000.00 [m/min]	Default: 30.00 [m/min]

p3826[0...n]	Friction characteristic value n6 / Friction n6		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T	Calculation: CALC_MOD_LIM_REF	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7010
	P group: Functions	Unit group: 3_1	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.00 [rpm]	Max: 210000.00 [rpm]	Default: 600.00 [rpm]

p3826[0...n]	Friction characteristic value v6 / Friction v6		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T	Calculation: CALC_MOD_LIM_REF	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7010
	P group: Functions	Unit group: 4_1	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.00 [m/min]	Max: 21000.00 [m/min]	Default: 60.00 [m/min]

p3827[0...n]	Friction characteristic value n7 / Friction n7		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T	Calculation: CALC_MOD_LIM_REF	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7010
	P group: Functions	Unit group: 3_1	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.00 [rpm]	Max: 210000.00 [rpm]	Default: 1200.00 [rpm]

p3827[0...n]	Friction characteristic value v7 / Friction v7		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T	Calculation: CALC_MOD_LIM_REF	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7010
	P group: Functions	Unit group: 4_1	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.00 [m/min]	Max: 21000.00 [m/min]	Default: 120.00 [m/min]

p3828[0...n]	Friction characteristic value n8 / Friction n8		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T	Calculation: CALC_MOD_LIM_REF	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7010
	P group: Functions	Unit group: 3_1	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.00 [rpm]	Max: 210000.00 [rpm]	Default: 1500.00 [rpm]
p3828[0...n]	Friction characteristic value v8 / Friction v8		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T	Calculation: CALC_MOD_LIM_REF	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7010
	P group: Functions	Unit group: 4_1	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.00 [m/min]	Max: 21000.00 [m/min]	Default: 150.00 [m/min]
p3829[0...n]	Friction characteristic value n9 / Friction n9		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T	Calculation: CALC_MOD_LIM_REF	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7010
	P group: Functions	Unit group: 3_1	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.00 [rpm]	Max: 210000.00 [rpm]	Default: 3000.00 [rpm]
p3829[0...n]	Friction characteristic value v9 / Friction v9		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T	Calculation: CALC_MOD_LIM_REF	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7010
	P group: Functions	Unit group: 4_1	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: 0.00 [m/min]	Max: 21000.00 [m/min]	Default: 300.00 [m/min]
p3830[0...n]	Friction characteristic value M0 / Friction M0		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Changeable: T	Calculation: -	Access level: 2
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 7010
	P group: Functions	Unit group: 7_1	Unit selection: p0505
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min: -1000000.0000 [Nm]	Max: 1000000.0000 [Nm]	Default: 0.0000 [Nm]

p3830[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Friction characteristic value F0 / Friction F0 Changeable: T Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: -1000000.0000 [N]	Calculation: - Dynamic index: DDS, p0180 Unit group: 8_1 Scaling: - Max: 1000000.0000 [N]	Access level: 2 Function plan: 7010 Unit selection: p0505 Expert list: 1 Default: 0.0000 [N]
p3831[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Friction characteristic value M1 / Friction M1 Changeable: T Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: -1000000.0000 [Nm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 7_1 Scaling: - Max: 1000000.0000 [Nm]	Access level: 2 Function plan: 7010 Unit selection: p0505 Expert list: 1 Default: 0.0000 [Nm]
p3831[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Friction characteristic value F1 / Friction F1 Changeable: T Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: -1000000.0000 [N]	Calculation: - Dynamic index: DDS, p0180 Unit group: 8_1 Scaling: - Max: 1000000.0000 [N]	Access level: 2 Function plan: 7010 Unit selection: p0505 Expert list: 1 Default: 0.0000 [N]
p3832[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Friction characteristic value M2 / Friction M2 Changeable: T Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: -1000000.0000 [Nm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 7_1 Scaling: - Max: 1000000.0000 [Nm]	Access level: 2 Function plan: 7010 Unit selection: p0505 Expert list: 1 Default: 0.0000 [Nm]
p3832[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Friction characteristic value F2 / Friction F2 Changeable: T Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: -1000000.0000 [N]	Calculation: - Dynamic index: DDS, p0180 Unit group: 8_1 Scaling: - Max: 1000000.0000 [N]	Access level: 2 Function plan: 7010 Unit selection: p0505 Expert list: 1 Default: 0.0000 [N]
p3833[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Friction characteristic value M3 / Friction M3 Changeable: T Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: -1000000.0000 [Nm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 7_1 Scaling: - Max: 1000000.0000 [Nm]	Access level: 2 Function plan: 7010 Unit selection: p0505 Expert list: 1 Default: 0.0000 [Nm]

p3833[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Friction characteristic value F3 / Friction F3 Changeable: T Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: -1000000.0000 [N]	Calculation: - Dynamic index: DDS, p0180 Unit group: 8_1 Scaling: - Max: 1000000.0000 [N]	Access level: 2 Function plan: 7010 Unit selection: p0505 Expert list: 1 Default: 0.0000 [N]
p3834[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Friction characteristic value M4 / Friction M4 Changeable: T Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: -1000000.0000 [Nm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 7_1 Scaling: - Max: 1000000.0000 [Nm]	Access level: 2 Function plan: 7010 Unit selection: p0505 Expert list: 1 Default: 0.0000 [Nm]
p3834[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Friction characteristic value F4 / Friction F4 Changeable: T Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: -1000000.0000 [N]	Calculation: - Dynamic index: DDS, p0180 Unit group: 8_1 Scaling: - Max: 1000000.0000 [N]	Access level: 2 Function plan: 7010 Unit selection: p0505 Expert list: 1 Default: 0.0000 [N]
p3835[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Friction characteristic value M5 / Friction M5 Changeable: T Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: -1000000.0000 [Nm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 7_1 Scaling: - Max: 1000000.0000 [Nm]	Access level: 2 Function plan: 7010 Unit selection: p0505 Expert list: 1 Default: 0.0000 [Nm]
p3835[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Friction characteristic value F5 / Friction F5 Changeable: T Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: -1000000.0000 [N]	Calculation: - Dynamic index: DDS, p0180 Unit group: 8_1 Scaling: - Max: 1000000.0000 [N]	Access level: 2 Function plan: 7010 Unit selection: p0505 Expert list: 1 Default: 0.0000 [N]
p3836[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Friction characteristic value M6 / Friction M6 Changeable: T Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: -1000000.0000 [Nm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 7_1 Scaling: - Max: 1000000.0000 [Nm]	Access level: 2 Function plan: 7010 Unit selection: p0505 Expert list: 1 Default: 0.0000 [Nm]

p3836[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Friction characteristic value F6 / Friction F6 Changeable: T Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: -1000000.0000 [N]	Calculation: - Dynamic index: DDS, p0180 Unit group: 8_1 Scaling: - Max: 1000000.0000 [N]	Access level: 2 Function plan: 7010 Unit selection: p0505 Expert list: 1 Default: 0.0000 [N]
p3837[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Friction characteristic value M7 / Friction M7 Changeable: T Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: -1000000.0000 [Nm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 7_1 Scaling: - Max: 1000000.0000 [Nm]	Access level: 2 Function plan: 7010 Unit selection: p0505 Expert list: 1 Default: 0.0000 [Nm]
p3837[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Friction characteristic value F7 / Friction F7 Changeable: T Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: -1000000.0000 [N]	Calculation: - Dynamic index: DDS, p0180 Unit group: 8_1 Scaling: - Max: 1000000.0000 [N]	Access level: 2 Function plan: 7010 Unit selection: p0505 Expert list: 1 Default: 0.0000 [N]
p3838[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Friction characteristic value M8 / Friction M8 Changeable: T Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: -1000000.0000 [Nm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 7_1 Scaling: - Max: 1000000.0000 [Nm]	Access level: 2 Function plan: 7010 Unit selection: p0505 Expert list: 1 Default: 0.0000 [Nm]
p3838[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Friction characteristic value F8 / Friction F8 Changeable: T Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: -1000000.0000 [N]	Calculation: - Dynamic index: DDS, p0180 Unit group: 8_1 Scaling: - Max: 1000000.0000 [N]	Access level: 2 Function plan: 7010 Unit selection: p0505 Expert list: 1 Default: 0.0000 [N]
p3839[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Friction characteristic value M9 / Friction M9 Changeable: T Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: -1000000.0000 [Nm]	Calculation: - Dynamic index: DDS, p0180 Unit group: 7_1 Scaling: - Max: 1000000.0000 [Nm]	Access level: 2 Function plan: 7010 Unit selection: p0505 Expert list: 1 Default: 0.0000 [Nm]

p3839[0...n] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Friction characteristic value F9 / Friction F9 Changeable: T Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: -1000000.0000 [N]	Calculation: - Dynamic index: DDS, p0180 Unit group: 8_1 Scaling: - Max: 1000000.0000 [N]	Access level: 2 Function plan: 7010 Unit selection: p0505 Expert list: 1 Default: 0.0000 [N]
r3840.0...8 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	CO/BO: Friction characteristic status word / Friction ZSW Changeable: - Data type: Unsigned32 P group: Functions Not for motor type: REL Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 7010 Unit selection: - Expert list: 1 Default: -
r3840.0...9 VECTOR (n/M), VECTOR_AC (n/M)	CO/BO: Friction characteristic status word / Friction ZSW Changeable: - Data type: Unsigned32 P group: Functions Not for motor type: REL Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 7010 Unit selection: - Expert list: 1 Default: -
r3841 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	CO: Friction characteristic output / Frict outp Changeable: - Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: - [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: p2003 Max: - [Nm]	Access level: 2 Function plan: 7010 Unit selection: p0505 Expert list: 1 Default: - [Nm]
r3841 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: Friction characteristic output / Frict outp Changeable: - Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: - [N]	Calculation: - Dynamic index: - Unit group: 8_1 Scaling: p2003 Max: - [N]	Access level: 2 Function plan: 7010 Unit selection: p0505 Expert list: 1 Default: - [N]
p3842 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Friction characteristic activation / Friction act Changeable: T Data type: Integer16 P group: Functions Not for motor type: REL Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: 7010 Unit selection: - Expert list: 1 Default: 0

p3843[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Friction characteristic frictional torque diff. smoothing time / Frict M_diff t_sm Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: PMSM, SESM, REL, RESM Min: 0.00 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [ms]
p3844[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Friction characteristic number changeover point upper / FricNo chng_pt up Changeable: T, U Data type: Unsigned8 P group: Closed-loop control Not for motor type: PMSM, SESM, REL, RESM Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 4	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p3845 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Friction characteristic record activation / Frict rec act Changeable: T Data type: Integer16 P group: Functions Not for motor type: REL Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 2 Function plan: 7010 Unit selection: - Expert list: 1 Default: 0
p3846[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Friction characteristic record ramp-up/ramp-down time / Frict rec t_RU/RD Changeable: T Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: 0.000 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 999999.000 [s]	Access level: 2 Function plan: 7010 Unit selection: - Expert list: 1 Default: 10.000 [s]
p3847[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	Friction characteristic record warm-up time / Frict rec t_warm Changeable: T Data type: FloatingPoint32 P group: Functions Not for motor type: REL Min: 0.000 [s]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 3600.000 [s]	Access level: 2 Function plan: 7010 Unit selection: - Expert list: 1 Default: 0.000 [s]
p3860 A_INF (Brk Mod ext), A_INF_840 (Brk Mod ext), B_INF (Brk Mod ext), B_INF_840 (Brk Mod ext), R_INF (Brk Mod ext), S_INF (Brk Mod ext), S_INF_840 (Brk Mod ext)	Number of Braking Modules connected in parallel / BM qty par_cct Changeable: C2(2) Data type: Unsigned8 P group: Converter Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8	Access level: 3 Function plan: 9951 Unit selection: - Expert list: 1 Default: 1

r3861.0...7	BO: Braking Module inhibit/acknowledgment / BM inhib/ackn		
A_INF (Brk Mod ext), A_INF_840 (Brk Mod ext), B_INF (Brk Mod ext), B_INF_840 (Brk Mod ext), R_INF (Brk Mod ext), S_INF (Brk Mod ext), S_INF_840 (Brk Mod ext)	Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9951 Unit selection: - Expert list: 1 Default: -
p3862	Braking Module DC link fast discharge delay time / BM DC-dischg t_del		
A_INF (Brk Mod ext), A_INF_840 (Brk Mod ext), B_INF (Brk Mod ext), B_INF_840 (Brk Mod ext), R_INF (Brk Mod ext), S_INF (Brk Mod ext), S_INF_840 (Brk Mod ext)	Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 500 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4294967295 [ms]	Access level: 3 Function plan: 9951 Unit selection: - Expert list: 1 Default: 1000 [ms]
p3863	BI: Activating Braking Module DC link fast discharge / BM DC-dischg act		
A_INF (Brk Mod ext), A_INF_840 (Brk Mod ext), B_INF (Brk Mod ext), B_INF_840 (Brk Mod ext), R_INF (Brk Mod ext), S_INF (Brk Mod ext), S_INF_840 (Brk Mod ext)	Changeable: T Data type: Unsigned32 / Binary P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9951 Unit selection: - Expert list: 1 Default: 0
r3864.0...7	BO: Braking Module DC link fast discharge / BM DC link dischg		
A_INF (Brk Mod ext), A_INF_840 (Brk Mod ext), B_INF (Brk Mod ext), B_INF_840 (Brk Mod ext), R_INF (Brk Mod ext), S_INF (Brk Mod ext), S_INF_840 (Brk Mod ext)	Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9951 Unit selection: - Expert list: 1 Default: -
p3865[0...7]	BI: Braking Module pre-alarm I2t shutdown / BM pre-A I2t shutd		
A_INF (Brk Mod ext), A_INF_840 (Brk Mod ext), B_INF (Brk Mod ext), B_INF_840 (Brk Mod ext), R_INF (Brk Mod ext), S_INF (Brk Mod ext), S_INF_840 (Brk Mod ext)	Changeable: T Data type: Unsigned32 / Binary P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9951 Unit selection: - Expert list: 1 Default: 0

p3866[0...7]	BI: Braking Module fault / BM fault		
A_INF (Brk Mod ext), A_INF_840 (Brk Mod ext), B_INF (Brk Mod ext), B_INF_840 (Brk Mod ext), R_INF (Brk Mod ext), S_INF (Brk Mod ext), S_INF_840 (Brk Mod ext)	Changeable: T Data type: Unsigned32 / Binary P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9951 Unit selection: - Expert list: 1 Default: 0

p3870	Long stator configuration / Long stator config		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin

p3871	BI: Set long stator signal source commutation angle (p3872) / Set s_src com ang		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T Data type: Unsigned32 / Binary P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p3872	CI: Long stator signal source commutation angle / S s com angle		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2005 Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 3878[0]

p3873	BI: Long stator sig. source changeover to cl.-loop ctrl w/ enc. / S s ctrl w/ enc		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T Data type: Unsigned32 / Binary P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p3874	CI: Long stator signal source commutation angle oper. with encoder / S s com ang enc		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2005 Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 3879[0]

r3875.0...1	CO/BO: Long stator status word / Long stator ZSW		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r3875.0...1	CO/BO: Long stator status word / Long stator ZSW		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p3876	BI: Unpark long stator signal source 1 encoder / S s 1 enc unpark		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T Data type: Unsigned32 / Binary P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p3878	CO: Long stator commutation angle 1 / Com_angle 1		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: -180 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: p2005 Max: 180 [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0 [°]
p3879	CO: Long stator commutation angle 2 / Com_angle 2		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: -180 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: p2005 Max: 180 [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0 [°]
p3880	BI: ESM activation signal source / ESM act s s		
VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned32 / Binary P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 7033 Unit selection: - Expert list: 1 Default: 0

p3881 VECTOR_AC	ESM setpoint source / ESM setp_src Changeable: T Data type: Integer16 P group: Functions Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 7	Access level: 3 Function plan: 7033 Unit selection: - Expert list: 1 Default: 0
p3881 VECTOR	ESM setpoint source / ESM setp_src Changeable: T Data type: Integer16 P group: Functions Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 7	Access level: 3 Function plan: 7033 Unit selection: - Expert list: 1 Default: 0
p3882 VECTOR, VECTOR_AC	ESM setpoint source alternative / ESM setp_src alt Changeable: T Data type: Integer16 P group: Functions Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: 7033 Unit selection: - Expert list: 1 Default: 0
p3883 VECTOR, VECTOR_AC	BI: ESM direction of rotation signal source / ESM rot dir s s Changeable: T Data type: Unsigned32 / Binary P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 7033 Unit selection: - Expert list: 1 Default: 0
p3886 VECTOR, VECTOR_AC	CI: ESM setpoint TB30/TM31 analog input / ESM setp TB30TM31 Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2000 Max: -	Access level: 3 Function plan: 7033 Unit selection: - Expert list: 1 Default: 0
r3887[0...1] VECTOR, VECTOR_AC	ESM number of activations/faults / ESM act/fault qty Changeable: - Data type: Unsigned16 P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: 7033 Unit selection: - Expert list: 1 Default: -

p3888 VECTOR, VECTOR_AC	ESM reset number of activations/faults / ESM act/F qty r Changeable: T Data type: Unsigned8 P group: Functions Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 4 Function plan: 7033 Unit selection: - Expert list: 1 Default: 0
r3889.0...10 VECTOR, VECTOR_AC	CO/BO: ESM status word / ESM ZSW Changeable: - Data type: Unsigned32 P group: Functions Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 7033 Unit selection: - Expert list: 1 Default: -
p3900 HLA, HLA_840, HLA_DBSI	Completion of quick commissioning / Compl quick_comm Changeable: C2(1) Data type: Integer16 P group: Displays, signals Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p3900 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Completion of quick commissioning / Compl quick_comm Changeable: C2(1) Data type: Integer16 P group: Displays, signals Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p3900 VECTOR, VECTOR_AC	Completion of quick commissioning / Compl quick_comm Changeable: C2(1) Data type: Integer16 P group: Displays, signals Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p3900 A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	Completion of quick commissioning / Compl quick_comm Changeable: C2(1) Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0

p3901[0...n] A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Power unit EEPROM Vdc offset calibration / PU EEPROM Vdc offs Changeable: C1, C2(1), T Data type: FloatingPoint32 P group: All groups Not for motor type: - Min: -40.0 [V]	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 40.0 [V]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [V]
r3925[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Identification final display / Ident final_disp Changeable: - Data type: Unsigned32 P group: Motor Not for motor type: - Min: -	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r3925[0...n] VECTOR, VECTOR_AC	Identification final display / Ident final_disp Changeable: - Data type: Unsigned32 P group: Motor Not for motor type: - Min: -	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r3927[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor data identification induction motor data determined / MotID ASM dat det Changeable: - Data type: Unsigned32 P group: Motor identification Not for motor type: - Min: -	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r3927[0...n] VECTOR, VECTOR_AC	Motor data identification control word / MotID STW Changeable: - Data type: Unsigned32 P group: Motor identification Not for motor type: - Min: -	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r3928[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Motor data identification synchronous motor data determined / MotID PMSM dat det Changeable: - Data type: Unsigned32 P group: Motor identification Not for motor type: REL Min: -	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r3928[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Rotating measurement configuration / Rot meas config Changeable: - Data type: Unsigned16 P group: Motor identification Not for motor type: REL Min: -	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p3940[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Motor/controller data calculation / Mot/ctrl_data calc Changeable: C2, T Data type: Integer16 P group: All groups Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 3	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p3950 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Service parameter / Serv par Changeable: C1, T, U Data type: Unsigned16 P group: All groups Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p3961 CU_S_AC_DP, CU_S_AC_PN	Fan operating hours counter / Fan op hr counter Changeable: T Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: 0.000 [h]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 340.28235E36 [h]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [h]
r3974 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Drive unit status word / Drv_unit ZSW Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r3977 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	BICO counter topology / BICO counter topo Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -

r3978 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	BICO CounterDevice / BICO CounterDevice Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r3979 A_INF, A_INF_840, B_INF, B_INF_840, CU_LINK, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, HUB, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41, TM54F_MA, TM54F_SL, VECTOR, VECTOR_AC	BICO counter drive object / BICO counter DO Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p3981 All objects	Acknowledge drive object faults / Ackn DO faults Changeable: T, U Data type: Unsigned8 P group: Messages Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: 8060 Unit selection: - Expert list: 1 Default: 0
p3985 A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Master control mode selection / PcCtrl mode select Changeable: T, U Data type: Integer16 P group: Setpoints Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
r3986 All objects	Number of parameters / Param count Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r3988[0...1] CU_I_840	Boot state / Boot_state Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10800	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r3988[0...1] CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Boot state / Boot_state Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10800	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r3996[0...1] All objects	Parameter write inhibit status / Par_write inhib st Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r3998 HLA, HLA_840, HLA_DBSI	First device commissioning / First dev_comm Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r3998[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	First drive commissioning / First drv_comm Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r3998 A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	First infeed commissioning / First inf_comm Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r4021 SERVO (Dig IO), SERVO_840 (Dig IO), SERVO_DBSI (Dig IO)	Digital inputs terminal actual value / DI actual value Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2201 Unit selection: - Expert list: 1 Default: -
r4021 TM15DI_DO	TM15DI/DO digital inputs, terminal actual value / TM15D DI act val Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 9400, 9401, 9402 Unit selection: - Expert list: 1 Default: -
r4021 TM31	TM31 digital inputs terminal actual value / TM31 DI act value Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 9549, 9550, 9552, 9560, 9562 Unit selection: - Expert list: 1 Default: -
r4021 TM41	TM41 digital inputs terminal actual value / TM41 DI act val Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r4021 TB30	TB30 digital inputs terminal actual value / TB30 DI act value Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 9100 Unit selection: - Expert list: 1 Default: -
r4022.0...1 SERVO (Dig IO), SERVO_840 (Dig IO), SERVO_DBSI (Dig IO)	CO/BO: Digital inputs status / DI status Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2201 Unit selection: - Expert list: 1 Default: -

r4022.0...23 TM15DI_DO	CO/BO: TM15DI/DO digital inputs status / TM15D DI status Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9399, 9400, 9401, 9402 Unit selection: - Expert list: 1 Default: -
r4022.0...11 TM31	CO/BO: TM31 digital inputs status / TM31 DI status Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9549, 9550, 9552, 9560, 9562 Unit selection: - Expert list: 1 Default: -
r4022.0...11 TM41	CO/BO: TM41 digital inputs status / TM41 DI status Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9659, 9660, 9661, 9662 Unit selection: - Expert list: 1 Default: -
r4022.0...3 TB30	CO/BO: TB30 digital inputs status / TB30 DI status Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9099, 9100 Unit selection: - Expert list: 1 Default: -
r4023.0...1 SERVO (Dig IO), SERVO_840 (Dig IO), SERVO_DBSI (Dig IO)	BO: Digital inputs status inverted / DI status inv Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2201 Unit selection: - Expert list: 1 Default: -

r4023.0...23 TM15DI_DO	CO/BO: TM15DI/DO digital inputs status inverted / TM15D DI stat inv Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9399, 9400, 9401, 9402 Unit selection: - Expert list: 1 Default: -
r4023.0...11 TM31	CO/BO: TM31 digital inputs status inverted / TM31 DI status inv Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9549, 9550, 9552, 9560, 9562 Unit selection: - Expert list: 1 Default: -
r4023.0...11 TM41	BO: TM41 digital inputs status inverted / TM41 DI status inv Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9659, 9660, 9661, 9662 Unit selection: - Expert list: 1 Default: -
r4023.0...3 TB30	BO: TB30 digital inputs status inverted / TB30 DI status inv Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9099, 9100 Unit selection: - Expert list: 1 Default: -
r4024 TM15DI_DO	CO: TM15DI/DO digital inputs 16 ... 23 status / TM15D DI 16-23 St Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9402 Unit selection: - Expert list: 1 Default: -

r4025 TM15DI_DO	CO: TM15DI/DO digital inputs 16 ... 23 status inverted / TM15D DI 16-23 inv Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9402 Unit selection: - Expert list: 1 Default: -
p4028 SERVO (Dig IO), SERVO_840 (Dig IO), SERVO_DBSI (Dig IO)	Set input or output / DI or DO Changeable: T Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2201 Unit selection: - Expert list: 1 Default: 0000 bin
p4028 TM15	TM15 set input or output / TM15 DI or DO Changeable: T Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 9389 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
p4028 TM15DI_DO	TM15DI/DO set input or output / TM15D DI or DO Changeable: T Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9399, 9400, 9401, 9402 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
p4028 TM17	TM17 set input or output / TM17 DI or DO Changeable: T Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 9419 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin

p4028 TM31	TM31 set input or output / TM31 DI or DO Changeable: T Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9549, 9560, 9562 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
p4028 TM41	TM41 set input or output / TM41 DI or DO Changeable: T Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9659, 9661, 9662 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
p4030 TM15DI_DO	BI: TM15DI/DO signal source for terminal DI/DO 0 / TM15D s_s DI/DO 0 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9399, 9400 Unit selection: - Expert list: 1 Default: 0
p4030 TM31	BI: TM31 signal source for terminal DO 0 / TM31 s_src DO 0 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9549, 9556 Unit selection: - Expert list: 1 Default: 0
p4030 TB30	BI: TB30 signal source for terminal DO 0 / TB30 s_src DO 0 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9099, 9102 Unit selection: - Expert list: 1 Default: 0
p4031 TM15DI_DO	BI: TM15DI/DO signal source for terminal DI/DO 1 / TM15D s_s DI/DO 1 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9400 Unit selection: - Expert list: 1 Default: 0

p4031 TM31	BI: TM31 signal source for terminal DO 1 / TM31 s_src DO 1 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9549, 9556 Unit selection: - Expert list: 1 Default: 0
p4031 TB30	BI: TB30 signal source for terminal DO 1 / TB30 s_src DO 1 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9102 Unit selection: - Expert list: 1 Default: 0
p4032 TM15DI_DO	BI: TM15DI/DO signal source for terminal DI/DO 2 / TM15D s_s DI/DO 2 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9400 Unit selection: - Expert list: 1 Default: 0
p4032 TB30	BI: TB30 signal source for terminal DO 2 / TB30 s_src DO 2 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9102 Unit selection: - Expert list: 1 Default: 0
p4033 TM15DI_DO	BI: TM15DI/DO signal source for terminal DI/DO 3 / TM15D s_s DI/DO 3 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9400 Unit selection: - Expert list: 1 Default: 0
p4033 TB30	BI: TB30 signal source for terminal DO 3 / TB30 s_src DO 3 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9099, 9102 Unit selection: - Expert list: 1 Default: 0

p4034 TM15DI_DO	BI: TM15DI/DO signal source for terminal DI/DO 4 / TM15D s_s DI/DO 4 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9400 Unit selection: - Expert list: 1 Default: 0
p4035 TM15DI_DO	BI: TM15DI/DO signal source for terminal DI/DO 5 / TM15D s_s DI/DO 5 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9400 Unit selection: - Expert list: 1 Default: 0
p4036 TM15DI_DO	BI: TM15DI/DO signal source for terminal DI/DO 6 / TM15D s_s DI/DO 6 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9400 Unit selection: - Expert list: 1 Default: 0
p4037 TM15DI_DO	BI: TM15DI/DO signal source for terminal DI/DO 7 / TM15D s_s DI/DO 7 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9400 Unit selection: - Expert list: 1 Default: 0
p4038 SERVO (Dig IO), SERVO_840 (Dig IO), SERVO_DBSI (Dig IO)	BI: Signal source for terminal DI/DO 0 distributed / S_s DI/DO 0 dis Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2201 Unit selection: - Expert list: 1 Default: 0
p4038 TM15DI_DO	BI: TM15DI/DO signal source for terminal DI/DO 8 / TM15D s_s DI/DO 8 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9401 Unit selection: - Expert list: 1 Default: 0

p4038	BI: TM31 signal source for terminal DI/DO 8 / TM31 s_s DI/DO8		
TM31	Changeable: T, U	Calculation: -	Access level: 1
	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: 9549, 9560
	P group: Commands	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0

p4038	BI: TM41 signal source for terminal DI/DO 0 / TM41 s_s DI/DO 0		
TM41	Changeable: T, U	Calculation: -	Access level: 1
	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: 9661
	P group: Commands	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0

p4039	BI: Signal source for terminal DI/DO 1 distributed / S_s DI/DO 1 dis		
SERVO (Dig IO), SERVO_840 (Dig IO), SERVO_DBSI (Dig IO)	Changeable: T, U	Calculation: -	Access level: 1
	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: 2201
	P group: Commands	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0

p4039	BI: TM15DI/DO signal source for terminal DI/DO 9 / TM15D s_s DI/DO 9		
TM15DI_DO	Changeable: T, U	Calculation: -	Access level: 1
	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: 9401
	P group: Commands	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0

p4039	BI: TM31 signal source for terminal DI/DO 9 / TM31 S_src DI/DO9		
TM31	Changeable: T, U	Calculation: -	Access level: 1
	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: 9560
	P group: Commands	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0

p4039	BI: TM41 signal source for terminal DI/DO 1 / TM41 s_s DI/DO 1		
TM41	Changeable: T, U	Calculation: -	Access level: 1
	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: 9661
	P group: Commands	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0

p4040 TM15DI_DO	BI: TM15DI/DO signal source for terminal DI/DO 10 / TM15D s_s DI/DO 10 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9401 Unit selection: - Expert list: 1 Default: 0
p4040 TM31	BI: TM31 signal source for terminal DI/DO 10 / TM31 S_src DI/DO10 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9562 Unit selection: - Expert list: 1 Default: 0
p4040 TM41	BI: TM41 signal source for terminal DI/DO 2 / TM41 s_s DI/DO 2 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9662 Unit selection: - Expert list: 1 Default: 0
p4041 TM15DI_DO	BI: TM15DI/DO signal source for terminal DI/DO 11 / TM15D s_s DI/DO 11 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9401 Unit selection: - Expert list: 1 Default: 0
p4041 TM31	BI: TM31 signal source for terminal DI/DO 11 / TM31 s_s DI/DO 11 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9549, 9562 Unit selection: - Expert list: 1 Default: 0
p4041 TM41	BI: TM41 signal source for terminal DI/DO 3 / TM41 s_s DI/DO 3 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9662 Unit selection: - Expert list: 1 Default: 0

p4042 TM15DI_DO	BI: TM15DI/DO signal source for terminal DI/DO 12 / TM15D s_s DI/DO 12 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9401 Unit selection: - Expert list: 1 Default: 0
p4043 TM15DI_DO	BI: TM15DI/DO signal source for terminal DI/DO 13 / TM15D s_s DI/DO 13 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9401 Unit selection: - Expert list: 1 Default: 0
p4044 TM15DI_DO	BI: TM15DI/DO signal source for terminal DI/DO 14 / TM15D s_s DI/DO 14 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9401 Unit selection: - Expert list: 1 Default: 0
p4045 TM15DI_DO	BI: TM15DI/DO signal source for terminal DI/DO 15 / TM15D s_s DI/DO 15 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9401 Unit selection: - Expert list: 1 Default: 0
p4046 TM31	TM31 digital outputs limit current / TM31 DO limit curr Changeable: T Data type: Integer16 P group: Commands Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: 9560 Unit selection: - Expert list: 1 Default: 0
r4047 SERVO (Dig IO), SERVO_840 (Dig IO), SERVO_DBSI (Dig IO)	Digital outputs status / DO status Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2201 Unit selection: - Expert list: 1 Default: -

r4047 TM15DI_DO	TM15DI/DO digital outputs status / TM15D DO status Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9400, 9401, 9402 Unit selection: - Expert list: 1 Default: -
r4047 TM31	TM31 digital outputs status / TM31 DO status Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9556, 9560, 9562 Unit selection: - Expert list: 1 Default: -
r4047 TM41	TM41 digital outputs status / TM41 DO status Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r4047 TB30	TB30 digital outputs status / TB30 DO status Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9102 Unit selection: - Expert list: 1 Default: -
p4048 SERVO (Dig IO), SERVO_840 (Dig IO), SERVO_DBSI (Dig IO)	Invert digital outputs / DO inv Changeable: T, U Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 2201 Unit selection: - Expert list: 1 Default: 0000 bin
p4048 TM15	TM15 invert digital inputs/outputs / TM15 DI/DO inv Changeable: T, U Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin

p4048 TM15DI_DO	TM15DI/DO invert digital outputs / TM15D DO inv Changeable: T, U Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9400, 9401, 9402 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
p4048 TM17	TM17 invert digital inputs/outputs / TM17 DI/DO inv Changeable: T, U Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
p4048 TM31	TM31 invert digital outputs / TM31 DO inv Changeable: T, U Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9556, 9560, 9562 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
p4048 TM41	TM41 invert digital outputs / TM41 DO inv Changeable: T, U Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
p4048 TB30	TB30 invert digital outputs / TB30 DO inv Changeable: T, U Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9102 Unit selection: - Expert list: 1 Default: 0000 bin
p4049 TM15	TM15 digital inputs/outputs set the mode / TM15 DI/DO mode Changeable: T Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin

p4049 TM17	TM17 digital inputs/outputs set the mode / TM17 DI/DO mode Changeable: T Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
r4052[0...1] TM31	CO: TM31 analog inputs current input voltage/current / TM31 AI U/I_inp Changeable: - Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9566, 9568 Unit selection: - Expert list: 1 Default: -
r4052[0] TM41	CO: TM41 analog inputs actual input voltage / TM41 AI U_inp act Changeable: - Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [V]	Access level: 1 Function plan: 9663 Unit selection: - Expert list: 1 Default: - [V]
r4052[0...1] TB30	CO: TB30 analog inputs actual input voltage / TB30 AI U_inp act Changeable: - Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [V]	Access level: 1 Function plan: 9104 Unit selection: - Expert list: 1 Default: - [V]
p4053[0...1] TM31	TM31 analog inputs smoothing time constant / TM31 AI T_smooth Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: 0.0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.0 [ms]	Access level: 1 Function plan: 9566, 9568 Unit selection: - Expert list: 1 Default: 0.0 [ms]
p4053[0] TM41	TM41 analog inputs smoothing time constant / TM41 AI T_smooth Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: 0.0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.0 [ms]	Access level: 1 Function plan: 9663 Unit selection: - Expert list: 1 Default: 0.0 [ms]

p4053[0...1] TB30	TB30 analog inputs smoothing time constant / TB30 AI T_smooth Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: 0.0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.0 [ms]	Access level: 1 Function plan: 9104 Unit selection: - Expert list: 1 Default: 0.0 [ms]
r4055[0...1] TM31	CO: TM31 analog inputs actual value in percent / TM31 AI value in % Changeable: - Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 1 Function plan: 9549, 9566, 9568 Unit selection: - Expert list: 1 Default: - [%]
r4055[0] TM41	CO: TM41 analog inputs actual value in percent / TM41 AI value in % Changeable: - Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 1 Function plan: 9663 Unit selection: - Expert list: 1 Default: - [%]
r4055[0...1] TB30	CO: TB30 analog inputs actual value in percent / TB30 AI value in % Changeable: - Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 1 Function plan: 9099, 9104 Unit selection: - Expert list: 1 Default: - [%]
p4056[0...1] TM31	TM31 analog inputs type / TM31 AI type Changeable: T, U Data type: Integer16 P group: Terminals Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 5	Access level: 1 Function plan: 9566, 9568 Unit selection: - Expert list: 1 Default: 4
r4056 TM41	TM41 analog input type / TM41 AI type Changeable: - Data type: Integer16 P group: Terminals Not for motor type: - Min: 4	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -

r4056[0...1] TB30	TB30 analog inputs type / TB30 AI type Changeable: - Data type: Integer16 P group: Terminals Not for motor type: - Min: 4	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
p4057[0...1] TM31	TM31 analog inputs characteristic value x1 / TM31 AI char x1 Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -20.000	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20.000	Access level: 2 Function plan: 9566, 9568 Unit selection: - Expert list: 1 Default: 0.000
p4057[0] TM41	TM41 analog input characteristic value x1 / TM41 AI char x1 Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -20.000 [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20.000 [V]	Access level: 2 Function plan: 9663 Unit selection: - Expert list: 1 Default: 0.000 [V]
p4057[0...1] TB30	TB30 analog inputs characteristic value x1 / TB30 AI char x1 Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -11.000 [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 11.000 [V]	Access level: 2 Function plan: 9104 Unit selection: - Expert list: 1 Default: 0.000 [V]
p4058[0...1] TM31	TM31 analog inputs characteristic value y1 / TM31 AI char y1 Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -1000.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.00 [%]	Access level: 2 Function plan: 9566, 9568 Unit selection: - Expert list: 1 Default: 0.00 [%]
p4058[0] TM41	TM41 analog input characteristic value y1 / TM41 AI char y1 Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -1000.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.00 [%]	Access level: 2 Function plan: 9663 Unit selection: - Expert list: 1 Default: 0.00 [%]

p4058[0...1] TB30	TB30 analog inputs characteristic value y1 / TB30 AI char y1 Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -1000.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.00 [%]	Access level: 2 Function plan: 9104 Unit selection: - Expert list: 1 Default: 0.00 [%]
p4059[0...1] TM31	TM31 analog inputs characteristic value x2 / TM31 AI char x2 Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -20.000	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20.000	Access level: 2 Function plan: 9566, 9568 Unit selection: - Expert list: 1 Default: 10.000
p4059[0] TM41	TM41 analog input characteristic value x2 / TM41 AI char x2 Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -20.000 [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20.000 [V]	Access level: 2 Function plan: 9663 Unit selection: - Expert list: 1 Default: 10.000 [V]
p4059[0...1] TB30	TB30 analog inputs characteristic value x2 / TB30 AI char x2 Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -11.000 [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 11.000 [V]	Access level: 2 Function plan: 9104 Unit selection: - Expert list: 1 Default: 10.000 [V]
p4060[0...1] TM31	TM31 analog inputs characteristic value y2 / TM31 AI char y2 Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -1000.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.00 [%]	Access level: 2 Function plan: 9566, 9568 Unit selection: - Expert list: 1 Default: 100.00 [%]
p4060[0] TM41	TM41 analog input characteristic value y2 / TM41 AI char y2 Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -1000.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.00 [%]	Access level: 2 Function plan: 9663 Unit selection: - Expert list: 1 Default: 100.00 [%]

p4060[0...1] TB30	TB30 analog inputs characteristic value y2 / TB30 AI char y2 Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -1000.00 [%] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.00 [%] Access level: 2 Function plan: 9104 Unit selection: - Expert list: 1 Default: 100.00 [%]
p4061[0...1] TM31	TM31 analog inputs wire breakage monitoring response threshold / TM31 WireBrkThresh Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: 0.00 [mA] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20.00 [mA] Access level: 2 Function plan: 9566, 9568 Unit selection: - Expert list: 1 Default: 2.00 [mA]
p4062[0...1] TM31	TM31 analog inputs wire breakage monitoring delay time / TM31 wirebrk t_del Changeable: T, U Data type: Unsigned16 P group: Terminals Not for motor type: - Min: 0 [ms] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000 [ms] Access level: 2 Function plan: 9566, 9568 Unit selection: - Expert list: 1 Default: 100 [ms]
p4063[0...1] TM31	TM31 analog inputs offset / TM31 AI offset Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -20.000 Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20.000 Access level: 2 Function plan: 9566, 9568 Unit selection: - Expert list: 1 Default: 0.000
p4063[0] TM41	TM41 analog input offset / TM41 AI offset Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -20.000 [V] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20.000 [V] Access level: 2 Function plan: 9663 Unit selection: - Expert list: 1 Default: 0.000 [V]
p4063[0...1] TB30	TB30 analog inputs offset / TB30 AI offset Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -20.000 [V] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20.000 [V] Access level: 2 Function plan: 9104 Unit selection: - Expert list: 1 Default: 0.000 [V]

p4066[0...1]	TM31 analog inputs activate absolute value generation / TM31 AI absVal act		
TM31	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: 9566, 9568
	P group: Terminals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	1	0

p4066[0]	TM41 analog input activate absolute value generation / TM41 AI absVal act		
TM41	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: 9663
	P group: Terminals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	1	0

p4066[0...1]	TB30 analog inputs activate absolute value generation / TB30 AI absVal act		
TB30	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: 9104
	P group: Terminals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	1	0

p4067[0...1]	BI: TM31 analog inputs invert signal source / TM31 AI inv s_src		
TM31	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: 9566, 9568
	P group: Terminals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0

p4067[0]	BI: TM41 analog input invert signal source / TM41 AI inv s s		
TM41	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: 9663
	P group: Terminals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0

p4067[0...1]	BI: TB30 analog inputs invert signal source / TB30 AI inv s_src		
TB30	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: 9104
	P group: Terminals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0

p4068[0...1] TM31	TM31 analog inputs window to suppress noise / TM31 AI window Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20.00 [%]	Access level: 3 Function plan: 9566, 9568 Unit selection: - Expert list: 1 Default: 0.00 [%]
p4068[0] TM41	TM41 analog input window to suppress noise / TM41 AI window Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20.00 [%]	Access level: 3 Function plan: 9663 Unit selection: - Expert list: 1 Default: 0.00 [%]
p4068[0...1] TB30	TB30 analog inputs noise suppression window / TB30 AI window Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20.00 [%]	Access level: 3 Function plan: 9104 Unit selection: - Expert list: 1 Default: 0.00 [%]
p4069[0...1] TM31	BI: TM31 analog inputs signal source for enable / TM31 AI enable Changeable: T, U Data type: Unsigned32 / Binary P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9566, 9568 Unit selection: - Expert list: 1 Default: 1
p4069[0] TM41	BI: TM41 analog input signal source for enable / TM41 AI enable Changeable: T, U Data type: Unsigned32 / Binary P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9663 Unit selection: - Expert list: 1 Default: 1
p4069[0...1] TB30	BI: TB30 analog inputs signal source for enable / TB30 AI enable Changeable: T, U Data type: Unsigned32 / Binary P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9104 Unit selection: - Expert list: 1 Default: 1

p4071[0...1] TM31	CI: TM31 analog outputs signal source / TM31 AO s_src Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: -	Access level: 1 Function plan: 9549, 9572 Unit selection: - Expert list: 1 Default: 0
p4071[0...1] TB30	CI: TB30 analog outputs signal source / TB30 AO s_src Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: -	Access level: 1 Function plan: 9099, 9106 Unit selection: - Expert list: 1 Default: 0
r4072[0...1] TM31	TM31 analog outputs output value currently referred / TM31 AO outp_val Changeable: - Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%]	Access level: 1 Function plan: 9572 Unit selection: - Expert list: 1 Default: - [%]
r4072[0...1] TB30	TB30 analog outputs output value currently referred / TB30 AO outp_val Changeable: - Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%]	Access level: 1 Function plan: 9106 Unit selection: - Expert list: 1 Default: - [%]
p4073[0...1] TM31	TM31 analog outputs smoothing time constant / TM31 AO T_smooth Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: 0.0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.0 [ms]	Access level: 1 Function plan: 9572 Unit selection: - Expert list: 1 Default: 0.0 [ms]
p4073[0...1] TB30	TB30 analog outputs smoothing time constant / TB30 AO T_smooth Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: 0.0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.0 [ms]	Access level: 1 Function plan: 9106 Unit selection: - Expert list: 1 Default: 0.0 [ms]

r4074[0...1] TM31	TM31 analog outputs current output voltage/current / TM31 AO U/I_outp Changeable: - Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: -	Access level: 1 Function plan: 9572 Unit selection: - Expert list: 1 Default: -
r4074[0...1] TB30	TB30 analog outputs actual output voltage / TB30 AO U_outp Changeable: - Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [V]	Access level: 1 Function plan: 9106 Unit selection: - Expert list: 1 Default: - [V]
p4075[0...1] TM31	TM31 analog outputs activate absolute value generation / TM31 AO absVal act Changeable: T Data type: Integer16 P group: Terminals Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: 9572 Unit selection: - Expert list: 1 Default: 0
p4075[0...1] TB30	TB30 analog outputs activate absolute value generation / TB30 AO absVal act Changeable: T Data type: Integer16 P group: Terminals Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: 9106 Unit selection: - Expert list: 1 Default: 0
p4076[0...1] TM31	TM31 analog outputs type / TM31 AO type Changeable: T, U Data type: Integer16 P group: Terminals Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4	Access level: 1 Function plan: 9572 Unit selection: - Expert list: 1 Default: 4
r4076[0...1] TB30	TB30 analog outputs type / TB30 AO type Changeable: - Data type: Integer16 P group: Terminals Not for motor type: - Min: 4	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -

p4077[0...1]	TM31 analog outputs characteristic value x1 / TM31 AO char x1		
TM31	Changeable: T, U	Calculation: -	Access level: 2
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 9572
	P group: Terminals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-1000.00 [%]	1000.00 [%]	0.00 [%]
p4077[0...1]	TB30 analog outputs characteristic value x1 / TB30 AO char x1		
TB30	Changeable: T, U	Calculation: -	Access level: 2
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 9106
	P group: Terminals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-1000.00 [%]	1000.00 [%]	0.00 [%]
p4078[0...1]	TM31 analog outputs characteristic value y1 / TM31 AO char y1		
TM31	Changeable: T, U	Calculation: -	Access level: 2
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 9572
	P group: Terminals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-20.000	20.000	0.000
p4078[0...1]	TB30 analog outputs characteristic value y1 / TB30 AO char y1		
TB30	Changeable: T, U	Calculation: -	Access level: 2
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 9106
	P group: Terminals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-11.000 [V]	11.000 [V]	0.000 [V]
p4079[0...1]	TM31 analog outputs characteristic value x2 / TM31 AO char x2		
TM31	Changeable: T, U	Calculation: -	Access level: 2
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 9572
	P group: Terminals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-1000.00 [%]	1000.00 [%]	100.00 [%]
p4079[0...1]	TB30 analog outputs characteristic value x2 / TB30 AO char x2		
TB30	Changeable: T, U	Calculation: -	Access level: 2
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 9106
	P group: Terminals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-1000.00 [%]	1000.00 [%]	100.00 [%]

p4080[0...1]	TM31 analog outputs characteristic value y2 / TM31 AO char y2		
TM31	Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -20.000	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20.000	Access level: 2 Function plan: 9572 Unit selection: - Expert list: 1 Default: 10.000
p4080[0...1]	TB30 analog outputs characteristic value y2 / TB30 AO char y2		
TB30	Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -11.000 [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 11.000 [V]	Access level: 2 Function plan: 9106 Unit selection: - Expert list: 1 Default: 10.000 [V]
p4082[0...1]	BI: TM31 analog outputs invert signal source / TM31 AO inv s_src		
TM31	Changeable: T, U Data type: Unsigned32 / Binary P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9572 Unit selection: - Expert list: 1 Default: 0
p4082[0...1]	BI: TB30 analog outputs invert signal source / TB30 AO inv s_src		
TB30	Changeable: T, U Data type: Unsigned32 / Binary P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9106 Unit selection: - Expert list: 1 Default: 0
p4083[0...1]	TM31 analog outputs offset / TM31 AO offset		
TM31	Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -20.000	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20.000	Access level: 1 Function plan: 9572 Unit selection: - Expert list: 1 Default: 0.000
p4083[0...1]	TB30 analog outputs offset / TB30 AO offset		
TB30	Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -10.000	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10.000	Access level: 1 Function plan: 9106 Unit selection: - Expert list: 1 Default: 0.000

p4086 TM15DI_DO	BI: TM15DI/DO signal source for terminal DI/DO 16 / TM15D s_s DI/DO 16 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9402 Unit selection: - Expert list: 1 Default: 0
p4087 TM15DI_DO	BI: TM15DI/DO signal source for terminal DI/DO 17 / TM15D s_s DI/DO 17 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9402 Unit selection: - Expert list: 1 Default: 0
p4088 TM15DI_DO	BI: TM15DI/DO signal source for terminal DI/DO 18 / TM15D s_s DI/DO 18 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9402 Unit selection: - Expert list: 1 Default: 0
p4089 TM15DI_DO	BI: TM15DI/DO signal source for terminal DI/DO 19 / TM15D s_s DI/DO 19 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9402 Unit selection: - Expert list: 1 Default: 0
p4090 TM15DI_DO	BI: TM15DI/DO signal source for terminal DI/DO 20 / TM15D s_s DI/DO 20 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9402 Unit selection: - Expert list: 1 Default: 0
p4091 TM15DI_DO	BI: TM15DI/DO signal source for terminal DI/DO 21 / TM15D s_s DI/DO 21 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9402 Unit selection: - Expert list: 1 Default: 0

p4092 TM15DI_DO	BI: TM15DI/DO signal source for terminal DI/DO 22 / TM15D s_s DI/DO 22 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9402 Unit selection: - Expert list: 1 Default: 0
p4093 TM15DI_DO	BI: TM15DI/DO signal source for terminal DI/DO 23 / TM15D s_s DI/DO 23 Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9402 Unit selection: - Expert list: 1 Default: 0
r4094.0...23 TM15DI_DO	BO: TM15 digital inputs status inverted raw data internal / TM15 DI st raw dat Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p4095 SERVO (Dig IO), SERVO_840 (Dig IO), SERVO_DBSI (Dig IO)	S120M digital inputs simulation mode / S120M DI sim_mode Changeable: T, U Data type: Unsigned32 P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
p4095 TM15DI_DO	TM15DI/DO digital inputs simulation mode / TM15D DI sim_mode Changeable: T, U Data type: Unsigned32 P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 9400, 9401, 9402 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
p4095 TM31	TM31 digital inputs simulation mode / TM31 DI sim_mode Changeable: T, U Data type: Unsigned32 P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 9549, 9550, 9552, 9560, 9562 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin

p4095 TM41	TM41 digital inputs simulation mode / TM41 DI sim_mode Changeable: T, U Data type: Unsigned32 P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
p4095 TB30	TB30 digital inputs simulation mode / TB30 DI sim_mode Changeable: T, U Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 9099, 9100 Unit selection: - Expert list: 1 Default: 0000 bin
p4096 SERVO (Dig IO), SERVO_840 (Dig IO), SERVO_DBSI (Dig IO)	S120M digital inputs simulation mode setpoint / S120M DI sim setp Changeable: T, U Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
p4096 TM15DI_DO	TM15DI/DO digital inputs simulation mode, setpoint / TM15D DI sim setp Changeable: T, U Data type: Unsigned32 P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 9400, 9401, 9402 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
p4096 TM31	TM31 digital inputs simulation mode setpoint / TM31 DI sim setp Changeable: T, U Data type: Unsigned32 P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 9549, 9550, 9552, 9560, 9562 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
p4096 TM41	TM41 digital inputs simulation mode setpoint / TM41 DI sim setp Changeable: T, U Data type: Unsigned32 P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin

p4096 TB30	TB30 digital inputs simulation mode setpoint / TB30 DI sim setp Changeable: T, U Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 9099, 9100 Unit selection: - Expert list: 1 Default: 0000 bin
p4097[0...1] TM31	TM31 analog inputs simulation mode / TM31 AI sim_mode Changeable: T, U Data type: Integer16 P group: Terminals Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: 9566, 9568 Unit selection: - Expert list: 1 Default: 0
p4097[0] TM41	TM41 analog input simulation mode / TM41 AI sim_mode Changeable: T, U Data type: Integer16 P group: Terminals Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: 9663 Unit selection: - Expert list: 1 Default: 0
p4097[0...1] TB30	TB30 analog inputs simulation mode / TB30 AI sim_mode Changeable: T, U Data type: Integer16 P group: Terminals Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: 9104 Unit selection: - Expert list: 1 Default: 0
p4098[0...1] TM31	TM31 analog inputs simulation mode setpoint / TM31 AI sim setp Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -20.000	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20.000	Access level: 2 Function plan: 9566, 9568 Unit selection: - Expert list: 1 Default: 0.000
p4098[0] TM41	TM41 analog input simulation mode setpoint / TM41 AI sim setp Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -20.000 [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20.000 [V]	Access level: 2 Function plan: 9663 Unit selection: - Expert list: 1 Default: 0.000 [V]

p4098[0...1] TB30	TB30 analog inputs simulation mode setpoint / TB30 AI sim setp Changeable: T, U Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: -11.000 [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 11.000 [V]	Access level: 2 Function plan: 9104 Unit selection: - Expert list: 1 Default: 0.000 [V]
p4099 SERVO (Dig IO), SERVO_840 (Dig IO), SERVO_DBSI (Dig IO)	Inputs/outputs sampling time / I/O t_sample Changeable: C1(3) Data type: FloatingPoint32 P group: Commands Not for motor type: - Min: 125.00 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 5000.00 [μs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 4000.00 [μs]
p4099 TM15	TM15 inputs/outputs sampling time / TM15 I/O t_sample Changeable: C1(3) Data type: FloatingPoint32 P group: Commands Not for motor type: - Min: 31.25 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 500.00 [μs]	Access level: 3 Function plan: 9389 Unit selection: - Expert list: 1 Default: 125.00 [μs]
p4099 TM15DI_DO	TM15DI/DO inputs/outputs sampling time / TM15DI I/O t_sample Changeable: C1(3) Data type: FloatingPoint32 P group: Commands Not for motor type: - Min: 0.00 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 5000.00 [μs]	Access level: 3 Function plan: 9399, 9400 Unit selection: - Expert list: 1 Default: 4000.00 [μs]
p4099 TM17	TM17 inputs/outputs sampling time / TM17 I/O t_sample Changeable: C1(3) Data type: FloatingPoint32 P group: Commands Not for motor type: - Min: 31.25 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 500.00 [μs]	Access level: 3 Function plan: 9419 Unit selection: - Expert list: 1 Default: 125.00 [μs]
p4099[0...2] TM31	TM31 inputs/outputs sampling time / TM31 I/O t_sample Changeable: C1(3) Data type: FloatingPoint32 P group: Commands Not for motor type: - Min: 0.00 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 5000.00 [μs]	Access level: 3 Function plan: 9549, 9550 Unit selection: - Expert list: 1 Default: 4000.00 [μs]

p4099[0...3] TM41	TM41 inputs/outputs sampling time / TM41 I/O t_sample Changeable: C1(3) Data type: FloatingPoint32 P group: Commands Not for motor type: - Min: 0.00 [µs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 5000.00 [µs]	Access level: 3 Function plan: 9659, 9660 Unit selection: - Expert list: 1 Default: [0] 4000.00 [µs] [1] 4000.00 [µs] [2] 0.00 [µs] [3] 125.00 [µs]
p4099[0...2] TB30	TB30 inputs/outputs sampling time / TB30 I/O t_sample Changeable: C1(3) Data type: FloatingPoint32 P group: Commands Not for motor type: - Min: 0.00 [µs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 5000.00 [µs]	Access level: 3 Function plan: 9099, 9100 Unit selection: - Expert list: 1 Default: [0] 4000.00 [µs] [1] 4000.00 [µs] [2] 4000.00 [µs]
p4100 SERVO (Spin_diag), SERVO_840 (Spin_diag), SERVO_AC (Spin_diag), SERVO_DBSI (Spin_diag)	Spindle supplementary temperature sensor type / Supp_temp sens typ Changeable: T Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p4100[0...3] TM120	TM120 temperature evaluation, sensor type / TM120 sensor type Changeable: T Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6	Access level: 1 Function plan: 9605, 9606 Unit selection: - Expert list: 1 Default: 1
p4100[0...11] TM150	TM150 sensor type / TM150 sensor type Changeable: T Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6	Access level: 1 Function plan: 9626, 9627 Unit selection: - Expert list: 1 Default: 5

p4100 TM31	TM31 sensor type / TM31 sensor type Changeable: T Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6	Access level: 1 Function plan: 9576 Unit selection: - Expert list: 1 Default: 0
r4101[0...3] TM120	TM120 sensor resistance / TM120 R_sensor Changeable: - Data type: Unsigned16 P group: Terminals Not for motor type: - Min: - [ohm]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [ohm]	Access level: 3 Function plan: 9605, 9606 Unit selection: - Expert list: 1 Default: - [ohm]
r4101[0...11] TM150	TM150 sensor resistance / TM150 R_sensor Changeable: - Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: - [ohm]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [ohm]	Access level: 3 Function plan: 9626, 9627 Unit selection: - Expert list: 1 Default: - [ohm]
r4101 TM31	TM31 sensor resistance / TM31 R_sensor Changeable: - Data type: Unsigned16 P group: Terminals Not for motor type: - Min: - [ohm]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [ohm]	Access level: 3 Function plan: 9576 Unit selection: - Expert list: 1 Default: - [ohm]
p4102[0...1] SERVO (Spin_diag), SERVO_840 (Spin_diag), SERVO_AC (Spin_diag), SERVO_DBSI (Spin_diag)	Spindle supplementary temperature fault threshold/alarm thresh. / Suppl_temp F/A_thr Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: -300.0 [°C]	Calculation: - Dynamic index: - Unit group: 21_1 Scaling: - Max: 9999.0 [°C]	Access level: 1 Function plan: - Unit selection: p0505 Expert list: 1 Default: [0] 120.0 [°C] [1] 155.0 [°C]
p4102[0...7] TM120	TM120 fault threshold/alarm threshold / TM120 F/A_thresh Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: -48 [°C]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 251 [°C]	Access level: 1 Function plan: 9605, 9606 Unit selection: - Expert list: 1 Default: 251 [°C]

p4102[0...23] TM150	TM150 fault threshold/alarm threshold / TM150 F/A_thresh Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: -99 [°C]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 251 [°C]	Access level: 1 Function plan: 9626, 9627 Unit selection: - Expert list: 1 Default: 251 [°C]
p4102[0...1] TM31	TM31 fault threshold/alarm threshold / TM31 F/A_thresh Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: -48 [°C]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 251 [°C]	Access level: 1 Function plan: 9576 Unit selection: - Expert list: 1 Default: [0] 100 [°C] [1] 120 [°C]
p4103 SERVO (Spin_diag), SERVO_840 (Spin_diag), SERVO_AC (Spin_diag), SERVO_DBSI (Spin_diag)	Spindle supplementary temperature delay time / Suppl_temp t_delay Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 600.000 [s]	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [s]
p4103[0...3] TM120	TM120 temperature evaluation delay time / TM120 temp t_delay Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.000 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 600000.000 [ms]	Access level: 1 Function plan: 9605, 9606 Unit selection: - Expert list: 1 Default: 0.000 [ms]
p4103[0...11] TM150	TM150 delay time / TM150 t_delay Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.0 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 600.0 [s]	Access level: 1 Function plan: 9626, 9627 Unit selection: - Expert list: 1 Default: 0.0 [s]
p4103 TM31	TM31 temperature evaluation delay time / TM31 temp t_delay Changeable: T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: 0.000 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 600000.000 [ms]	Access level: 1 Function plan: 9576 Unit selection: - Expert list: 1 Default: 0.000 [ms]

r4104.0...2 SERVO (Spin_diag), SERVO_840 (Spin_diag), SERVO_AC (Spin_diag), SERVO_DBSI (Spin_diag)	BO: Spindle supplementary temperature status / Suppl_temp status Changeable: - Data type: Unsigned16 P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r4104.0...7 TM120	BO: TM120 temperature evaluation status / TM120 temp status Changeable: - Data type: Unsigned16 P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9605, 9606 Unit selection: - Expert list: 1 Default: -
r4104.0...23 TM150	BO: TM150 temperature evaluation status / TM150 temp status Changeable: - Data type: Unsigned32 P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9626, 9627 Unit selection: - Expert list: 1 Default: -
r4104.0...1 TM31	BO: TM31 temperature evaluation status / TM31 temp status Changeable: - Data type: Unsigned16 P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9549, 9576 Unit selection: - Expert list: 1 Default: -
r4105 SERVO (Spin_diag), SERVO_840 (Spin_diag), SERVO_AC (Spin_diag), SERVO_DBSI (Spin_diag)	CO: Spindle supplementary temperature actual value / Suppl_temp act val Changeable: - Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: - Unit group: - Scaling: p2006 Max: - [°C]	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: - [°C]
r4105[0...3] TM120	CO: TM120 temperature actual value / TM120 temp_act val Changeable: - Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: - Unit group: - Scaling: p2006 Max: - [°C]	Access level: 1 Function plan: 8016, 9605, 9606 Unit selection: - Expert list: 1 Default: - [°C]

r4105[0...11] TM150	CO: TM150 temperature actual value / TM150 temp_act val Changeable: - Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: - Unit group: - Scaling: p2006 Max: - [°C]	Access level: 1 Function plan: 9626, 9627 Unit selection: - Expert list: 1 Default: - [°C]
r4105 TM31	CO: TM31 temperature actual value / TM31 temp_act val Changeable: - Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: - Unit group: - Scaling: p2006 Max: - [°C]	Access level: 1 Function plan: 9549, 9576 Unit selection: - Expert list: 1 Default: - [°C]
r4107 SERVO (Spin_diag), SERVO_840 (Spin_diag), SERVO_AC (Spin_diag), SERVO_DBSI (Spin_diag)	Spindle supplementary temperature sensor use / Supp_temp_sens_use Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
p4108[0...5] TM150	TM150 terminal block measuring method / TM150 meas method Changeable: T Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 1 Function plan: 9625, 9626, 9627 Unit selection: - Expert list: 1 Default: 1
p4109[0...11] TM150	TM150 wire resistance measurement / TM150 R_wire meas Changeable: T Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 1 Function plan: 9626, 9627 Unit selection: - Expert list: 1 Default: 0
p4110[0...11] TM150	TM150 wire resistance value / TM150 R_wire value Changeable: T Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.00 [ohm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3000.00 [ohm]	Access level: 1 Function plan: 9626, 9627 Unit selection: - Expert list: 1 Default: 0.00 [ohm]

p4111[0...2] TM150	TM150 group channel assignment / TM150 grp channel Changeable: T Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: 9625 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
r4112[0...2] TM150	CO: TM150 group temperature actual value maximum value / TM150 grp temp max Changeable: - Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: - Unit group: - Scaling: p2006 Max: - [°C]	Access level: 1 Function plan: 9625 Unit selection: - Expert list: 1 Default: - [°C]
r4113[0...2] TM150	CO: TM150 group temperature actual value minimum value / TM150 grp temp min Changeable: - Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: - Unit group: - Scaling: p2006 Max: - [°C]	Access level: 1 Function plan: 9625 Unit selection: - Expert list: 1 Default: - [°C]
r4114[0...2] TM150	CO: TM150 group temperature average actual value / TM150 grp temp av Changeable: - Data type: FloatingPoint32 P group: Terminals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: - Unit group: - Scaling: p2006 Max: - [°C]	Access level: 1 Function plan: 9625 Unit selection: - Expert list: 1 Default: - [°C]
p4117[0...2] TM150	TM150 group sensor error effect / TM150 error effect Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 1 Function plan: 9625 Unit selection: - Expert list: 1 Default: 0
p4118[0...11] TM150	TM150 fault threshold/alarm threshold hysteresis / TM150 thresh hyst Changeable: T Data type: Unsigned16 P group: - Not for motor type: - Min: 0 [K]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 50 [K]	Access level: 1 Function plan: 9626, 9627 Unit selection: - Expert list: 1 Default: 5 [K]

p4119[0...11] TM150	TM150 activate/deactivate smoothing / TM150 smooth act Changeable: T Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 1 Function plan: 9626, 9627 Unit selection: - Expert list: 1 Default: 0
r4120[0...11] TM150	TM150 actual smoothing time in ms / TM150 actual T ms Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: - [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [ms]	Access level: 1 Function plan: 9626, 9627 Unit selection: - Expert list: 1 Default: - [ms]
p4121 TM150	TM150 filter rated line frequency / TM150 filt f_line Changeable: T Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 1 Function plan: 9626, 9627 Unit selection: - Expert list: 1 Default: 0
p4122[0...11] TM150	TM150 smoothing time constant / TM150 T Changeable: T Data type: Unsigned16 P group: - Not for motor type: - Min: 100 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000 [ms]	Access level: 1 Function plan: 9626, 9627 Unit selection: - Expert list: 1 Default: 100 [ms]
r4154 TM41	TM41 diagnostics speed setpoint non-filtered / Diag n_set nflt Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [rpm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [rpm]
r4155 TM41	TM41 diagnostics speed setpoint / TM41 Diag n_set Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [rpm]	Access level: 3 Function plan: 9674 Unit selection: - Expert list: 1 Default: - [rpm]

r4201	TM15 system time for synchronization / TM15 t_system sync		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4201	TM17 system time for synchronization / TM17 t_system sync		
TM17	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4204	TM15 control digital output 0 ... 15 / TM15 ctrl DO 0-15		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4204	TM17 control digital output 0 ... 15 / TM17 ctrl DO 0-15		
TM17	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4205	TM15 control digital output 16 ... 23 / TM15 ctrl DO 16-23		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4211	TM15 edge mode digital input 0 ... 7 / TM15 EdgMd DI0-7		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r4211 TM17	TM17 edge mode digital input 0 ... 7 / TM17 EdgMd DI 0-7 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4212 TM15	TM15 edge mode digital input 8 ... 15 / TM15 EdgMd DI8-15 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4212 TM17	TM17 edge mode digital input 8 ... 15 / TM17 EdgMd DI 8-15 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4213 TM15	TM15 edge mode digital input 16 ... 23 / TM15 EdgMd DI16-23 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p4220 TM17	TM17 enable DI/DO 0 ... 5 / TM17 enable 0-5 Changeable: T Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
p4221 TM17	TM17 smoothing time constant digital input 0 ... 15 / TM17 T_{sm} DI 0-15 Changeable: T, U Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin

p4222	TM17 time absolute/relative digital output 0 ... 15 / TM17 abs/rel 0-15		
TM17	Changeable: T Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
r4250	TM15 set/reset time digital output 0 / TM15 t_set DO 0		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4250	TM17 set/reset time digital output 0 / TM17 t_set DO 0		
TM17	Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4251	TM15 set/reset time digital output 1 / TM15 t_set DO 1		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4251	TM17 set/reset time digital output 1 / TM17 t_set DO 1		
TM17	Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4252	TM15 set/reset time digital output 2 / TM15 t_set DO 2		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r4252 TM17	TM17 set/reset time digital output 2 / TM17 t_set DO 2 Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4253 TM15	TM15 set/reset time digital output 3 / TM15 t_set DO 3 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4253 TM17	TM17 set/reset time digital output 3 / TM17 t_set DO 3 Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4254 TM15	TM15 set/reset time digital output 4 / TM15 t_set DO 4 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4254 TM17	TM17 set/reset time digital output 4 / TM17 t_set DO 4 Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4255 TM15	TM15 set/reset time digital output 5 / TM15 t_set DO 5 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r4255	TM17 set/reset time digital output 5 / TM17 t_set DO 5		
TM17	Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4256	TM15 set/reset time digital output 6 / TM15 t_set DO 6		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4256	TM17 set/reset time digital output 6 / TM17 t_set DO 6		
TM17	Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4257	TM15 set/reset time digital output 7 / TM15 t_set DO 7		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4257	TM17 set/reset time digital output 7 / TM17 t_set DO 7		
TM17	Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4258	TM15 set/reset time digital output 8 / TM15 t_set DO 8		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r4258 TM17	TM17 set/reset time digital output 8 / TM17 t_set DO 8 Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4259 TM15	TM15 set/reset time digital output 9 / TM15 t_set DO 9 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4259 TM17	TM17 set/reset time digital output 9 / TM17 t_set DO 9 Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4260 TM15	TM15 set/reset time digital output 10 / TM15 t_set DO 10 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4260 TM17	TM17 set/reset time digital output 10 / TM17 t_set DO 10 Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4261 TM15	TM15 set/reset time digital output 11 / TM15 t_set DO 11 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r4261	TM17 set/reset time digital output 11 / TM17 t_set DO 11		
TM17	Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4262	TM15 set/reset time digital output 12 / TM15 t_set DO 12		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4262	TM17 set/reset time digital output 12 / TM17 t_set DO 12		
TM17	Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4263	TM15 set/reset time digital output 13 / TM15 t_set DO 13		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4263	TM17 set/reset time digital output 13 / TM17 t_set DO 13		
TM17	Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4264	TM15 set/reset time digital output 14 / TM15 t_set DO 14		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r4264 TM17	TM17 set/reset time digital output 14 / TM17 t_set DO 14 Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4265 TM15	TM15 set/reset time digital output 15 / TM15 t_set DO 15 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4265 TM17	TM17 set/reset time digital output 15 / TM17 t_set DO 15 Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4266 TM15	TM15 set/reset time digital output 16 / TM15 t_set DO 16 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4267 TM15	TM15 set/reset time digital output 17 / TM15 t_set DO 17 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4268 TM15	TM15 set/reset time digital output 18 / TM15 t_set DO 18 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r4269	TM15 set/reset time digital output 19 / TM15 t_set DO 19		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4270	TM15 set/reset time digital output 20 / TM15 t_set DO 20		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4271	TM15 set/reset time digital output 21 / TM15 t_set DO 21		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4272	TM15 set/reset time digital output 22 / TM15 t_set DO 22		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4273	TM15 set/reset time digital output 23 / TM15 t_set DO 23		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4301	TM15 module synchronization / TM15 module sync		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r4301 TM17	TM17 module synchronization / TM17 module sync Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4304 TM15	TM15 status digital input 0 ... 15 / TM15 St DI 0-15 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4304 TM17	TM17 status digital input 0 ... 15 / TM17 St DI 0-15 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4305 TM15	TM15 status digital input 16 ... 23 / TM15 St DI 16-23 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4311 TM15	TM15 edge status digital input 0 ... 7 / TM15 EdgSt DI 0-7 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4311 TM17	TM17 edge status digital input 0 ... 7 / TM17 EdgSt DI 0-7 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r4312	TM15 edge status digital input 8 ... 15 / TM15 EdgSt DI 8-15		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4312	TM17 edge status digital input 8 ... 15 / TM17 EdgSt DI 8-15		
TM17	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4313	TM15 edge status digital input 16 ... 23 / TM15 EdgSt DI16-23		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4350	TM15 edge times digital input 0 / TM15 edge_t DI 0		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4350	TM17 edge times digital input 0 / TM17 edge_t DI 0		
TM17	Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4351	TM15 edge times digital input 1 / TM15 edge_t DI 1		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r4351 TM17	TM17 edge times digital input 1 / TM17 edge_t DI 1 Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4352 TM15	TM15 edge times digital input 2 / TM15 edge_t DI 2 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4352 TM17	TM17 edge times digital input 2 / TM17 edge_t DI 2 Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4353 TM15	TM15 edge times digital input 3 / TM15 edge_t DI 3 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4353 TM17	TM17 edge times digital input 3 / TM17 edge_t DI 3 Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4354 TM15	TM15 edge times digital input 4 / TM15 edge_t DI 4 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r4354	TM17 edge times digital input 4 / TM17 edge_t DI 4		
TM17	Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4355	TM15 edge times digital input 5 / TM15 edge_t DI 5		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4355	TM17 edge times digital input 5 / TM17 edge_t DI 5		
TM17	Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4356	TM15 edge times digital input 6 / TM15 edge_t DI 6		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4356	TM17 edge times digital input 6 / TM17 edge_t DI 6		
TM17	Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4357	TM15 edge times digital input 7 / TM15 edge_t DI 7		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r4357 TM17	TM17 edge times digital input 7 / TM17 edge_t DI 7 Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4358 TM15	TM15 edge times digital input 8 / TM15 edge_t DI 8 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4358 TM17	TM17 edge times digital input 8 / TM17 edge_t DI 8 Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4359 TM15	TM15 edge times digital input 9 / TM15 edge_t DI 9 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4359 TM17	TM17 edge times digital input 9 / TM17 edge_t DI 9 Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4360 TM15	TM15 edge times digital input 10 / TM15 edge_t DI 10 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r4360 TM17	TM17 edge times digital input 10 / TM17 edge_t DI 10 Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4361 TM15	TM15 edge times digital input 11 / TM15 edge_t DI 11 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4361 TM17	TM17 edge times digital input 11 / TM17 edge_t DI 11 Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4362 TM15	TM15 edge times digital input 12 / TM15 edge_t DI 12 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4362 TM17	TM17 edge times digital input 12 / TM17 edge_t DI 12 Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4363 TM15	TM15 edge times digital input 13 / TM15 edge_t DI 13 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r4363 TM17	TM17 edge times digital input 13 / TM17 edge_t DI 13 Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4364 TM15	TM15 edge times digital input 14 / TM15 edge_t DI 14 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4364 TM17	TM17 edge times digital input 14 / TM17 edge_t DI 14 Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4365 TM15	TM15 edge times digital input 15 / TM15 edge_t DI 15 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4365 TM17	TM17 edge times digital input 15 / TM17 edge_t DI 15 Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4366 TM15	TM15 edge times digital input 16 / TM15 edge_t DI 16 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r4367	TM15 edge times digital input 17 / TM15 edge_t DI 17		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4368	TM15 edge times digital input 18 / TM15 edge_t DI 18		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4369	TM15 edge times digital input 19 / TM15 edge_t DI 19		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4370	TM15 edge times digital input 20 / TM15 edge_t DI 20		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4371	TM15 edge times digital input 21 / TM15 edge_t DI 21		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r4372	TM15 edge times digital input 22 / TM15 edge_t DI 22		
TM15	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r4373 TM15	TM15 edge times digital input 23 / TM15 edge_t DI 23 Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p4400 TM41	TM41 encoder emulation operating mode / Enc_emulat mode Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: 9674, 9676 Unit selection: - Expert list: 1 Default: 0
p4401 TM41	TM41 encoder emulation mode / Enc_emulat mode Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9674, 9676 Unit selection: - Expert list: 1 Default: 1111 0011 bin
r4402.0...2 TM41	CO/BO: TM41 encoder emulation status / Enc_emulat status Changeable: - Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9674, 9676 Unit selection: - Expert list: 1 Default: -
r4403 TM41	TM41 encoder emulation operating mode active / Enc_emul mode act Changeable: - Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9674, 9676 Unit selection: - Expert list: 1 Default: -
p4404 TM41	TM41 encoder emulation controller options / Enc_emul ctrl_opt Changeable: C2(4) Data type: Unsigned16 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0001 bin

p4408	TM41 encoder emulation pulse number leading encoder / TM41 enc puls no.		
TM41	Changeable: C2(4)	Calculation: -	Access level: 3
	Data type: Unsigned32	Dynamic index: -	Function plan: 9674, 9676
	P group: Encoder	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	16384	0
p4418	TM41 encoder emulation fine resolution leading encoder / TM41 fine res		
TM41	Changeable: C2(4)	Calculation: -	Access level: 3
	Data type: Unsigned8	Dynamic index: -	Function plan: 9676
	P group: Encoder	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	2	18	11
r4419	TM41 encoder emulation diagnostics position setpoint / TM41 Diag s_set		
TM41	Changeable: -	Calculation: -	Access level: 3
	Data type: Integer32	Dynamic index: -	Function plan: 9676
	P group: Encoder	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-
p4420	CI: TM41 encoder emulation position setpoint / Enc_emul s_setp		
TM41	Changeable: T	Calculation: -	Access level: 3
	Data type: Unsigned32 / Integer32	Dynamic index: -	Function plan: 9676
	P group: Setpoints	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0
p4421	TM41 encoder emulation deadtime compensation / Enc_emul t_dead		
TM41	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 9676
	P group: Setpoints	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-10.00	10.00	0.00
p4422	TM41 encoder emulation position setpoint inversion / Enc_emul s_set inv		
TM41	Changeable: C2(4)	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: 9676
	P group: Encoder	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	1	0

p4423 TM41	TM41 encoder emulation standstill adaptation / Enc_standst_adapt Changeable: C2(4) Data type: Unsigned16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2000	Access level: 3 Function plan: 9676 Unit selection: - Expert list: 1 Default: 4
p4426 TM41	TM41 encoder emulation pulses for zero mark / Enc_emul pulses ZM Changeable: C2(4), T, U Data type: Unsigned32 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 16384	Access level: 3 Function plan: 9674, 9676 Unit selection: - Expert list: 1 Default: 0
r4427 TM41	TM41 encoder emulation zero mark position / TM41 NM_position Changeable: - Data type: Integer32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p4600[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Motor temperature sensor 1 sensor type / Temp_sens 1 type Changeable: C2(3), T, U Data type: Integer16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 60	Access level: 2 Function plan: 8016 Unit selection: - Expert list: 1 Default: 0
p4601[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Motor temperature sensor 2 sensor type / Temp_sens 2 type Changeable: C2(3), T, U Data type: Integer16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 60	Access level: 2 Function plan: 8016 Unit selection: - Expert list: 1 Default: 0
p4602[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Motor temperature sensor 3 sensor type / Temp_sens 3 type Changeable: C2(3), T, U Data type: Integer16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 60	Access level: 2 Function plan: 8016 Unit selection: - Expert list: 1 Default: 0

p4603[0...n]	Motor temperature sensor 4 sensor type / Temp_sens 4 type		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(3), T, U Data type: Integer16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 60	Access level: 2 Function plan: 8016 Unit selection: - Expert list: 1 Default: 0
p4610[0...n]	Motor temperature sensor 1 sensor type MDS / Temp sens1 typ MDS		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(3), T, U Data type: Integer16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 32	Access level: 2 Function plan: 8016 Unit selection: - Expert list: 1 Default: 10
p4611[0...n]	Motor temperature sensor 2 sensor type MDS / Temp sens2 typ MDS		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(3), T, U Data type: Integer16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 32	Access level: 2 Function plan: 8016 Unit selection: - Expert list: 1 Default: 10
p4612[0...n]	Motor temperature sensor 3 sensor type MDS / Temp sens3 typ MDS		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(3), T, U Data type: Integer16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 32	Access level: 2 Function plan: 8016 Unit selection: - Expert list: 1 Default: 10
p4613[0...n]	Motor temperature sensor 4 sensor type MDS / Temp sens4 typ MDS		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(3), T, U Data type: Integer16 P group: Motor Not for motor type: - Min: 0	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 32	Access level: 2 Function plan: 8016 Unit selection: - Expert list: 1 Default: 10
r4620[0...3]	Motor temperature measured / Mot_temp meas		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: - Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: 8016 Unit selection: p0505 Expert list: 1 Default: - [°C]

p4630[0...n] ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Absolute encoder linear measuring step factor / Abs_enc meas fact Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: 1	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
p4631[0...n] HLA, HLA_840, HLA_DBSI	Cylinder distance per encoder revolution / x_cyl per rev Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: 0 [µm]	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 4294967295 [µm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0 [µm]
r4640[0...95] ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Encoder diagnostics state machine / Enc diag stat_ma Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p4641[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	OEM encoder diagnostic signal selection / OEM enc diag sel Changeable: T, U Data type: Unsigned16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p4642 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Test function encoder fault / Test encoder fault Changeable: T, U Data type: Unsigned8 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p4643[0...n] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	DRIVE-CLiQ encoder repeat telegram / DQ enc repeat Changeable: C1(3) Data type: Unsigned16 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0001 0000 0001 bin

p4649[0...n] ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Encoder function reserve amplitude limit incremental signals / Enc fct amp inc Changeable: C2(4) Data type: Unsigned16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 500	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p4650 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Encoder functional reserve component number / Enc fct_res num Changeable: T, U Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 399	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
r4651[0...3] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Encoder functional reserve / Enc fct_reserve Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [%]
p4652[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	XIST1_ERW reset mode / XIST1_ERW res mode Changeable: C1(3) Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 3 Function plan: 4750 Unit selection: - Expert list: 1 Default: 0
p4652 ENC, ENC_840	XIST1_ERW reset mode / XIST1_ERW res mode Changeable: C1(3) Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 3 Function plan: 4750 Unit selection: - Expert list: 1 Default: 0
r4653[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: XIST1_ERW actual value / XIST1_ERW actual Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4750 Unit selection: - Expert list: 1 Default: -

r4653 ENC, ENC_840	CO: XIST1_ERW actual value / XIST1_ERW actual Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4750 Unit selection: - Expert list: 1 Default: -
r4654.0...16 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO/BO: XIST1_ERW status / XIST1_ERW stat Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4750 Unit selection: - Expert list: 1 Default: -
r4654.0 ENC, ENC_840	CO/BO: XIST1_ERW status / XIST1_ERW stat Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4750 Unit selection: - Expert list: 1 Default: -
p4655[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BI: XIST1_ERW reset signal source / XIST1_ERW resS_src Changeable: T Data type: Unsigned32 / Binary P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4750 Unit selection: - Expert list: 1 Default: 0
p4655 ENC, ENC_840	BI: XIST1_ERW reset signal source / XIST1_ERW resS_src Changeable: T Data type: Unsigned32 / Binary P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 4750 Unit selection: - Expert list: 1 Default: 0
p4660[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Sensor Module filter bandwidth / SM Filt_bandw Changeable: C2(4) Data type: FloatingPoint32 P group: Encoder Not for motor type: - Min: 0.00 [kHz]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20000.00 [kHz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [kHz]

p4660 ENC, ENC_840	Sensor Module filter bandwidth / SM Filt_bandw Changeable: C2(4) Data type: FloatingPoint32 P group: Encoder Not for motor type: - Min: 0.00 [kHz]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20000.00 [kHz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [kHz]
r4661[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Sensor Module filter bandwidth display / SM Filt_bandw disp Changeable: - Data type: FloatingPoint32 P group: Encoder Not for motor type: - Min: - [kHz]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [kHz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [kHz]
r4661 ENC, ENC_840	Sensor Module filter bandwidth display / SM Filt_bandw disp Changeable: - Data type: FloatingPoint32 P group: Encoder Not for motor type: - Min: - [kHz]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [kHz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [kHz]
p4662[0...n] ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Encoder characteristic type / Enc char_type Changeable: C2(4) Data type: Integer16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 1	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0
p4663[0...n] ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Encoder characteristic K0 / Enc char K0 Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p4664[0...n] ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Encoder characteristic K1 / Enc char K1 Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -

p4665[0...n]	Encoder characteristic K2 / Enc char K2		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p4666[0...n]	Encoder characteristic K3 / Enc char K3		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p4670[0...n]	Analog sensor configuration / Ana_sens config		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
p4671[0...n]	Analog sensor input / Ana_sens inp		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Integer16 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 3	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0
p4672[0...n]	Analog sensor channel A voltage at actual value zero / Ana_sens A U at 0		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: -10.0000 [V]	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 10.0000 [V]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0.0000 [V]
p4673[0...n]	Analog sensor channel A voltage per encoder period / Ana_sens A U/per		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: -10.0000 [V]	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 10.0000 [V]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 6.0000 [V]

p4674[0...n]	Analog sensor channel B voltage at actual value zero / Ana_sens B U at 0		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: -10.0000 [V]	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 10.0000 [V]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0.0000 [V]
p4675[0...n]	Analog sensor channel B voltage per encoder period / Ana_sens B U/per		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: -10.0000 [V]	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 10.0000 [V]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 6.0000 [V]
p4676[0...n]	Analog sensor range limit threshold / Ana_sens lim thr		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.0 [%]	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 100.0 [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 100.0 [%]
p4677[0...n]	Analog sensor LVDT configuration / Ana_sens LVDT conf		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
p4678[0...n]	Analog sensor LVDT ratio / An_sens LVDT ratio		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: FloatingPoint32 P group: Encoder Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 200.00 [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 50.00 [%]
p4679[0...n]	Analog sensor LVDT phase / An_sens LVDT ph		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4), T Data type: FloatingPoint32 P group: Encoder Not for motor type: - Min: -360.00 [°]	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 360.00 [°]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [°]

p4680[0...n]	Zero mark monitoring tolerance permissible / ZM_monit tol perm		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 1000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 4

p4681[0...n]	Zero mark monitoring tolerance window limit 1 positive / ZM tol lim 1 pos		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 1000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2

p4682[0...n]	Zero mark monitoring tolerance window limit 1 negative / ZM tol lim 1 neg		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Integer32 P group: Encoder Not for motor type: - Min: -1001	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 0	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -1001

p4683[0...n]	Zero mark monitoring tolerance window alarm threshold positive / ZM tol A_thr pos		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 100000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p4684[0...n]	Zero mark monitoring tolerance window alarm threshold negative / ZM tol A_thr neg		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Integer32 P group: Encoder Not for motor type: - Min: -100001	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 0	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -100001

p4685[0...n]	Speed actual value mean value generation / n_act mean val		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 20	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p4686[0...n] ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Zero mark minimum length / ZM min length Changeable: C2(4) Data type: Unsigned32 P group: Encoder Not for motor type: - Min: 0	Calculation: - Dynamic index: EDS, p0140 Unit group: - Scaling: - Max: 10	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
p4688[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Zero mark monitoring differential pulse count / ZM diff_pulse qty Changeable: T Data type: Integer32 P group: - Not for motor type: - Min: -2147483648	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147483647	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p4688 ENC, ENC_840	CO: Zero mark monitoring differential pulse count / ZM diff_pulse qty Changeable: T Data type: Integer32 P group: - Not for motor type: - Min: -2147483648	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147483647	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
r4689[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: Squarewave encoder diagnostics / Sq-wave enc diag Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r4689 ENC, ENC_840	CO: Squarewave encoder diagnostics / Sq-wave enc diag Changeable: - Data type: Unsigned32 P group: Encoder Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p4690 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	SMI spare part component number / SMI comp_no Changeable: T Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 399	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0

p4691 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	SMI spare part save/download data / Save/DL SMI data Changeable: T Data type: Integer16 P group: Displays, signals Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 39	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p4692 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	SMI spare part save data of all SMIs / Save SMI data Changeable: T Data type: Integer16 P group: Displays, signals Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 29	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p4693[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	SMI spare part data backup directory / SMI dat_bkup dir Changeable: T Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 399	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
r4694[0...19] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	SMI spare part data backup motor article number / SMI dat_bkup MLFB Changeable: - Data type: Unsigned8 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p4700[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace control / Trace control Changeable: T, U Data type: Integer16 P group: Trace and function generator Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0
p4701 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Measuring function control / Meas fct ctrl Changeable: T, U Data type: Integer16 P group: Trace and function generator Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0

p4703[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace options / Trace options Changeable: T Data type: Unsigned16 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0000 bin
r4705[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace status / Trace status Changeable: - Data type: Integer16 P group: Trace and function generator Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4706 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Measuring function status / Meas fct status Changeable: - Data type: Integer16 P group: Trace and function generator Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 5	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
p4707 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Measurement function configuration / Meas fct config Changeable: T, U Data type: Integer16 P group: Trace and function generator Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0
r4708[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace memory space required / Trace mem required Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4709[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace memory space required for measuring functions / Trace mem required Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -

p4710[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace trigger condition / Trace Trig_cond Changeable: T, U Data type: Integer16 P group: Trace and function generator Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 2
p4711[0...5] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace trigger signal / Trace trig_signal Changeable: T, U Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0
p4712[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace trigger threshold / Trace trig_thresh Changeable: T, U Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: -340.28235E36	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 340.28235E36	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0.00
p4713[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace tolerance band trigger threshold 1 / Trace trig thr 1 Changeable: T, U Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: -340.28235E36	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 340.28235E36	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0.00
p4714[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace tolerance band trigger threshold 2 / Trace trig thr 2 Changeable: T, U Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: -340.28235E36	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 340.28235E36	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0.00
p4715[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace bit mask trigger, bit mask / Trace trig mask Changeable: T, U Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0

p4716[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace bit mask trigger trigger condition / Trace Trig_cond Changeable: T, U Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0
p4717 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Measuring function number of averaging operations / Meas fct avg qty Changeable: T, U Data type: Unsigned8 P group: Trace and function generator Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0
p4718 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Measuring function number of stabilizing periods / MeasFct StabPerQty Changeable: T, U Data type: Unsigned8 P group: Trace and function generator Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0
r4719[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace trigger index / Trace Trig_index Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
p4720[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace recording cycle / Trace record_cyc Changeable: T, U Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: 0.000 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 60000.000 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 1.000 [ms]
p4721[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace recording time / Trace record_time Changeable: T, U Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: 0.000 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 340.28235E36 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 1000.000 [ms]

p4722[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace trigger delay / Trace trig_delay Changeable: T, U Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: -340.28235E36 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 340.28235E36 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0.000 [ms]
p4723[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace time slice cycle / Trace cycle Changeable: T, U Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: 0.03125 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4.00000 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0.12500 [ms]
p4724[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace average in the time range / Trace average Changeable: T, U Data type: Unsigned8 P group: Trace and function generator Not for motor type: - Min: 0000 bin	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 0001 bin	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0000 bin
r4725[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace data type 1 traced / Trace rec type 1 Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4726[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace data type 2 traced / Trace rec type 2 Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4727[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace data type 3 traced / Trace rec type 3 Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -

r4728[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace data type 4 traced / Trace rec type 4 Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4729[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace number of recorded values / Trace rec values Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
p4730[0...5] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace record signal 0 / Trace record sig 0 Changeable: T, U Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0
p4731[0...5] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace record signal 1 / Trace record sig 1 Changeable: T, U Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0
p4732[0...5] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace record signal 2 / Trace record sig 2 Changeable: T, U Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0
p4733[0...5] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace record signal 3 / Trace record sig 3 Changeable: T, U Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0

p4734[0...5] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace record signal 4 / Trace record sig 4 Changeable: T, U Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0
p4735[0...5] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace record signal 5 / Trace record sig 5 Changeable: T, U Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0
p4736[0...5] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace record signal 6 / Trace record sig 6 Changeable: T, U Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0
p4737[0...5] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace record signal 7 / Trace record sig 7 Changeable: T, U Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0
r4740[0...16383] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace 0 trace buffer signal 0 floating point / Trace 0 rec sig 0 Changeable: - Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4741[0...16383] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace 0 trace buffer signal 1 floating point / Trace 0 rec sig 1 Changeable: - Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -

r4742[0...16383]	Trace 0 trace buffer signal 2 floating point / Trace 0 rec sig 2		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4743[0...16383]	Trace 0 trace buffer signal 3 floating point / Trace 0 rec sig 3		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4744[0...16383]	Trace 0 trace buffer signal 4 floating point / Trace 0 rec sig 4		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4745[0...16383]	Trace 0 trace buffer signal 5 floating point / Trace 0 rec sig 5		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4746[0...16383]	Trace 0 trace buffer signal 6 floating point / Trace 0 rec sig 6		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4747[0...16383]	Trace 0 trace buffer signal 7 floating point / Trace 0 rec sig 7		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -

r4750[0...16383]	Trace 1 trace buffer signal 0 floating point / Trace 1 rec sig 0		
CU_I_840,	Changeable: -	Calculation: -	Access level: 3
CU_NX_840,	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
CU_S_AC_DP,	P group: Trace and function generator	Unit group: -	Unit selection: -
CU_S_AC_PN,	Not for motor type: -	Scaling: -	Expert list: 0
CU_S120_DP,	Min:	Max:	Default:
CU_S120_PN	-	-	-

r4751[0...16383]	Trace 1 trace buffer signal 1 floating point / Trace 1 rec sig 1		
CU_I_840,	Changeable: -	Calculation: -	Access level: 3
CU_NX_840,	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
CU_S_AC_DP,	P group: Trace and function generator	Unit group: -	Unit selection: -
CU_S_AC_PN,	Not for motor type: -	Scaling: -	Expert list: 0
CU_S120_DP,	Min:	Max:	Default:
CU_S120_PN	-	-	-

r4752[0...16383]	Trace 1 trace buffer signal 2 floating point / Trace 1 rec sig 2		
CU_I_840,	Changeable: -	Calculation: -	Access level: 3
CU_NX_840,	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
CU_S_AC_DP,	P group: Trace and function generator	Unit group: -	Unit selection: -
CU_S_AC_PN,	Not for motor type: -	Scaling: -	Expert list: 0
CU_S120_DP,	Min:	Max:	Default:
CU_S120_PN	-	-	-

r4753[0...16383]	Trace 1 trace buffer signal 3 floating point / Trace 1 rec sig 3		
CU_I_840,	Changeable: -	Calculation: -	Access level: 3
CU_NX_840,	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
CU_S_AC_DP,	P group: Trace and function generator	Unit group: -	Unit selection: -
CU_S_AC_PN,	Not for motor type: -	Scaling: -	Expert list: 0
CU_S120_DP,	Min:	Max:	Default:
CU_S120_PN	-	-	-

r4754[0...16383]	Trace 1 trace buffer signal 4 floating point / Trace 1 rec sig 4		
CU_I_840,	Changeable: -	Calculation: -	Access level: 3
CU_NX_840,	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
CU_S_AC_DP,	P group: Trace and function generator	Unit group: -	Unit selection: -
CU_S_AC_PN,	Not for motor type: -	Scaling: -	Expert list: 0
CU_S120_DP,	Min:	Max:	Default:
CU_S120_PN	-	-	-

r4755[0...16383]	Trace 1 trace buffer signal 5 floating point / Trace 1 rec sig 5		
CU_I_840,	Changeable: -	Calculation: -	Access level: 3
CU_NX_840,	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
CU_S_AC_DP,	P group: Trace and function generator	Unit group: -	Unit selection: -
CU_S_AC_PN,	Not for motor type: -	Scaling: -	Expert list: 0
CU_S120_DP,	Min:	Max:	Default:
CU_S120_PN	-	-	-

r4756[0...16383]	Trace 1 trace buffer signal 6 floating point / Trace 1 rec sig 6		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4757[0...16383]	Trace 1 trace buffer signal 7 floating point / Trace 1 rec sig 7		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4760[0...16383]	Trace 0 trace buffer signal 0 / Trace 0 rec sig 0		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4761[0...16383]	Trace 0 trace buffer signal 1 / Trace 0 rec sig 1		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4762[0...16383]	Trace 0 trace buffer signal 2 / Trace 0 rec sig 2		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4763[0...16383]	Trace 0 trace buffer signal 3 / Trace 0 rec sig 3		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -

r4764[0...16383]	Trace 0 trace buffer signal 4 / Trace 0 rec sig 4		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4765[0...16383]	Trace 0 trace buffer signal 5 / Trace 0 rec sig 5		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4766[0...16383]	Trace 0 trace buffer signal 6 / Trace 0 rec sig 6		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4767[0...16383]	Trace 0 trace buffer signal 7 / Trace 0 rec sig 7		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4770[0...16383]	Trace 1 trace buffer signal 0 / Trace 1 rec sig 0		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4771[0...16383]	Trace 1 trace buffer signal 1 / Trace 1 rec sig 1		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -

r4772[0...16383]	Trace 1 trace buffer signal 2 / Trace 1 rec sig 2		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4773[0...16383]	Trace 1 trace buffer signal 3 / Trace 1 rec sig 3		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4774[0...16383]	Trace 1 trace buffer signal 4 / Trace 1 rec sig 4		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4775[0...16383]	Trace 1 trace buffer signal 5 / Trace 1 rec sig 5		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4776[0...16383]	Trace 1 trace buffer signal 6 / Trace 1 rec sig 6		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4777[0...16383]	Trace 1 trace buffer signal 7 / Trace 1 rec sig 7		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -

p4780[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace physical address signal 0 / Trace PhyAddr Sig0 Changeable: T, U Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: 0000 bin	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1111 1111 1111 1111 1111 1111 1111 1111 bin	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0000 bin
p4781[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace physical address signal 1 / Trace PhyAddr Sig1 Changeable: T, U Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: 0000 bin	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1111 1111 1111 1111 1111 1111 1111 1111 bin	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0000 bin
p4782[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace physical address signal 2 / Trace PhyAddr Sig2 Changeable: T, U Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: 0000 bin	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1111 1111 1111 1111 1111 1111 1111 1111 bin	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0000 bin
p4783[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace physical address signal 3 / Trace PhyAddr Sig3 Changeable: T, U Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: 0000 bin	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1111 1111 1111 1111 1111 1111 1111 1111 bin	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0000 bin
p4784[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace physical address signal 4 / Trace PhyAddr Sig4 Changeable: T, U Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: 0000 bin	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1111 1111 1111 1111 1111 1111 1111 1111 bin	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0000 bin

p4785[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace physical address signal 5 / Trace PhyAddr Sig5 Changeable: T, U Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: 0000 bin	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1111 1111 1111 1111 1111 1111 1111 1111 bin	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0000 bin
p4786[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace physical address signal 6 / Trace PhyAddr Sig6 Changeable: T, U Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: 0000 bin	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1111 1111 1111 1111 1111 1111 1111 1111 bin	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0000 bin
p4787[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace physical address signal 7 / Trace PhyAddr Sig7 Changeable: T, U Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: 0000 bin	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1111 1111 1111 1111 1111 1111 1111 1111 bin	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0000 bin
p4789[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace physical address trigger signal / Trace PhyAddr Trig Changeable: T, U Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0000 hex
r4790[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace data type 5 traced / Trace rec type 5 Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -

r4791[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace data type 6 traced / Trace rec type 6 Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4792[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace data type 7 traced / Trace rec type 7 Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4793[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace data type 8 traced / Trace rec type 8 Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
p4795 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace memory bank changeover / Trace mem changeov Changeable: T, U Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 500	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0
r4797[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace 0 trigger instant / Trace 0 t_trigger Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4798[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace 1 trigger instant / Trace 1 t_trigger Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -

r4799 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Trace memory location free / Trace mem free Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
p4800 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Function generator control / FG control Changeable: T, U Data type: Integer16 P group: Trace and function generator Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0
r4805 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Function generator status / FG status Changeable: - Data type: Integer16 P group: Trace and function generator Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r4806.0 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	BO: Function generator status signal / FG status signal Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
p4810 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Function generator mode / FG operating mode Changeable: T, U Data type: Integer16 P group: Trace and function generator Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 99	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0
p4812 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Function generator physical address / FG phys address Changeable: T, U Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0

p4813 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Function generator physical address reference value / FG phys addr ref Changeable: T, U Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: 1.00	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000000.00	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 1.00
p4815[0...2] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Function generator drive number / FG drive number Changeable: T, U Data type: Unsigned16 P group: Trace and function generator Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0
p4816 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Function generator output signal integer number scaling / FG outp integ scal Changeable: T, U Data type: Integer32 P group: - Not for motor type: - Min: -2147483648	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147483647	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0
r4817 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	CO: Function generator output signal integer number / FG outp integ no. Changeable: - Data type: Integer32 P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 0 Default: -
r4818 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	CO: Function generator output signal / FG outp_sig Changeable: - Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: - [%]
p4819 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	BI: Function generator control / FG control Changeable: T, U Data type: Unsigned32 / Binary P group: Trace and function generator Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 1

p4820 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Function generator signal shape / FG signal shape Changeable: T, U Data type: Integer16 P group: Trace and function generator Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 5	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 1
p4821 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Function generator period / FG period duration Changeable: T, U Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 60000.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 1000.00 [ms]
p4822 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Function generator pulse width / FG pulse width Changeable: T, U Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 60000.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 500.00 [ms]
p4823 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Function generator bandwidth / FG bandwidth Changeable: T, U Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: 0.0025 [Hz]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 16000.0000 [Hz]	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 4000.0000 [Hz]
p4824 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Function generator amplitude / FG amplitude Changeable: T, U Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: -1600.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1600.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 5.00 [%]
p4825 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Function generator 2nd amplitude / FG 2nd amplitude Changeable: T, U Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: -1600.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1600.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 7.00 [%]

p4826 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Function generator offset / FG offset Changeable: T, U Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: -1600.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1600.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0.00 [%]
p4827 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Function generator ramp-up time to offset / FG ramp-up offset Changeable: T, U Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100000.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 32.00 [ms]
p4828 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Function generator lower limit / FG lower limit Changeable: T, U Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: -10000.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 0.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -100.00 [%]
p4829 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Function generator upper limit / FG upper limit Changeable: T, U Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 100.00 [%]
p4830 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Function generator time slice cycle / FG time slice Changeable: T, U Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: 0.03125 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2.00000 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0.12500 [ms]
p4831 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Function generator amplitude scaling / FG amplitude scal Changeable: T, U Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: 0.00000 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 200.00000 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 100.00000 [%]

p4832[0...2] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Function generator amplitude scaling / FG amplitude scal Changeable: T, U Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: -340.28235E36 [%] Max: 340.28235E36 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 340.28235E36 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 100.00000 [%]
p4833[0...2] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Function generator offset scaling / FG offset scal Changeable: T, U Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: -340.28235E36 [%] Max: 340.28235E36 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 340.28235E36 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 100.00000 [%]
r4834[0...4] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	CO: Function generator free measurement output signal / FG fr MeasFct outp Changeable: - Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: - [%] Max: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: - [%]
p4835[0...4] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Function generator free measurement function scaling / FG fr MeasFct scal Changeable: T, U Data type: FloatingPoint32 P group: Trace and function generator Not for motor type: - Min: -200.00000 [%] Max: 200.00000 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 200.00000 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 100.00000 [%]
p4840[0...1] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	MTrace cycle number setting / Cycle number Changeable: T, U Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: 0 Max: 4294967295	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0
r4841[0...1] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	MTrace cycle actual display / Cycle act display Changeable: - Data type: Unsigned32 P group: Trace and function generator Not for motor type: - Min: - Max: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -

p4844[0...1] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	MTrace ring buffer files number / Ring buff file qty Changeable: T Data type: Unsigned16 P group: Trace and function generator Not for motor type: - Min: 10	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 10
r4899 TM41	Status word sequence control / ZSW seq_ctrl Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r4950 All objects	TEC DO-specific number / TEC DO qty Changeable: - Data type: Unsigned16 P group: OEM range Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 16	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r4951 All objects	TEC DO-specific identifier total length / TEC DO ident tot_l Changeable: - Data type: Unsigned16 P group: OEM range Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 144	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r4952 All objects	TEC DO-specific GUID total length / TEC DO GUID length Changeable: - Data type: Unsigned16 P group: OEM range Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 288	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r4955[0...n] All objects	TEC DO-specific identifier / TEC DO ident Changeable: - Data type: Unsigned8 P group: OEM range Not for motor type: - Min: -	Calculation: - Dynamic index: r4951 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -

p4956[0...n] All objects	TEC DO-specific activation / TEC DO act Changeable: C1, T Data type: Integer16 P group: OEM range Not for motor type: - Min: 0	Calculation: - Dynamic index: r4950 Unit group: - Scaling: - Max: 1	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0
r4957[0...n] All objects	TEC DO-specific version / TEC DO Version Changeable: - Data type: Unsigned32 P group: OEM range Not for motor type: - Min: 0	Calculation: - Dynamic index: r4950 Unit group: - Scaling: - Max: 4294967295	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r4958[0...n] All objects	TEC DO-specific interface version / TEC DO interf_vers Changeable: - Data type: Unsigned32 P group: OEM range Not for motor type: - Min: -	Calculation: - Dynamic index: r4950 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r4959[0...n] All objects	TEC DO-specific GUID / TEC DO GUID Changeable: - Data type: Unsigned8 P group: OEM range Not for motor type: - Min: -	Calculation: - Dynamic index: r4952 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r4960[0...n] All objects	TEC DO-specific GUID drive object / TEC DO GUID DO Changeable: - Data type: Unsigned8 P group: OEM range Not for motor type: - Min: -	Calculation: - Dynamic index: r4952 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p4961[0...n] All objects	TEC DO-specific logbook module selection / TEC DO log module Changeable: T Data type: Unsigned32 P group: OEM range Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: r4950 Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0000 hex

r4975 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	TEC invalid number / TEC inval qty Changeable: - Data type: Unsigned16 P group: OEM range Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r4976 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	TEC invalid identifier total length / TEC inval ID tot_l Changeable: - Data type: Unsigned16 P group: OEM range Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r4978[0...n] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	TEC invalid identifier / TEC inval ID Changeable: - Data type: Unsigned8 P group: OEM range Not for motor type: - Min: -	Calculation: - Dynamic index: r4976 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r4979[0...n] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	TEC invalid error code / TEC inv error code Changeable: - Data type: Unsigned32 P group: OEM range Not for motor type: - Min: -	Calculation: - Dynamic index: r4975 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r4985 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	TEC number / TEC qty Changeable: - Data type: Unsigned16 P group: OEM range Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 16	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r4986 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	TEC identifier total length / TEC ident tot_l Changeable: - Data type: Unsigned16 P group: OEM range Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 144	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -

r4987 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	TEC GUID total length / TEC GUID tot_lgth Changeable: - Data type: Unsigned16 P group: OEM range Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 288	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r4988[0...n] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	TEC identifier / TEC ident Changeable: - Data type: Unsigned8 P group: OEM range Not for motor type: - Min: -	Calculation: - Dynamic index: r4986 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r4989[0...n] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	TEC version / TEC version Changeable: - Data type: Unsigned32 P group: OEM range Not for motor type: - Min: -	Calculation: - Dynamic index: r4985 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r4990[0...n] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	TEC interface version / TEC interf_vers Changeable: - Data type: Unsigned32 P group: OEM range Not for motor type: - Min: -	Calculation: - Dynamic index: r4985 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r4991[0...n] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	TEC GUID / TEC GUID Changeable: - Data type: Unsigned8 P group: OEM range Not for motor type: - Min: -	Calculation: - Dynamic index: r4987 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r4992[0...n] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	TEC GUID ES / TEC GUID ES Changeable: - Data type: Unsigned8 P group: OEM range Not for motor type: - Min: -	Calculation: - Dynamic index: r4987 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -

r4993[0...n] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	TEC activation status / TEC act stat Changeable: - Data type: Integer16 P group: OEM range Not for motor type: - Min: 0	Calculation: - Dynamic index: r4985 Unit group: - Scaling: - Max: 1	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r4994[0...n] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	TEC properties / TEC property Changeable: - Data type: Unsigned32 P group: OEM range Not for motor type: - Min: -	Calculation: - Dynamic index: r4985 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r4995[0...n] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	TEC external version / TEC ext version Changeable: - Data type: Unsigned32 P group: OEM range Not for motor type: - Min: -	Calculation: - Dynamic index: r4985 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r5000 SERVO (Spin_diag), SERVO_840 (Spin_diag), SERVO_AC (Spin_diag), SERVO_DBSI (Spin_diag)	CO: Spindle properties/status / Prop/status Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r5001 SERVO (Spin_diag), SERVO_840 (Spin_diag), SERVO_AC (Spin_diag), SERVO_DBSI (Spin_diag)	CO: Spindle clamp state / Clamp state Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 11	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r5002 SERVO (Spin_diag), SERVO_840 (Spin_diag), SERVO_AC (Spin_diag), SERVO_DBSI (Spin_diag)	CO: Spindle analog sensor S1 measured value / Ana_sensS1 MeasVal Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -

r5003	CO: Spindle digital sensors status / Dig_sens status		
SERVO (Spin_diag), SERVO_840 (Spin_diag), SERVO_AC (Spin_diag), SERVO_DBSI (Spin_diag)	Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r5004	CO: Spindle supplementary value / Suppl meas val		
SERVO (Spin_diag), SERVO_840 (Spin_diag), SERVO_AC (Spin_diag), SERVO_DBSI (Spin_diag)	Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r5005	Spindle file system status / File sys stat		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p5007	Spindle file system selection / File sys select		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
p5009	Adapt spindle file system / Adapt file sys		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 53	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
r5012	Spindle Sensor Module properties / SM properties		
SERVO (Spin_diag), SERVO_840 (Spin_diag), SERVO_AC (Spin_diag), SERVO_DBSI (Spin_diag)	Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -

p5016 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Enable spindle commissioning / Enable comm Changeable: C2, T Data type: Integer16 P group: All groups Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p5019 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Spindle password / Password Changeable: T, U Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r5020 SERVO (Spin_diag), SERVO_840 (Spin_diag), SERVO_AC (Spin_diag), SERVO_DBSI (Spin_diag)	Spindle manufacturer / Manufacturer Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 48	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r5021[0...18] SERVO (Spin_diag), SERVO_840 (Spin_diag), SERVO_AC (Spin_diag), SERVO_DBSI (Spin_diag)	Spindle article number / Article No. Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r5022[0...15] SERVO (Spin_diag), SERVO_840 (Spin_diag), SERVO_AC (Spin_diag), SERVO_DBSI (Spin_diag)	Spindle serial number / Serial No. Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r5023 SERVO (Spin_diag), SERVO_840 (Spin_diag), SERVO_AC (Spin_diag), SERVO_DBSI (Spin_diag)	Spindle production date / Prod_date Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r5032	Maximum spindle speed / n_max		
SERVO (Lin, Spin_diag), SERVO_840 (Lin, Spin_diag), SERVO_AC (Lin, Spin_diag), SERVO_DBSI (Lin, Spin_diag)	Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [m/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [m/min]
r5032	Maximum spindle speed / n_max		
SERVO (Spin_diag), SERVO_840 (Spin_diag), SERVO_AC (Spin_diag), SERVO_DBSI (Spin_diag)	Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [rpm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [rpm]
r5033	Spindle angular commutation offset / Commut_ang_off		
SERVO (Spin_diag), SERVO_840 (Spin_diag), SERVO_AC (Spin_diag), SERVO_DBSI (Spin_diag)	Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [°]
r5034	Spindle current controller sampling time maximum / I_ctrl t_samp max		
SERVO (Spin_diag), SERVO_840 (Spin_diag), SERVO_AC (Spin_diag), SERVO_DBSI (Spin_diag)	Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [μs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [μs]
p5040	Spindle voltage threshold values tolerance / U_thresh tol		
SERVO (Spin_diag), SERVO_840 (Spin_diag), SERVO_AC (Spin_diag), SERVO_DBSI (Spin_diag)	Changeable: T Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.0 [mV]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.0 [mV]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [mV]
p5041[0...5]	Spindle voltage threshold values / U_thresh		
SERVO (Spin_diag), SERVO_840 (Spin_diag), SERVO_AC (Spin_diag), SERVO_DBSI (Spin_diag)	Changeable: T Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.0 [mV]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 340.28235E36 [mV]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [mV]

p5042[0...1] SERVO (Spin_diag), SERVO_840 (Spin_diag), SERVO_AC (Spin_diag), SERVO_DBSI (Spin_diag)	Spindle transition times / t_transition Changeable: T Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.0 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 340.28235E36 [μs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [μs]
p5043[0...6] SERVO (Lin, Spin_diag), SERVO_840 (Lin, Spin_diag), SERVO_AC (Lin, Spin_diag), SERVO_DBSI (Lin, Spin_diag)	Spindle speed limits / n_limits Changeable: T Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.0 [m/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535.0 [m/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [m/min]
p5043[0...6] SERVO (Spin_diag), SERVO_840 (Spin_diag), SERVO_AC (Spin_diag), SERVO_DBSI (Spin_diag)	Spindle speed limits / n_limits Changeable: T Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.0 [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535.0 [rpm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [rpm]
r5044 SERVO (Lin, Spin_diag), SERVO_840 (Lin, Spin_diag), SERVO_AC (Lin, Spin_diag), SERVO_DBSI (Lin, Spin_diag)	Maximum permissible spindle velocity limit / Spin v_lim MaxPerm Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [m/min]	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: - [m/min]
r5044 SERVO (Spin_diag), SERVO_840 (Spin_diag), SERVO_AC (Spin_diag), SERVO_DBSI (Spin_diag)	Maximum permissible spindle speed limit / Spin n_lim MaxPerm Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [rpm]	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: - [rpm]
r5170[0...5] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	HF phase current actual values / HF I_ph act val Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [A]	Calculation: - Dynamic index: - Unit group: 6_5 Scaling: p2002 Max: - [A]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [A]

r5171	CO: HF damping voltage actual value / HF U_damp act val		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: 5_2 Scaling: p2001 Max: - [V]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [V]
r5172[0...3]	CO: HF temperatures / HF temp		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: - Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [°C]
r5173	CO: HF Damping Module I2t overload / HF DM overl I2t		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [%]
p5174	HF control word / HF control word		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: CALC_MOD_REG Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
r5175[0...1]	HF diagnostics / HF diag		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p5200[0...n]	Current setpoint filter 5 ... 10 activation / I_setp_filt act		
SERVO (Ext I_setp_filt), SERVO_840 (Ext I_setp_filt), SERVO_AC (Ext I_setp_filt), SERVO_DBSI (Ext I_setp_filt)	Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 5711 Unit selection: - Expert list: 1 Default: 0000 0000 bin

p5200	Signal filter activation / I_act_filt act		
A_INF (Suppl cl-loop ctrl), A_INF_840 (Suppl cl-loop ctrl), R_INF (Suppl cl-loop ctrl)	Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: CALC_MOD_CON Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
p5201[0...n]	Current setpoint filter 5 type / I_set_filt 5 type		
SERVO (Ext I_setp_filt), SERVO_840 (Ext I_setp_filt), SERVO_AC (Ext I_setp_filt), SERVO_DBSI (Ext I_setp_filt)	Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: REL Min: 1	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: 5711 Unit selection: - Expert list: 1 Default: 1
p5201	Output voltage setpoint filter 5 type / U_set_filt 5 type		
A_INF (Suppl cl-loop ctrl), A_INF_840 (Suppl cl-loop ctrl), R_INF (Suppl cl-loop ctrl)	Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 1	Calculation: CALC_MOD_CON Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2
p5202[0...n]	Current setpoint filter 5 denominator natural frequency / I_set_filt5 fn_den		
SERVO (Ext I_setp_filt), SERVO_840 (Ext I_setp_filt), SERVO_AC (Ext I_setp_filt), SERVO_DBSI (Ext I_setp_filt)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 5711 Unit selection: - Expert list: 1 Default: 1999.0 [Hz]
p5202	Output voltage setpoint filter 5 denominator natural frequency / U_set_filt5 fn_den		
A_INF (Suppl cl-loop ctrl), A_INF_840 (Suppl cl-loop ctrl), R_INF (Suppl cl-loop ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.5 [Hz]	Calculation: CALC_MOD_CON Dynamic index: - Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1000.0 [Hz]
p5203[0...n]	Current setpoint filter 5 denominator damping / I_set_filt 5 D_den		
SERVO (Ext I_setp_filt), SERVO_840 (Ext I_setp_filt), SERVO_AC (Ext I_setp_filt), SERVO_DBSI (Ext I_setp_filt)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.001	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 5711 Unit selection: - Expert list: 1 Default: 0.700

p5203	Output voltage setpoint filter 5 denominator damping / U_set_filt 5 D_den		
A_INF (Suppl cl-loop ctrl), A_INF_840 (Suppl cl-loop ctrl), R_INF (Suppl cl-loop ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.001	Calculation: CALC_MOD_CON Dynamic index: - Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.700
p5204[0...n]	Current setpoint filter 5 numerator natural frequency / I_set_filt5 fn_num		
SERVO (Ext I_setp_filt), SERVO_840 (Ext I_setp_filt), SERVO_AC (Ext I_setp_filt), SERVO_DBSI (Ext I_setp_filt)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 5711 Unit selection: - Expert list: 1 Default: 1999.0 [Hz]
p5204	Output voltage setpoint filter 5 numerator natural frequency / U_set_filt5 fn_num		
A_INF (Suppl cl-loop ctrl), A_INF_840 (Suppl cl-loop ctrl), R_INF (Suppl cl-loop ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.5 [Hz]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1000.0 [Hz]
p5205[0...n]	Current setpoint filter 5 numerator damping / I_set_filt 5 D_num		
SERVO (Ext I_setp_filt), SERVO_840 (Ext I_setp_filt), SERVO_AC (Ext I_setp_filt), SERVO_DBSI (Ext I_setp_filt)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 5711 Unit selection: - Expert list: 1 Default: 0.700
p5205	Output voltage setpoint filter 5 numerator damping / U_set_filt 5 D_num		
A_INF (Suppl cl-loop ctrl), A_INF_840 (Suppl cl-loop ctrl), R_INF (Suppl cl-loop ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.000	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.010
p5206[0...n]	Current setpoint filter 6 type / I_set_filt 6 type		
SERVO (Ext I_setp_filt), SERVO_840 (Ext I_setp_filt), SERVO_AC (Ext I_setp_filt), SERVO_DBSI (Ext I_setp_filt)	Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: REL Min: 1	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: 5711 Unit selection: - Expert list: 1 Default: 1

p5207[0...n]	Current setpoint filter 6 denominator natural frequency / I_set_filt6 fn_den
SERVO (Ext I_setp_filt), SERVO_840 (Ext I_setp_filt), SERVO_AC (Ext I_setp_filt), SERVO_DBSI (Ext I_setp_filt)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]
	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]
	Access level: 3 Function plan: 5711 Unit selection: - Expert list: 1 Default: 1999.0 [Hz]

p5208[0...n]	Current setpoint filter 6 denominator damping / I_set_filt 6 D_den
SERVO (Ext I_setp_filt), SERVO_840 (Ext I_setp_filt), SERVO_AC (Ext I_setp_filt), SERVO_DBSI (Ext I_setp_filt)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.001
	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000
	Access level: 3 Function plan: 5711 Unit selection: - Expert list: 1 Default: 0.700

p5209[0...n]	Current setpoint filter 6 numerator natural frequency / I_set_filt6 fn_num
SERVO (Ext I_setp_filt), SERVO_840 (Ext I_setp_filt), SERVO_AC (Ext I_setp_filt), SERVO_DBSI (Ext I_setp_filt)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]
	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]
	Access level: 3 Function plan: 5711 Unit selection: - Expert list: 1 Default: 1999.0 [Hz]

p5210[0...n]	Current setpoint filter 6 numerator damping / I_set_filt 6 D_num
SERVO (Ext I_setp_filt), SERVO_840 (Ext I_setp_filt), SERVO_AC (Ext I_setp_filt), SERVO_DBSI (Ext I_setp_filt)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000
	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000
	Access level: 3 Function plan: 5711 Unit selection: - Expert list: 1 Default: 0.700

p5211[0...n]	Current setpoint filter 7 type / I_set_filt 7 type
SERVO (Ext I_setp_filt), SERVO_840 (Ext I_setp_filt), SERVO_AC (Ext I_setp_filt), SERVO_DBSI (Ext I_setp_filt)	Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: REL Min: 1
	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2
	Access level: 3 Function plan: 5711 Unit selection: - Expert list: 1 Default: 1

p5211	Current actual value filter 7 type / I_act_filt 7 type
A_INF (Suppl cl-loop ctrl), A_INF_840 (Suppl cl-loop ctrl), R_INF (Suppl cl-loop ctrl)	Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 1
	Calculation: CALC_MOD_CON Dynamic index: - Unit group: - Scaling: - Max: 2
	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2

p5212[0...n]	Current setpoint filter 7 denominator natural frequency / I_set_filt7 fn_den		
SERVO (Ext I_setp_filt),	Changeable: T, U	Calculation: CALC_MOD_CON	Access level: 3
SERVO_840 (Ext	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5711
I_setp_filt), SERVO_AC	P group: Closed-loop control	Unit group: -	Unit selection: -
(Ext I_setp_filt),	Not for motor type: REL	Scaling: -	Expert list: 1
SERVO_DBSI (Ext	Min:	Max:	Default:
I_setp_filt)	0.5 [Hz]	16000.0 [Hz]	1999.0 [Hz]

p5212	Current actual value filter 7 denominator natural frequency / I_act_filt7 fn_den		
A_INF (Suppl cl-loop	Changeable: T, U	Calculation: CALC_MOD_CON	Access level: 3
ctrl), A_INF_840 (Suppl	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
cl-loop ctrl), R_INF	P group: Closed-loop control	Unit group: -	Unit selection: -
(Suppl cl-loop ctrl)	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.5 [Hz]	16000.0 [Hz]	1000.0 [Hz]

p5213[0...n]	Current setpoint filter 7 denominator damping / I_set_filt 7 D_den		
SERVO (Ext I_setp_filt),	Changeable: T, U	Calculation: CALC_MOD_CON	Access level: 3
SERVO_840 (Ext	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5711
I_setp_filt), SERVO_AC	P group: Closed-loop control	Unit group: -	Unit selection: -
(Ext I_setp_filt),	Not for motor type: REL	Scaling: -	Expert list: 1
SERVO_DBSI (Ext	Min:	Max:	Default:
I_setp_filt)	0.001	10.000	0.700

p5213	Current actual value filter 7 denominator damping / I_act_filt 7 D_den		
A_INF (Suppl cl-loop	Changeable: T, U	Calculation: CALC_MOD_CON	Access level: 3
ctrl), A_INF_840 (Suppl	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
cl-loop ctrl), R_INF	P group: Closed-loop control	Unit group: -	Unit selection: -
(Suppl cl-loop ctrl)	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.001	10.000	0.700

p5214[0...n]	Current setpoint filter 7 numerator natural frequency / I_set_filt7 fn_num		
SERVO (Ext I_setp_filt),	Changeable: T, U	Calculation: -	Access level: 3
SERVO_840 (Ext	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5711
I_setp_filt), SERVO_AC	P group: Closed-loop control	Unit group: -	Unit selection: -
(Ext I_setp_filt),	Not for motor type: REL	Scaling: -	Expert list: 1
SERVO_DBSI (Ext	Min:	Max:	Default:
I_setp_filt)	0.5 [Hz]	16000.0 [Hz]	1999.0 [Hz]

p5214	Current actual value filter 7 numerator natural frequency / I_act_filt7 fn_num		
A_INF (Suppl cl-loop	Changeable: T, U	Calculation: -	Access level: 3
ctrl), A_INF_840 (Suppl	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
cl-loop ctrl), R_INF	P group: Closed-loop control	Unit group: -	Unit selection: -
(Suppl cl-loop ctrl)	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.5 [Hz]	16000.0 [Hz]	1000.0 [Hz]

p5215[0...n]	Current setpoint filter 7 numerator damping / I_set_filt 7 D_num		
SERVO (Ext I_setp_filt), SERVO_840 (Ext I_setp_filt), SERVO_AC (Ext I_setp_filt), SERVO_DBSI (Ext I_setp_filt)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 5711 Unit selection: - Expert list: 1 Default: 0.700

p5215	Current actual value filter 7 numerator damping / I_act_filt 7 D_num		
A_INF (Suppl cl-loop ctrl), A_INF_840 (Suppl cl-loop ctrl), R_INF (Suppl cl-loop ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.000	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.010

p5216[0...n]	Current setpoint filter 8 type / I_set_filt 8 type		
SERVO (Ext I_setp_filt), SERVO_840 (Ext I_setp_filt), SERVO_AC (Ext I_setp_filt), SERVO_DBSI (Ext I_setp_filt)	Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: REL Min: 1	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: 5711 Unit selection: - Expert list: 1 Default: 1

p5217[0...n]	Current setpoint filter 8 denominator natural frequency / I_set_filt8 fn_den		
SERVO (Ext I_setp_filt), SERVO_840 (Ext I_setp_filt), SERVO_AC (Ext I_setp_filt), SERVO_DBSI (Ext I_setp_filt)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 5711 Unit selection: - Expert list: 1 Default: 1999.0 [Hz]

p5218[0...n]	Current setpoint filter 8 denominator damping / I_set_filt 8 D_den		
SERVO (Ext I_setp_filt), SERVO_840 (Ext I_setp_filt), SERVO_AC (Ext I_setp_filt), SERVO_DBSI (Ext I_setp_filt)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.001	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 5711 Unit selection: - Expert list: 1 Default: 0.700

p5219[0...n]	Current setpoint filter 8 numerator natural frequency / I_set_filt8 fn_num		
SERVO (Ext I_setp_filt), SERVO_840 (Ext I_setp_filt), SERVO_AC (Ext I_setp_filt), SERVO_DBSI (Ext I_setp_filt)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 5711 Unit selection: - Expert list: 1 Default: 1999.0 [Hz]

p5220[0...n]	Current setpoint filter 8 numerator damping / I_set_filt 8 D_num		
SERVO (Ext I_setp_filt),	Changeable: T, U	Calculation: -	Access level: 3
SERVO_840 (Ext	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5711
I_setp_filt), SERVO_AC	P group: Closed-loop control	Unit group: -	Unit selection: -
(Ext I_setp_filt),	Not for motor type: REL	Scaling: -	Expert list: 1
SERVO_DBSI (Ext	Min:	Max:	Default:
I_setp_filt)	0.000	10.000	0.700

p5221[0...n]	Current setpoint filter 9 type / I_set_filt 9 type		
SERVO (Ext I_setp_filt),	Changeable: T, U	Calculation: CALC_MOD_CON	Access level: 3
SERVO_840 (Ext	Data type: Integer16	Dynamic index: DDS, p0180	Function plan: 5711
I_setp_filt), SERVO_AC	P group: Closed-loop control	Unit group: -	Unit selection: -
(Ext I_setp_filt),	Not for motor type: REL	Scaling: -	Expert list: 1
SERVO_DBSI (Ext	Min:	Max:	Default:
I_setp_filt)	1	2	1

p5222[0...n]	Current setpoint filter 9 denominator natural frequency / I_set_filt9 fn_den		
SERVO (Ext I_setp_filt),	Changeable: T, U	Calculation: CALC_MOD_CON	Access level: 3
SERVO_840 (Ext	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5711
I_setp_filt), SERVO_AC	P group: Closed-loop control	Unit group: -	Unit selection: -
(Ext I_setp_filt),	Not for motor type: REL	Scaling: -	Expert list: 1
SERVO_DBSI (Ext	Min:	Max:	Default:
I_setp_filt)	0.5 [Hz]	16000.0 [Hz]	1999.0 [Hz]

p5223[0...n]	Current setpoint filter 9 denominator damping / I_set_filt 9 D_den		
SERVO (Ext I_setp_filt),	Changeable: T, U	Calculation: CALC_MOD_CON	Access level: 3
SERVO_840 (Ext	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5711
I_setp_filt), SERVO_AC	P group: Closed-loop control	Unit group: -	Unit selection: -
(Ext I_setp_filt),	Not for motor type: REL	Scaling: -	Expert list: 1
SERVO_DBSI (Ext	Min:	Max:	Default:
I_setp_filt)	0.001	10.000	0.700

p5224[0...n]	Current setpoint filter 9 numerator natural frequency / I_set_filt9 fn_num		
SERVO (Ext I_setp_filt),	Changeable: T, U	Calculation: -	Access level: 3
SERVO_840 (Ext	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5711
I_setp_filt), SERVO_AC	P group: Closed-loop control	Unit group: -	Unit selection: -
(Ext I_setp_filt),	Not for motor type: REL	Scaling: -	Expert list: 1
SERVO_DBSI (Ext	Min:	Max:	Default:
I_setp_filt)	0.5 [Hz]	16000.0 [Hz]	1999.0 [Hz]

p5225[0...n]	Current setpoint filter 9 numerator damping / I_set_filt 9 D_num		
SERVO (Ext I_setp_filt),	Changeable: T, U	Calculation: -	Access level: 3
SERVO_840 (Ext	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5711
I_setp_filt), SERVO_AC	P group: Closed-loop control	Unit group: -	Unit selection: -
(Ext I_setp_filt),	Not for motor type: REL	Scaling: -	Expert list: 1
SERVO_DBSI (Ext	Min:	Max:	Default:
I_setp_filt)	0.000	10.000	0.700

p5226[0...n]	Current setpoint filter 10 type / I_set_filt 10 type		
SERVO (Ext I_setp_filt), SERVO_840 (Ext I_setp_filt), SERVO_AC (Ext I_setp_filt), SERVO_DBSI (Ext I_setp_filt)	Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: REL Min: 1	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: 5711 Unit selection: - Expert list: 1 Default: 1

p5227[0...n]	Current setpoint filter 10 denominator natural frequency / I_set_filt1 fn_den		
SERVO (Ext I_setp_filt), SERVO_840 (Ext I_setp_filt), SERVO_AC (Ext I_setp_filt), SERVO_DBSI (Ext I_setp_filt)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 5711 Unit selection: - Expert list: 1 Default: 1999.0 [Hz]

p5228[0...n]	Current setpoint filter 10 denominator damping / I_set_filt10 D_den		
SERVO (Ext I_setp_filt), SERVO_840 (Ext I_setp_filt), SERVO_AC (Ext I_setp_filt), SERVO_DBSI (Ext I_setp_filt)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.001	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 5711 Unit selection: - Expert list: 1 Default: 0.700

p5229[0...n]	Current setpoint filter 10 numerator natural frequency / I_set_filt 10 fn		
SERVO (Ext I_setp_filt), SERVO_840 (Ext I_setp_filt), SERVO_AC (Ext I_setp_filt), SERVO_DBSI (Ext I_setp_filt)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.5 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 16000.0 [Hz]	Access level: 3 Function plan: 5711 Unit selection: - Expert list: 1 Default: 1999.0 [Hz]

p5230[0...n]	Current setpoint filter 10 numerator damping / I_set_filt10 D_num		
SERVO (Ext I_setp_filt), SERVO_840 (Ext I_setp_filt), SERVO_AC (Ext I_setp_filt), SERVO_DBSI (Ext I_setp_filt)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 0.000	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: 5711 Unit selection: - Expert list: 1 Default: 0.700

p5250[0...n]	Cogging torque compensation configuration / Cog_M_comp config		
SERVO (Cog_M_comp), SERVO_840 (Cog_M_comp), SERVO_AC (Cog_M_comp), SERVO_DBSI (Cog_M_comp)	Changeable: T, U Data type: Unsigned8 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin

p5251	Activate cogging torque compensation learning / Cog_M_comp_learn		
SERVO (Cog_M_comp), SERVO_840 (Cog_M_comp), SERVO_AC (Cog_M_comp), SERVO_DBSI (Cog_M_comp)	Changeable: T, U Data type: Unsigned8 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 bin
p5252	Cogging torque compensation table length / Cog_M_comp length		
SERVO (Cog_M_comp), SERVO_840 (Cog_M_comp), SERVO_AC (Cog_M_comp), SERVO_DBSI (Cog_M_comp)	Changeable: T Data type: Unsigned8 P group: Closed-loop control Not for motor type: - Min: 6	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 12	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 10
p5253	Cogging torque compensation periodicity factor / Cog_M_comp_period		
SERVO (Cog_M_comp), SERVO_840 (Cog_M_comp), SERVO_AC (Cog_M_comp), SERVO_DBSI (Cog_M_comp)	Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00000	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 32768.00000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1.00000
r5254[0...3]	Cogging torque compensation diagnostics / Cog_M_comp diag		
SERVO (Cog_M_comp), SERVO_840 (Cog_M_comp), SERVO_AC (Cog_M_comp), SERVO_DBSI (Cog_M_comp)	Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r5255[0...1]	CO: Cogging torque compensation input/output / Cog_M_comp I/O		
SERVO (Cog_M_comp, Lin), SERVO_840 (Cog_M_comp, Lin), SERVO_AC (Cog_M_comp, Lin), SERVO_DBSI (Cog_M_comp, Lin)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [N]	Calculation: - Dynamic index: - Unit group: 8_1 Scaling: p2003 Max: - [N]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [N]

r5255[0...1]	CO: Cogging torque compensation input/output / Cog_M_comp I/O		
SERVO (Cog_M_comp), SERVO_840 (Cog_M_comp), SERVO_AC (Cog_M_comp), SERVO_DBSI (Cog_M_comp)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: p2003 Max: - [Nm]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [Nm]

p5256[0...n]	Cogging torque compensation direction reversal hysteresis / Cog_M_comp hyst		
SERVO (Cog_M_comp, Lin), SERVO_840 (Cog_M_comp, Lin), SERVO_AC (Cog_M_comp, Lin), SERVO_DBSI (Cog_M_comp, Lin)	Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.00 [m/min]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00 [m/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.40 [m/min]

p5256[0...n]	Cogging torque compensation direction reversal hysteresis / Cog_M_comp hyst		
SERVO (Cog_M_comp), SERVO_840 (Cog_M_comp), SERVO_AC (Cog_M_comp), SERVO_DBSI (Cog_M_comp)	Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.00 [rpm]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100.00 [rpm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 20.00 [rpm]

p5257[0...19]	Cogging torque compensation frequency range real part / Cog_M_comp f real		
SERVO (Cog_M_comp, Lin), SERVO_840 (Cog_M_comp, Lin), SERVO_AC (Cog_M_comp, Lin), SERVO_DBSI (Cog_M_comp, Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -1000000.000000 [N]	Calculation: - Dynamic index: - Unit group: 8_1 Scaling: - Max: 1000000.000000 [N]	Access level: 4 Function plan: - Unit selection: p0505 Expert list: 1 Default: 0.000000 [N]

p5257[0...19]	Cogging torque compensation frequency range real part / Cog_M_comp f real		
SERVO (Cog_M_comp), SERVO_840 (Cog_M_comp), SERVO_AC (Cog_M_comp), SERVO_DBSI (Cog_M_comp)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -1000000.000000 [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: - Max: 1000000.000000 [Nm]	Access level: 4 Function plan: - Unit selection: p0505 Expert list: 1 Default: 0.000000 [Nm]

p5258[0...19]	Cogging torque compensation frequency range imaginary part / Cog_M_comp f Imag		
SERVO (Cog_M_comp, Lin), SERVO_840 (Cog_M_comp, Lin), SERVO_AC (Cog_M_comp, Lin), SERVO_DBSI (Cog_M_comp, Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -1000000.000000 [N]	Calculation: - Dynamic index: - Unit group: 8_1 Scaling: - Max: 1000000.000000 [N]	Access level: 4 Function plan: - Unit selection: p0505 Expert list: 1 Default: 0.000000 [N]

p5258[0...19]	Cogging torque compensation frequency range imaginary part / Cog_M_comp f Imag		
SERVO (Cog_M_comp), SERVO_840 (Cog_M_comp), SERVO_AC (Cog_M_comp), SERVO_DBSI (Cog_M_comp)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -1000000.000000 [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: - Max: 1000000.000000 [Nm]	Access level: 4 Function plan: - Unit selection: p0505 Expert list: 1 Default: 0.000000 [Nm]

p5259[0...19]	Cogging torque compensation frequency range multiplicity / Cog_M_comp f multi		
SERVO (Cog_M_comp), SERVO_840 (Cog_M_comp), SERVO_AC (Cog_M_comp), SERVO_DBSI (Cog_M_comp)	Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2048	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0

p5260[0...4095]	Cogging torque compensation table / Cog_M_comp table		
SERVO (Cog_M_comp, Lin), SERVO_840 (Cog_M_comp, Lin), SERVO_AC (Cog_M_comp, Lin), SERVO_DBSI (Cog_M_comp, Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -1000000.000000 [N]	Calculation: - Dynamic index: - Unit group: 8_1 Scaling: - Max: 1000000.000000 [N]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: 0.000000 [N]

p5260[0...4095]	Cogging torque compensation table / Cog_M_comp table		
SERVO (Cog_M_comp), SERVO_840 (Cog_M_comp), SERVO_AC (Cog_M_comp), SERVO_DBSI (Cog_M_comp)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -1000000.000000 [Nm]	Calculation: - Dynamic index: - Unit group: 7_1 Scaling: - Max: 1000000.000000 [Nm]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: 0.000000 [Nm]

p5261[0...4095]	Cogging torque compensation table negative direction / Cog_M_cmp tab neg		
SERVO (Cog_M_comp, Lin), SERVO_840 (Cog_M_comp, Lin), SERVO_AC (Cog_M_comp, Lin), SERVO_DBSI (Cog_M_comp, Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -1000000.000000 [N]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000000.000000 [N]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000000 [N]

p5261[0...4095]	Cogging torque compensation table negative direction / Cog_M_cmp tab neg		
SERVO (Cog_M_comp), SERVO_840 (Cog_M_comp), SERVO_AC (Cog_M_comp), SERVO_DBSI (Cog_M_comp)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -1000000.000000 [Nm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000000.000000 [Nm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000000 [Nm]

p5271[0...n]	Online / One Button Tuning configuration / Ot OBT config		
SERVO (J_estimator, Lin), SERVO_840 (J_estimator, Lin), SERVO_AC (J_estimator, Lin), SERVO_DBSI (J_estimator, Lin)	Changeable: T Data type: Unsigned16 P group: - Not for motor type: REL Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 1100 bin

p5271[0...n]	Online / One Button Tuning configuration / Ot OBT config		
SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	Changeable: T Data type: Unsigned16 P group: - Not for motor type: REL Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 1100 bin

p5271[0...n]	Online / One Button Tuning configuration / Ot OBT config		
VECTOR (J_estimator), VECTOR_AC (J_estimator)	Changeable: T Data type: Unsigned16 P group: - Not for motor type: REL Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 bin

p5272[0...n]	Online tuning dynamic factor / Ot dyn_factor		
SERVO (J_estimator, Lin), SERVO_840 (J_estimator, Lin), SERVO_AC (J_estimator, Lin), SERVO_DBSI (J_estimator, Lin)	Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: REL Min: 5.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000.0 [%]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 100.0 [%]

p5272[0...n]	Online tuning dynamic factor / Ot dyn_factor		
SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: REL Min: 5.0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1000.0 [%]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 100.0 [%]

p5273[0...n]	Online tuning dynamic factor load / Ot dyn_factor load		
SERVO (J_estimator, Lin), SERVO_840 (J_estimator, Lin), SERVO_AC (J_estimator, Lin), SERVO_DBSI (J_estimator, Lin)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5045
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.0 [%]	100.0 [%]	30.0 [%]

p5273[0...n]	Online tuning dynamic factor load / Ot dyn_factor load		
SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: 5045
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.0 [%]	100.0 [%]	30.0 [%]

r5274	CO: Online / One Button Tuning dynamic response estimated / Ot dyn estimate		
SERVO (J_estimator, Lin), SERVO_840 (J_estimator, Lin), SERVO_AC (J_estimator, Lin), SERVO_DBSI (J_estimator, Lin)	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 5045
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	- [ms]	- [ms]	- [ms]

r5274	CO: Online / One Button Tuning dynamic response estimated / Ot dyn estimate		
SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 5045
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	- [ms]	- [ms]	- [ms]

p5275[0...n]	Online / One Button Tuning dynamic response time constant / Ot dyn T		
SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.0 [ms]	60.0 [ms]	7.5 [ms]

r5276	Online / One Button Tuning Kv factor estimated / Ot Kv estimated		
SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 5045
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: REL	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	- [1000 rpm]	- [1000 rpm]	- [1000 rpm]

r5277	Online/One Button Tuning precontrol symmetrizing time estimated / Ot FFW estimated		
SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: REL Min: - [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [ms]	Access level: 3 Function plan: 5045 Unit selection: - Expert list: 1 Default: - [ms]
p5280[0...n]	Current setpoint filter adaptation configuration / Filt adapt config		
SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: -1	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p5281[0...n]	Current setpoint filter adaptation assignment / Filt adapt assign		
SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	Changeable: T, U Data type: Unsigned16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p5282[0...n]	Current setpoint filter adaptation limit frequency lower / Filt adapt f lower		
SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: 50 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5000 [Hz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 250 [Hz]
p5283[0...n]	Current setpoint filter adaptation limit frequency upper / Filt adapt f upper		
SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: 200 [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000 [Hz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1500 [Hz]
p5284[0...n]	Current setpoint filter adaptation activation threshold / Filt adapt thresh		
SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0 [%]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 10000 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100 [%]

r5285[0...n]	Current setpoint filter adaptation actual frequency / Filt adapt act f		
SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [Hz]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: - [Hz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [Hz]
p5292	FFT tuning dynamic factor / FFT tun dyn_factor		
SERVO (J_estimator, Lin), SERVO_840 (J_estimator, Lin), SERVO_AC (J_estimator, Lin), SERVO_DBSI (J_estimator, Lin)	Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: REL Min: 25.0 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 125.0 [%]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 80.0 [%]
p5292	FFT tuning dynamic factor / FFT tun dyn_factor		
SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: REL Min: 25.0 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 125.0 [%]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 80.0 [%]
r5293	Velocity controller gain identified / FFT tun Kp ident		
SERVO (J_estimator, Lin), SERVO_840 (J_estimator, Lin), SERVO_AC (J_estimator, Lin), SERVO_DBSI (J_estimator, Lin)	Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [Ns/m]	Calculation: - Dynamic index: - Unit group: 24_2 Scaling: - Max: - [Ns/m]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [Ns/m]
r5293	FFT tuning speed controller P gain identified / FFT tun Kp ident		
SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [Nms/rad]	Calculation: - Dynamic index: - Unit group: 17_1 Scaling: - Max: - [Nms/rad]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [Nms/rad]
r5294[0...5]	FFT tuning zero position identified / FFT tun zero ident		
SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [Hz]	Calculation: - Dynamic index: - Unit group: 2_1 Scaling: - Max: - [Hz]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [Hz]

r5295[0...5]	FFT tuning pole position identified / FFT tun pole ident		
SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [Hz]	Calculation: - Dynamic index: - Unit group: 2_1 Scaling: - Max: - [Hz]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [Hz]

p5296[0...2]	FFT tuning PRBS amplitude / FFT tun PRBS ampl		
SERVO (J_estimator, Lin), SERVO_840 (J_estimator, Lin), SERVO_AC (J_estimator, Lin), SERVO_DBSI (J_estimator, Lin)	Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: REL Min: 1.0 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 300.0 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: [0] 10.0 [%] [1] 30.0 [%] [2] 5.0 [%]

p5296[0...2]	FFT tuning PRBS amplitude / FFT tun PRBS ampl		
SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: REL Min: 1.0 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 300.0 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: [0] 10.0 [%] [1] 30.0 [%] [2] 5.0 [%]

p5297[0...2]	FFT tuning PRBS offset / FFT tun PRBS offs		
SERVO (J_estimator, Lin), SERVO_840 (J_estimator, Lin), SERVO_AC (J_estimator, Lin), SERVO_DBSI (J_estimator, Lin)	Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: REL Min: -210000.0000 [m/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 210000.0000 [m/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0000 [m/min]

p5297[0...2]	FFT tuning PRBS offset / FFT tun PRBS offs		
SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: REL Min: -210000.0000 [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 210000.0000 [rpm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0000 [rpm]

r5298	FFT tuning amplitude response / FFT tun ampl_resp		
SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r5299	FFT tuning phase response / FFT tun ph_resp		
SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p5300[0...n]	Autotuning selection / Autotuning select		
SERVO (J_estimator, Lin), SERVO_840 (J_estimator, Lin), SERVO_AC (J_estimator, Lin), SERVO_DBSI (J_estimator, Lin)	Changeable: T Data type: Integer16 P group: - Not for motor type: REL Min: -1	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p5300[0...n]	Autotuning selection / Autotuning select		
SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	Changeable: T Data type: Integer16 P group: - Not for motor type: REL Min: -1	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 2	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
p5301[0...n]	One Button Tuning configuration / OBT config		
SERVO (J_estimator, Lin), SERVO_840 (J_estimator, Lin), SERVO_AC (J_estimator, Lin), SERVO_DBSI (J_estimator, Lin)	Changeable: T, U Data type: Unsigned32 P group: - Not for motor type: REL Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0111 bin
p5301[0...n]	One Button Tuning configuration / OBT config		
SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	Changeable: T, U Data type: Unsigned32 P group: - Not for motor type: REL Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0111 bin

p5302[0...n] SERVO (J_estimator, Lin), SERVO_840 (J_estimator, Lin), SERVO_AC (J_estimator, Lin), SERVO_DBSI (J_estimator, Lin)	Online tuning configuration / Ot config Changeable: T, U Data type: Unsigned32 P group: - Not for motor type: REL Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 1100 bin
p5302[0...n] SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	Online tuning configuration / Ot config Changeable: T, U Data type: Unsigned32 P group: - Not for motor type: REL Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 1100 bin
r5306[0...n] SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	Autotuning status / Autotuning stat Changeable: - Data type: Unsigned16 P group: - Not for motor type: REL Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
p5307[0...n] SERVO (J_estimator, Lin), SERVO_840 (J_estimator, Lin), SERVO_AC (J_estimator, Lin), SERVO_DBSI (J_estimator, Lin)	Activate One Button Tuning test signal / Act OBT test sig Changeable: T Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
p5307[0...n] SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	Activate One Button Tuning test signal / Act OBT test sig Changeable: T Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
p5308[0...n] SERVO (J_estimator, Lin), SERVO_840 (J_estimator, Lin), SERVO_AC (J_estimator, Lin), SERVO_DBSI (J_estimator, Lin)	One Button Tuning test signal distance limiting / OBT test sig lim Changeable: T Data type: Integer32 P group: - Not for motor type: - Min: -30000 [mm]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 30000 [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0 [mm]

p5308[0...n] SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	One Button Tuning test signal distance limiting / OBT test sig lim Changeable: T Data type: Integer32 P group: - Not for motor type: - Min: -30000 [°]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 30000 [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0 [°]
p5309[0...n] SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator)	One Button Tuning test signal duration / OBT test sig dur Changeable: T Data type: Unsigned32 P group: - Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5000 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2000 [ms]
p5310[0...n] VECTOR (J_estimator), VECTOR_AC (J_estimator)	Moment of inertia precontrol configuration / J_est config Changeable: C2(3), T, U Data type: Unsigned32 P group: Motor Not for motor type: - Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
r5311[0...n] VECTOR (J_estimator), VECTOR_AC (J_estimator)	Moment of inertia precontrol status word / J_prectrl ZSW Changeable: - Data type: Unsigned32 P group: Motor Not for motor type: - Min: -	Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p5312[0...n] VECTOR (J_estimator), VECTOR_AC (J_estimator)	Moment of inertia precontrol linear positive / J_est lin pos Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: -340.28235E36 [s²]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 340.28235E36 [s²]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000000 [s²]
p5313[0...n] VECTOR (J_estimator), VECTOR_AC (J_estimator)	Moment of inertia precontrol constant positive / J_est const pos Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: -340.28235E36 [kgm²]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: 25_1 Scaling: - Max: 340.28235E36 [kgm²]	Access level: 3 Function plan: - Unit selection: p0100 Expert list: 1 Default: 0.000000 [kgm²]

p5314[0...n]	Moment of inertia precontrol linear negative / J_est lin neg		
VECTOR (J_estimator), VECTOR_AC (J_estimator)	Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: -340.28235E36 [s²]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 340.28235E36 [s²]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000000 [s²]
p5315[0...n]	Moment of inertia precontrol constant negative / J_est const neg		
VECTOR (J_estimator), VECTOR_AC (J_estimator)	Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: - Min: -340.28235E36 [kgm²]	Calculation: CALC_MOD_ALL Dynamic index: DDS, p0180 Unit group: 25_1 Scaling: - Max: 340.28235E36 [kgm²]	Access level: 3 Function plan: - Unit selection: p0100 Expert list: 1 Default: 0.000000 [kgm²]
p5316[0...n]	Inertia precontrol change time inertia / J_prectrl t J		
SERVO (J_estimator, Lin), SERVO_840 (J_estimator, Lin), SERVO_AC (J_estimator, Lin), SERVO_DBSI (J_estimator, Lin)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 10.00 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5000.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 500.00 [ms]
p5316[0...n]	Moment of inertia precontrol change time moment of inertia / J_prectrl t J		
SERVO (J_estimator), SERVO_840 (J_estimator), SERVO_AC (J_estimator), SERVO_DBSI (J_estimator), VECTOR (J_estimator), VECTOR_AC (J_estimator)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: REL Min: 10.00 [ms]	Calculation: CALC_MOD_CON Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 5000.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 500.00 [ms]
p5350[0...n]	Mot_temp_mod 1/3 boost factor at standstill / Standst boost_fact		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL Min: 1.0000	Calculation: - Dynamic index: MDS, p0130 Unit group: - Scaling: - Max: 2.0000	Access level: 2 Function plan: 8017 Unit selection: - Expert list: 1 Default: 2.0000

r5389.0...8	CO/BO: Mot_temp status word faults/alarms / Mot_temp ZSW F/A		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 8016 Unit selection: - Expert list: 1 Default: -
p5390[0...n]	Mot_temp_mod 1/3 alarm threshold / A thresh		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL Min: 0.0 [°C]	Calculation: - Dynamic index: MDS, p0130 Unit group: 21_1 Scaling: - Max: 200.0 [°C]	Access level: 2 Function plan: 8017 Unit selection: p0505 Expert list: 1 Default: 110.0 [°C]
p5391[0...n]	Mot_temp_mod 1/3 fault threshold / F thresh		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(3), T, U Data type: FloatingPoint32 P group: Motor Not for motor type: ASM, SESM, REL Min: 0.0 [°C]	Calculation: - Dynamic index: MDS, p0130 Unit group: 21_1 Scaling: - Max: 200.0 [°C]	Access level: 2 Function plan: 8017 Unit selection: p0505 Expert list: 1 Default: 120.0 [°C]
r5397	Mot_temp_mod 3 ambient temperature image p0613 / AmbTmp image p0613		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: ASM, SESM, REL Min: - [°C]	Calculation: - Dynamic index: - Unit group: 21_1 Scaling: - Max: - [°C]	Access level: 2 Function plan: 8019 Unit selection: p0505 Expert list: 1 Default: - [°C]
r5398[0...n]	Mot_temp_mod 3 alarm threshold image p5390 / A thr image p5390		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: ASM, SESM, REL Min: - [°C]	Calculation: - Dynamic index: MDS, p0130 Unit group: 21_1 Scaling: - Max: - [°C]	Access level: 2 Function plan: 8019 Unit selection: p0505 Expert list: 1 Default: - [°C]
r5399[0...n]	Mot_temp_mod 3 fault threshold image p5391 / F thr image p5391		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: ASM, SESM, REL Min: - [°C]	Calculation: - Dynamic index: MDS, p0130 Unit group: 21_1 Scaling: - Max: - [°C]	Access level: 2 Function plan: 8019 Unit selection: p0505 Expert list: 1 Default: - [°C]

p5400	Grid droop control configuration / Grid droop ctr cfg		
A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Changeable: T Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
p5401[0...1]	BI: Line droop control activation / Line drp act		
A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 7982 Unit selection: - Expert list: 1 Default: [0] 0 [1] 1
r5402.0...6	CO/BO: Line droop control status word / Line drp ZSW		
A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Changeable: - Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p5403[0...1]	CI: Line droop control current signal source / Line drp I s_src		
A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2002 Max: -	Access level: 3 Function plan: 7982 Unit selection: - Expert list: 1 Default: [0] 3467[0] [1] 3467[1]
p5404[0...1]	CI: Line droop control voltage signal source / Line drp U s_src		
A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: -	Access level: 3 Function plan: 7982 Unit selection: - Expert list: 1 Default: [0] 3468[0] [1] 3468[1]

p5405	Line droop control frequency droop no-load frequency / Line drp f_no-ld		
A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 30.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: 300.00 [%]	Access level: 3 Function plan: 7982 Unit selection: - Expert list: 1 Default: 100.00 [%]
p5406[0...1]	CI: Line droop control frequency droop supplementary setpoint / L drp f_suppl_setp		
A_INF (Line droop ctrl, Line transf), A_INF_840 (Line droop ctrl, Line transf), R_INF (Line droop ctrl, Line transf)	Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 7982 Unit selection: - Expert list: 1 Default: [0] 0 [1] 5582[0]
p5407	Line droop control frequency droop gradient / Line drp f_grad		
A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.00 [%]	Access level: 3 Function plan: 7982 Unit selection: - Expert list: 1 Default: 5.00 [%]
p5408	CI: Line droop control frequency droop gradient dynamic / Line drp f_grad dy		
A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p5409	Line droop control frequency droop smoothing time / Line drp f_t_sm		
A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000.00 [ms]	Access level: 3 Function plan: 7982 Unit selection: - Expert list: 1 Default: 150.00 [ms]
r5410	CO: Line droop control frequency droop output / Line drp f_outp		
A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Hz]	Calculation: - Dynamic index: - Unit group: - Scaling: p2000 Max: - [Hz]	Access level: 3 Function plan: 7982 Unit selection: - Expert list: 1 Default: - [Hz]

r5411[0...1]	CO: Line droop control frequency droop active power / Line drp f P_act		
A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [kW]	Calculation: - Dynamic index: - Unit group: - Scaling: r2004 Max: - [kW]	Access level: 3 Function plan: 7982 Unit selection: - Expert list: 1 Default: - [kW]
r5412	CO: Line droop control line angle / Line drp angle		
A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°]	Calculation: - Dynamic index: - Unit group: - Scaling: p2005 Max: - [°]	Access level: 3 Function plan: 7982 Unit selection: - Expert list: 1 Default: - [°]
p5413	Line droop control additional frequency droop gradient / Line droop add-f		
A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.0 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000.0 [%]	Access level: 3 Function plan: 7982 Unit selection: - Expert list: 1 Default: 0.0 [%]
p5414	Line droop control additional frequency droop smoothing time / Line droop add-t		
A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.0 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.0 [%]	Access level: 3 Function plan: 7982 Unit selection: - Expert list: 1 Default: 10.0 [%]
p5415	Line droop control voltage droop no-load voltage / Line drp U_no-l		
A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 30.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: 300.00 [%]	Access level: 3 Function plan: 7982 Unit selection: - Expert list: 1 Default: 100.00 [%]
p5416[0...1]	Cl: Line droop control voltage droop supplementary setpoint / L drp V_suppl_setp		
A_INF (Line droop ctrl, Line transf), A_INF_840 (Line droop ctrl, Line transf), R_INF (Line droop ctrl, Line transf)	Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 7982 Unit selection: - Expert list: 1 Default: [0] 0 [1] 5582[1]

p5417	Line droop control voltage droop gradient / Line drp U grad		
A_INF (Line droop ctrl),	Changeable: T, U	Calculation: -	Access level: 3
R_INF (Line droop ctrl)	Data type: FloatingPoint32	Dynamic index: -	Function plan: 7982
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [%]	100.00 [%]	5.00 [%]

p5418	CI: Line droop control voltage droop gradient dynamic / Line drp U grad dy		
A_INF (Line droop ctrl),	Changeable: T, U	Calculation: -	Access level: 3
R_INF (Line droop ctrl)	Data type: Unsigned32 / FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: PERCENT	Expert list: 1
	Min:	Max:	Default:
	-	-	0

p5419	Line droop control voltage droop smoothing time / Line drp U t_sm		
A_INF (Line droop ctrl),	Changeable: T, U	Calculation: -	Access level: 3
R_INF (Line droop ctrl)	Data type: FloatingPoint32	Dynamic index: -	Function plan: 7982
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [ms]	10000.00 [ms]	150.00 [ms]

r5420	CO: Line droop control voltage droop output / Line drp U outp		
A_INF (Line droop ctrl),	Changeable: -	Calculation: -	Access level: 3
R_INF (Line droop ctrl)	Data type: FloatingPoint32	Dynamic index: -	Function plan: 7982
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: p2001	Expert list: 1
	Min:	Max:	Default:
	- [Vrms]	- [Vrms]	- [Vrms]

r5421[0...1]	CO: Line droop control voltage droop reactive current / Line drp U I_reac		
A_INF (Line droop ctrl),	Changeable: -	Calculation: -	Access level: 3
R_INF (Line droop ctrl)	Data type: FloatingPoint32	Dynamic index: -	Function plan: 7982
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: p2002	Expert list: 1
	Min:	Max:	Default:
	- [A]	- [A]	- [A]

r5422[0...1]	CO: Line droop control voltage droop reactive power / Line drp U Q_reac		
A_INF (Line droop ctrl),	Changeable: -	Calculation: -	Access level: 3
R_INF (Line droop ctrl)	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Displays, signals	Unit group: 14_12	Unit selection: p0505
	Not for motor type: -	Scaling: r2004	Expert list: 1
	Min:	Max:	Default:
	- [kvar]	- [kvar]	- [kvar]

p5423	Line droop control supplementary inductance / Line drp L_suppl		
A_INF (Line droop ctrl),	Changeable: T, U	Calculation: -	Access level: 4
R_INF (Line droop ctrl)	Data type: FloatingPoint32	Dynamic index: -	Function plan: 7983
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-10.000 [mH]	10.000 [mH]	0.000 [mH]
p5424	Line droop control supplementary inductance smoothing time / L drp L_suppl t_sm		
A_INF (Line droop ctrl),	Changeable: T, U	Calculation: -	Access level: 4
R_INF (Line droop ctrl)	Data type: FloatingPoint32	Dynamic index: -	Function plan: 7983
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [ms]	100.00 [ms]	0.00 [ms]
p5425[0...1]	CI: Line droop control voltage control signal source / L drp U_ctrl s_sc		
A_INF (Line droop ctrl),	Changeable: T	Calculation: -	Access level: 3
R_INF (Line droop ctrl)	Data type: Unsigned32 / FloatingPoint32	Dynamic index: -	Function plan: 7982
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: p2001	Expert list: 1
	Min:	Max:	Default:
	-	-	[0] 3468[0] [1] 3468[1]
p5426	Line droop control voltage control P gain / Line drp U_ctrl Kp		
A_INF (Line droop ctrl),	Changeable: T, U	Calculation: -	Access level: 3
R_INF (Line droop ctrl)	Data type: FloatingPoint32	Dynamic index: -	Function plan: 7982
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.0 [%]	100.0 [%]	0.0 [%]
p5427	Line droop control voltage control integration time / Line drp U_ctrl Ti		
A_INF (Line droop ctrl),	Changeable: T, U	Calculation: -	Access level: 3
R_INF (Line droop ctrl)	Data type: FloatingPoint32	Dynamic index: -	Function plan: 7982
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.0 [ms]	10000.0 [ms]	500.0 [ms]

p5428[0...3]	Line droop control voltage control short circuit / Line drp U_ctrl sh		
A_INF (Line droop ctrl), Changeable: T, U	Calculation: -	Access level: 4	
R_INF (Line droop ctrl) Data type: FloatingPoint32	Dynamic index: -	Function plan: -	
P group: Displays, signals	Unit group: -	Unit selection: -	
Not for motor type: -	Scaling: -	Expert list: 1	
Min:	Max:	Default:	
0.00 [%]	100.00 [%]	[0] 20.00 [%]	
		[1] 0.00 [%]	
		[2] 90.00 [%]	
		[3] 2.00 [%]	
r5429	CO: Line droop control voltage control output / L drp U_ctrl outp		
A_INF (Line droop ctrl), Changeable: -	Calculation: -	Access level: 3	
R_INF (Line droop ctrl) Data type: FloatingPoint32	Dynamic index: -	Function plan: 7982	
P group: Displays, signals	Unit group: -	Unit selection: -	
Not for motor type: -	Scaling: p2001	Expert list: 1	
Min:	Max:	Default:	
- [Vrms]	- [Vrms]	- [Vrms]	
p5430[0...1]	Modulation depth controller setting / ModDpth_ctrl set		
A_INF (Line droop ctrl), Changeable: T, U	Calculation: -	Access level: 3	
R_INF (Line droop ctrl) Data type: FloatingPoint32	Dynamic index: -	Function plan: -	
P group: Closed-loop control	Unit group: -	Unit selection: -	
Not for motor type: -	Scaling: -	Expert list: 1	
Min:	Max:	Default:	
50.0 [%]	110.0 [%]	[0] 94.0 [%]	
		[1] 110.0 [%]	
p5431	Modulation depth controller dynamic response / Mod_ctrl dyn		
A_INF (Line droop ctrl), Changeable: T, U	Calculation: -	Access level: 3	
R_INF (Line droop ctrl) Data type: FloatingPoint32	Dynamic index: -	Function plan: -	
P group: Closed-loop control	Unit group: -	Unit selection: -	
Not for motor type: -	Scaling: -	Expert list: 1	
Min:	Max:	Default:	
0.0 [ms]	10000.0 [ms]	10.0 [ms]	
p5432[0...1]	Modulation depth controller output voltage limits / Mod_ctrl lim U		
A_INF (Line droop ctrl), Changeable: T, U	Calculation: -	Access level: 3	
R_INF (Line droop ctrl) Data type: FloatingPoint32	Dynamic index: -	Function plan: -	
P group: Closed-loop control	Unit group: -	Unit selection: -	
Not for motor type: -	Scaling: -	Expert list: 1	
Min:	Max:	Default:	
-200.0 [V]	200.0 [V]	[0] 100.0 [V]	
		[1] -100.0 [V]	

r5433	CO: Modulation depth controller output / Mod_ctrl outp		
A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: - [V]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [V]

p5434	Direct component controller low pass limit frequency / I_dc_reg PT2 f		
A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: 0.000 [Hz]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1.000 [Hz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.500 [Hz]

p5435	Direct component controller low pass damping / I_dc_reg PT2 D		
A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: 0.001	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10.000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1.000

p5436	Direct component controller P gain / I_dc_reg Kp		
A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: 0.0000 [ohm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10.0000 [ohm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0200 [ohm]

p5437	Direct component controller integration time / I_dc_reg Ti		
A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.000 [s]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 3.500 [s]

p5438	Direct component controller limiting / I_dc_ctrl limit		
A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: 0.0 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10.0 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2.0 [%]

p5440	Harmonics controller bandpass filter activation / Bandpass act		
A_INF (Line droop ctrl),	Changeable: T, U	Calculation: -	Access level: 4
R_INF (Line droop ctrl)	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0000 bin
p5441[0...3]	Harmonics controller bandpass filter gain / Bandpass gain		
A_INF (Line droop ctrl),	Changeable: T, U	Calculation: -	Access level: 4
R_INF (Line droop ctrl)	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00	10000.00	120.00
p5442[0...3]	Harmonics controller bandpass filter mid-frequency / Bandpass f_mid		
A_INF (Line droop ctrl),	Changeable: T, U	Calculation: -	Access level: 4
R_INF (Line droop ctrl)	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [Hz]	1000.00 [Hz]	300.00 [Hz]
p5443	Harmonics controller bandpass filter gain total / Bandpass gain tot		
A_INF (Line droop ctrl),	Changeable: T, U	Calculation: -	Access level: 4
R_INF (Line droop ctrl)	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00	100.00	1.00
r5444[0...1]	CO: Line droop control line voltage absolute value / U_line abs val		
A_INF (Line droop ctrl),	Changeable: -	Calculation: -	Access level: 3
R_INF (Line droop ctrl)	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: p2001	Expert list: 1
	Min:	Max:	Default:
	- [V]	- [V]	- [V]
r5445[0...11]	Line droop control voltage alpha/beta component / U A/B comp		
A_INF (Line droop ctrl),	Changeable: -	Calculation: -	Access level: 3
R_INF (Line droop ctrl)	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	- [V]	- [V]	- [V]

r5446[0...1] CO: Line droop control line voltage active/reactive component / U_line P/Q comp

A_INF (Line droop ctrl),	Changeable: -	Calculation: -	Access level: 3
R_INF (Line droop ctrl)	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: p2001	Expert list: 1
	Min:	Max:	Default:
	- [V]	- [V]	- [V]

r5447 CO: Line droop control line voltage absolute value / I_line abs val

A_INF (Line droop ctrl),	Changeable: -	Calculation: -	Access level: 3
R_INF (Line droop ctrl)	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Displays, signals	Unit group: 6_2	Unit selection: p0505
	Not for motor type: -	Scaling: p2002	Expert list: 1
	Min:	Max:	Default:
	- [Arms]	- [Arms]	- [Arms]

r5448[0...3] Line droop control line current alpha/beta component / I_line A/B comp

A_INF (Line droop ctrl),	Changeable: -	Calculation: -	Access level: 3
R_INF (Line droop ctrl)	Data type: FloatingPoint32	Dynamic index: -	Function plan: 7982, 7983
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	- [A]	- [A]	- [A]

r5449[0...1] CO: Line droop control line current active/reactive component / I_line P/Q comp

A_INF (Line droop ctrl),	Changeable: -	Calculation: -	Access level: 3
R_INF (Line droop ctrl)	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: p2002	Expert list: 1
	Min:	Max:	Default:
	- [A]	- [A]	- [A]

r5450[0...5] CO: Line droop setpoint active / Line drp setp act

A_INF (Line droop ctrl),	Changeable: -	Calculation: -	Access level: 3
R_INF (Line droop ctrl)	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: PERCENT	Expert list: 1
	Min:	Max:	Default:
	- [%]	- [%]	- [%]

p5451 BI: Current hysteresis controller operating mode / I_hyst_ctrl mode

A_INF (Line droop ctrl),	Changeable: T, U	Calculation: -	Access level: 3
R_INF (Line droop ctrl)	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: -
	P group: Commands	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0

r5452.0...3 CO/BO: Current hysteresis controller sequence control status word / I_hyst_ctrl seqZSW

A_INF (Line droop ctrl),	Changeable: -	Calculation: -	Access level: 3
R_INF (Line droop ctrl)	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-

p5453[0...5] Current hysteresis controller overcurrent limit / I_hyst_ctrl I lim

A_INF (Line droop ctrl),	Changeable: T, U	Calculation: -	Access level: 4
R_INF (Line droop ctrl)	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	45.0 [%]	130.0 [%]	[0...4] 85.0 [%]
			[5] 115.0 [%]

p5454[0...5] Current hysteresis controller overcurrent hysteresis width / I_hyst_ctrl I hyst

A_INF (Line droop ctrl),	Changeable: T, U	Calculation: -	Access level: 4
R_INF (Line droop ctrl)	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	15.0 [%]	50.0 [%]	20.0 [%]

p5455[0...5] Current hysteresis controller overcurrent tolerance range / I_hyst_ctrl I tol

A_INF (Line droop ctrl),	Changeable: T, U	Calculation: -	Access level: 4
R_INF (Line droop ctrl)	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	10.0 [%]	100.0 [%]	20.0 [%]

p5456[0...2] Current hysteresis controller configuration / I_hyst_ctrl config

A_INF (Line droop ctrl),	Changeable: T, U	Calculation: -	Access level: 4
R_INF (Line droop ctrl)	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: Modulation	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	[0] 1000 0000 0010 0000 bin
			[1] 1000 0000 0010 0000 bin
			[2] 1000 0000 0011 0000 bin

p5457[0...2]	Current hysteresis controller pulse frequency changeover / I_hyst_ctrl f_puls
A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 50.0 [%]
	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 200.0 [%]
	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 100.0 [%]

p5458[0...1]	Current hysteresis controller minimum time operating state / I_hyst_ctrl t_mode
A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: 0.000 [s]
	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3.000 [s]
	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: [0] 1.000 [s] [1] 1.000 [s]

p5459[0...3]	Current hysteresis controller sequence control state change / I_hyst_ctrl seq
A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: 0.0 [%]
	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 200.0 [%]
	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: [0] 10.0 [%] [1] 5.0 [%] [2] 70.0 [%] [3] 75.0 [%]

p5460[0...n]	VSM2 input line supply voltage, voltage scaler / VSM2 inp U_scaler
A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [%]
	Calculation: - Dynamic index: p0150 Unit group: - Scaling: PERCENT Max: 100000.00 [%]
	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [%]

r5461[0...n]	CO: VSM2 input line supply voltage u1 - u2 / VSM2 inp u1-u2
A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [V]
	Calculation: - Dynamic index: p0150 Unit group: 5_3 Scaling: p2001 Max: - [V]
	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [V]

r5462[0...n] A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	CO: VSM2 input line supply voltage u2 - u3 / VSM2 inp u2-u3 Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [V]	Calculation: - Dynamic index: p0150 Unit group: 5_3 Scaling: p2001 Max: - [V]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [V]
r5464[0...n] A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	CO: VSM2 temperature evaluation status / VSM2 temp status Changeable: - Data type: Unsigned16 P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: p0150 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p5465[0...n] A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	VSM2 temperature evaluation sensor type / VSM2 temp sens_typ Changeable: T Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: p0150 Unit group: - Scaling: - Max: 6	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
r5466[0...n] A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	CO: VSM2 temperature actual value / VSM2 Temp_ActVal Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: p0150 Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [°C]
p5467[0...n] A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	VSM2 overtemperature alarm threshold / VSM2 temp A_thresh Changeable: T Data type: FloatingPoint32 P group: - Not for motor type: - Min: -100.00 [°C]	Calculation: - Dynamic index: p0150 Unit group: 21_1 Scaling: p2006 Max: 301.00 [°C]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: 150.00 [°C]
p5468[0...n] A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	VSM2 overtemperature shutdown threshold / VSM2 temp F_thresh Changeable: T Data type: FloatingPoint32 P group: - Not for motor type: - Min: -100.00 [°C]	Calculation: - Dynamic index: p0150 Unit group: 21_1 Scaling: p2006 Max: 301.00 [°C]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: 180.00 [°C]

p5469[0...n] A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	VSM2 overtemperature hysteresis / VSM2 temp hyst Changeable: T Data type: FloatingPoint32 P group: - Not for motor type: - Min: 1.00 [K]	Calculation: - Dynamic index: p0150 Unit group: 21_2 Scaling: p2006 Max: 50.00 [K]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: 3.00 [K]
p5470[0...n] A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	VSM2 10 V input CT gain / VSM2 CT_gain Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.000 [A]	Calculation: - Dynamic index: p0150 Unit group: - Scaling: p2002 Max: 1000.000 [A]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1.000 [A]
r5471[0...n] A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	CO: VSM2 10 V input CT 1 actual value / VSM2 CT1 I_act Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [A]	Calculation: - Dynamic index: p0150 Unit group: - Scaling: p2002 Max: - [A]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [A]
r5472[0...n] A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	CO: VSM2 10 V input CT 2 actual value / VSM2 CT2 I_act Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [A]	Calculation: - Dynamic index: p0150 Unit group: - Scaling: p2002 Max: - [A]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [A]
r5473[0...n] A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	CO: VSM2 10 V input 1 actual value / VSM2 inp 1 U_act Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [V]	Calculation: - Dynamic index: p0150 Unit group: - Scaling: p2001 Max: - [V]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [V]
r5474[0...n] A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	CO: VSM2 10 V input 2 actual value / VSM2 inp 2 U_act Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [V]	Calculation: - Dynamic index: p0150 Unit group: - Scaling: p2001 Max: - [V]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [V]

p5476	Line droop control damping gain / Line droop damp k		
A_INF (Line droop ctrl),	Changeable: T, U	Calculation: -	Access level: 4
R_INF (Line droop ctrl)	Data type: FloatingPoint32	Dynamic index: -	Function plan: 7982
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.0 [%]	1000.0 [%]	0.0 [%]

p5477	Line droop control damping smoothing time / Line droop damp T		
A_INF (Line droop ctrl),	Changeable: T, U	Calculation: -	Access level: 4
R_INF (Line droop ctrl)	Data type: FloatingPoint32	Dynamic index: -	Function plan: 7982
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	5.0 [%]	2000.0 [%]	200.0 [%]

p5478[0...1]	Line droop control current limits / Line droop I_lim		
A_INF (Line droop ctrl)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	50.0 [%]	123.0 [%]	[0] 90.0 [%]
			[1] 123.0 [%]

p5478[0...1]	Line droop control current limits / Line droop I_lim		
R_INF (Line droop ctrl)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	50.0 [%]	123.0 [%]	[0] 67.0 [%]
			[1] 67.0 [%]

r5479[0...5]	Line droop control current permissible / Line droop I perm		
A_INF (Line droop ctrl),	Changeable: -	Calculation: -	Access level: 3
R_INF (Line droop ctrl)	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	- [Arms]	- [Arms]	- [Arms]

p5480 A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Transformer magnetization mode / Transf mag mode Changeable: T Data type: Integer16 P group: Commands Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 102	Access level: 3 Function plan: 7990 Unit selection: - Expert list: 1 Default: 0
p5481[0...2] A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Transformer magnetization times / Transf mag t Changeable: T Data type: FloatingPoint32 P group: Commands Not for motor type: - Min: 0.04 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.00 [s]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: [0] 2.00 [s] [1] 1.00 [s] [2] 1.00 [s]
r5482 A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	CO: Line synchronization status / Line synch. status Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 207	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p5483 A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	BI: Line circuit breaker enable / Line LSS enab Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 7988, 7990, 7994 Unit selection: - Expert list: 1 Default: 0
p5484[0...2] A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Magnetization transformer controller dynamics / Mag transf ctr_dyn Changeable: T Data type: FloatingPoint32 P group: Commands Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.00 [ms]	Access level: 3 Function plan: 7993 Unit selection: - Expert list: 1 Default: [0] 50.00 [ms] [1] 50.00 [ms] [2] 100.00 [ms]

p5485[0...1]	Transformer magnetization voltage thresholds / Transf mag U_thr		
A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Changeable: T	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 7990, 7993
	P group: Commands	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: 0.0 [V]	Max: 300.0 [V]	Default: [0] 35.0 [V] [1] 3.5 [V]

p5486[0...1]	Transformer rated voltage primary / Transf U_rated pri		
A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Changeable: C2(1, 2)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Converter	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: 0.00 [Vrms]	Max: 63000.00 [Vrms]	Default: 400.00 [Vrms]

p5487[0...3]	CI: Transformer primary voltage signal source / Trans U_prim s_src		
A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Changeable: T	Calculation: -	Access level: 3
	Data type: Unsigned32 / FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: p2001	Expert list: 1
	Min: -	Max: -	Default: [0] 5461[0] [1] 5462[0] [2] 0 [3] 0

r5488[0...5]	CO: Transformer secondary voltage transformed / Transf U_sec trans		
A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 7990
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: p2001	Expert list: 1
	Min: - [V]	Max: - [V]	Default: - [V]

r5489	Transformer leakage inductance identified / Transf L_l ident		
A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Converter	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: - [mH]	Max: - [mH]	Default: - [mH]

p5490 A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Transformer leakage inductance / Transf L_leak Changeable: C2(1), T Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.001 [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.000 [mH]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.100 [mH]
r5491 A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Transformer magnetizing inductance identified / Transf L_H ident Changeable: - Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: - [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mH]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [mH]
p5492 A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Transformer magnetizing inductance / Transf L_H Changeable: C2(1), T Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.10 [mH]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000.00 [mH]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 250.00 [mH]
r5493.0...1 A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	CO/BO: Line circuit breaker control signals / LSS control sig Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 7990 Unit selection: - Expert list: 1 Default: -
p5494[0...1] A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Transformer magnetization scaling values / Traf mag scale Changeable: T Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 10.0 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 150.0 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: [0] 100.0 [%] [1] 40.0 [%]
p5495 A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Transformer operating mode configuration / Transf op config Changeable: T, U Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin

r5497[0...1] A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	CO: Transformer secondary current / Transf I_second Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [A]	Calculation: - Dynamic index: - Unit group: - Scaling: p2002 Max: - [A]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [A]
r5498[0...2] A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	CO: Transformer secondary voltage / Transf U_second Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: - [V]	Access level: 3 Function plan: 7990 Unit selection: - Expert list: 1 Default: - [V]
r5499.0...6 A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	CO/BO: Line synchronization status word / Sync status word Changeable: - Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p5500 A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Dynamic grid support configuration / Dyn grid config Changeable: T Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: 7996, 7997 Unit selection: - Expert list: 1 Default: 0000 0000 1000 1000 bin
p5501 A_INF (Dyn. grid support), R_INF (Dyn. grid support)	BI: Dynamic grid support activation / Dyn grid act Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
r5502.0...4 A_INF (Dyn. grid support), R_INF (Dyn. grid support)	CO/BO: Dynamic grid support status word / Dyn grid ZSW Changeable: - Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

p5503[0...1]			
A_INF (Dyn. grid support), R_INF (Dyn. grid support)	CI: Dynamic grid support current signal source / Dyn grid I sig_src		
	Changeable: T	Calculation: -	Access level: 3
	Data type: Unsigned32 / FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: p2002	Expert list: 1
	Min:	Max:	Default:
	-	-	[0] 3467[0] [1] 3467[1]
p5504[0...1]			
A_INF (Dyn. grid support), R_INF (Dyn. grid support)	CI: Dynamic grid control voltage signal source / Dyn grid U sig_src		
	Changeable: T	Calculation: -	Access level: 3
	Data type: Unsigned32 / FloatingPoint32	Dynamic index: -	Function plan: 7996, 7999
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: p2001	Expert list: 1
	Min:	Max:	Default:
	-	-	[0] 3468[0] [1] 3468[1]
p5505[0...3]			
A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Dynamic grid support characteristic voltage values / Dyn grid char U		
	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 7996
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.0 [%]	100.0 [%]	[0] 10.0 [%] [1] 50.0 [%] [2] 10.0 [%] [3] 50.0 [%]
p5506[0...3]			
A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Dynamic grid support characteristic reactive current setpoint / Dyn grid char I		
	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 7996
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.0 [%]	500.0 [%]	[0] 20.0 [%] [1] 100.0 [%] [2] 20.0 [%] [3] 100.0 [%]

p5507[0...4] A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Dynamic grid support times / Dyn grid times Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000.00 [ms]	Access level: 3 Function plan: 7996, 7998, 7999 Unit selection: - Expert list: 1 Default: [0] 500.00 [ms] [1] 2.00 [ms] [2] 20.00 [ms] [3] 4.00 [ms] [4] 8.00 [ms]
p5508[0...1] A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Dynamic grid support Vdc thresholds / Dyn grid Vdc thr Changeable: T, U Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: -200 [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 0 [V]	Access level: 3 Function plan: 7997 Unit selection: - Expert list: 1 Default: [0] -50 [V] [1] 0 [V]
p5509[0...13] A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Dynamic grid support scaling values / Dyn grid scal Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.10 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 200.00 [%]	Access level: 3 Function plan: 7996, 7997, 7998 Unit selection: - Expert list: 1 Default: [0] 40.00 [%] [1] 40.00 [%] [2] 4.00 [%] [3] 1.00 [%] [4] 100.00 [%] [5] 100.00 [%] [6] 1.00 [%] [7] 0.10 [%] [8] 0.10 [%] [9] 10.00 [%] [10] 5.00 [%] [11] 100.00 [%] [12] 100.00 [%] [13] 3.00 [%]
r5510[0...8] A_INF (Dyn. grid support), R_INF (Dyn. grid support)	CO: Dynamic grid support output / Dyn grid outp Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: 7987, 7997 Unit selection: p0505 Expert list: 1 Default: - [Arms]

r5511[0...1] A_INF (Dyn. grid support), R_INF (Dyn. grid support)	CO: Dynamic grid support line voltage amplitude / Dyn grid U ampl Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [V]	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: - [V]	Access level: 3 Function plan: 7996 Unit selection: - Expert list: 1 Default: - [V]
r5512[0...1] A_INF (Dyn. grid support), R_INF (Dyn. grid support)	CO: Dynamic grid support line voltage absolute value / Dyn grid U abs val Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: 5_1 Scaling: p2001 Max: - [Vrms]	Access level: 3 Function plan: 7996, 7999 Unit selection: p0505 Expert list: 1 Default: - [Vrms]
r5513[0...3] A_INF (Dyn. grid support), R_INF (Dyn. grid support)	CO: Dynamic grid support line voltage pos/neg phase-sequence system / Dyn grid U pos/neg Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: 5_1 Scaling: p2001 Max: - [Vrms]	Access level: 3 Function plan: 7996 Unit selection: p0505 Expert list: 1 Default: - [Vrms]
r5514[0...1] A_INF (Dyn. grid support), R_INF (Dyn. grid support)	CO: Dynamic grid support current setpoint alpha/beta / Dyn grid I a/b Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [A]	Calculation: - Dynamic index: - Unit group: - Scaling: p2002 Max: - [A]	Access level: 4 Function plan: 7997 Unit selection: - Expert list: 1 Default: - [A]
r5515[0...1] A_INF (Dyn. grid support), R_INF (Dyn. grid support)	CO: Dynamic grid support active power display / Dyn grid P displ Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [kW]	Calculation: - Dynamic index: - Unit group: - Scaling: r2004 Max: - [kW]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [kW]
r5516[0...1] A_INF (Dyn. grid support), R_INF (Dyn. grid support)	CO: Dynamic grid support reactive power display / Dyn grid Q disp Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [kvar]	Calculation: - Dynamic index: - Unit group: 14_12 Scaling: r2004 Max: - [kvar]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [kvar]

p5518 A_INF (Dyn. grid support), R_INF (Dyn. grid support)	CI: Dynamic grid support line phase angle signal source / Dyn grid ang S_src Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2005 Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0
p5519 A_INF (Dyn. grid support), R_INF (Dyn. grid support)	CI: Dynamic grid support line frequency signal source / Line freq S_src Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2000 Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0
p5520 A_INF (Dyn. grid support), R_INF (Dyn. grid support)	CI: Dynamic grid support FRT current limit signal source / FRT curr lim s_src Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: -	Access level: 3 Function plan: 7997 Unit selection: - Expert list: 1 Default: 1
r5522.0...3 A_INF (Dyn. grid support), R_INF (Dyn. grid support)	CO/BO: Dynamic grid support sequence control status word / Dyn grid seq ZSW Changeable: - Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p5523[0...2] A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Dynamic grid support overcurrent limit / Dyn grid I lim Changeable: T Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: 50.0 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 130.0 [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: [0] 120.0 [%] [1] 120.0 [%] [2] 120.0 [%]

p5524[0...2] A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Dynamic grid support hysteresis width / Dyn grid hyst Changeable: T Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: 15.0 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 50.0 [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 20.0 [%]
p5525[0...2] A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Dynamic grid support overcurrent tolerance range / Dyn grid I tol Changeable: T Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: 10.0 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.0 [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 20.0 [%]
p5526[0...2] A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Dynamic grid support overcurrent modulator configuration / Dyn grid I config Changeable: T, U Data type: Unsigned16 P group: Modulation Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: [0] 1000 0000 1010 0000 bin [1] 1000 0000 1010 0000 bin [2] 1000 0000 1011 0000 bin
p5527[0...2] A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Dynamic grid support changeover pulse frequency / Dyn grid chg f_pul Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 50.0 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 200.0 [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: [0] 100.0 [%] [1] 100.0 [%] [2] 100.0 [%]
p5528[0...4] A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Dynamic grid control operating state times / Dyn grid t state Changeable: T, U Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: 0.000 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10.000 [s]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: [0] 1.000 [s] [1] 2.000 [s] [2] 3.000 [s] [3] 0.050 [s] [4] 0.050 [s]

p5529[0...7] A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Dynamic grid support sequence control scaling values / Dyn grid seq scal Changeable: T, U Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: 0.0 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 200.0 [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: [0] 10.0 [%] [1] 5.0 [%] [2] 65.0 [%] [3] 70.0 [%] [4] 15.0 [%] [5] 15.0 [%] [6] 100.0 [%] [7] 105.0 [%]
p5540 A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Line monitoring configuration / Line monit config Changeable: T Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: 7999 Unit selection: - Expert list: 1 Default: 0000 0010 0000 0011 bin
p5541 A_INF (Dyn. grid support), R_INF (Dyn. grid support)	BI: Line monitoring activation / Line monit act Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 7999 Unit selection: - Expert list: 1 Default: 0
r5542.0...14 A_INF (Dyn. grid support), R_INF (Dyn. grid support)	CO/BO: Line monitoring status word / Line monit ZSW Changeable: - Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 7999 Unit selection: - Expert list: 1 Default: -
p5543[0...3] A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Line monitoring voltage threshold / Line mon U_thresh Changeable: T Data type: FloatingPoint32 P group: - Not for motor type: - Min: 50.0 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 150.0 [%]	Access level: 3 Function plan: 7999 Unit selection: - Expert list: 1 Default: [0] 110.0 [%] [1] 88.0 [%] [2] 100.0 [%] [3] 100.0 [%]

p5544[0...3] A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Line monitoring frequency threshold / Line mon_f thresh Changeable: T Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.0 [Hz]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 5.0 [Hz]	Access level: 3 Function plan: 7999 Unit selection: - Expert list: 1 Default: [0] 0.5 [Hz] [1] 0.7 [Hz] [2] 0.0 [Hz] [3] 0.0 [Hz]
p5545[0...7] A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Line monitoring times / Line monit times Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 300000.00 [ms]	Access level: 4 Function plan: 7999 Unit selection: - Expert list: 1 Default: [0] 150.00 [ms] [1] 50.00 [ms] [2] 3000.00 [ms] [3] 0.00 [ms] [4] 0.00 [ms] [5] 2000.00 [ms] [6] 100.00 [ms] [7] 60000.00 [ms]
p5547[0] A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Line monitoring frequencies / Line monit f Changeable: T Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.01 [Hz]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1.00 [Hz]	Access level: 4 Function plan: 7999 Unit selection: - Expert list: 1 Default: 0.10 [Hz]
p5548[0] A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Line monitoring gains / Line monit gains Changeable: T Data type: FloatingPoint32 P group: - Not for motor type: - Min: -10.00	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10.00	Access level: 4 Function plan: 7999 Unit selection: - Expert list: 1 Default: 0.10

p5550[0...2]	Line monitoring line fault thresholds voltage characteristic / Line mon U_thresh		
A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Changeable: T	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 7999
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.0 [%]	150.0 [%]	[0] 120.0 [%]
			[1] 80.0 [%]
			[2] 5.0 [%]

p5551[0...9]	Line monitoring HVRT time values / Line monit HVRT t		
A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 7999
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [s]	1000.00 [s]	[0] 0.00 [s]
			[1] 0.15 [s]
			[2] 0.70 [s]
			[3] 1.50 [s]
			[4] 3.00 [s]
			[5] 25.00 [s]
			[6] 50.00 [s]
			[7] 100.00 [s]
			[8] 200.00 [s]
			[9] 300.00 [s]

p5552[0...9]	Line monitoring HVRT voltage values / Line monit HVRT U		
A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Changeable: T	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 7999
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	101.0 [%]	150.0 [%]	110.0 [%]

p5553[0...9] A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Line monitoring LVRT time values / Line monit LVRT t Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.00 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 300.00 [s]	Access level: 3 Function plan: 7999 Unit selection: - Expert list: 1 Default: [0] 0.00 [s] [1] 0.15 [s] [2] 0.70 [s] [3] 1.50 [s] [4] 3.00 [s] [5] 25.00 [s] [6] 50.00 [s] [7] 100.00 [s] [8] 200.00 [s] [9] 300.00 [s]
p5554[0...9] A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Line monitoring LVRT voltage values / Line monit LVRT U Changeable: T Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.0 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 99.0 [%]	Access level: 3 Function plan: 7999 Unit selection: - Expert list: 1 Default: 90.0 [%]
p5555[0...2] A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Line monitoring line fault thresholds frequency characteristic / Line mon thresh f Changeable: T Data type: FloatingPoint32 P group: - Not for motor type: - Min: -20.0 [Hz]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 20.0 [Hz]	Access level: 3 Function plan: 7999 Unit selection: - Expert list: 1 Default: [0] 0.5 [Hz] [1] -0.7 [Hz] [2] 0.2 [Hz]

p5556[0...9]	Line monitoring HFRT time values / Line monit HFRT t		
A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 7999
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [s]	1000.00 [s]	[0] 0.00 [s]
			[1] 0.15 [s]
			[2] 0.70 [s]
			[3] 1.50 [s]
			[4] 3.00 [s]
			[5] 25.00 [s]
			[6] 50.00 [s]
			[7] 100.00 [s]
			[8] 200.00 [s]
			[9] 300.00 [s]

p5557[0...9]	Line monitoring HFRT frequency values / Line monit HFRT f		
A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Changeable: T	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 7999
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.0 [Hz]	20.0 [Hz]	1.5 [Hz]

p5558[0...9]	Line monitoring LFRT time values / Line monit LFRT t		
A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 7999
	P group: Closed-loop control	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [s]	300.00 [s]	[0] 0.00 [s]
			[1] 0.15 [s]
			[2] 0.70 [s]
			[3] 1.50 [s]
			[4] 3.00 [s]
			[5] 25.00 [s]
			[6] 50.00 [s]
			[7] 100.00 [s]
			[8] 200.00 [s]
			[9] 300.00 [s]

p5559[0...9]	Line monitoring LFRT frequency values / Line monit LFRT f		
A_INF (Dyn. grid support), R_INF (Dyn. grid support)	Changeable: T	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 7999
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-20.0 [Hz]	0.0 [Hz]	-2.5 [Hz]

p5571 A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	BI: Line PLL2 activation signal source / LinePLL2 act s_src Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 5499.5
r5572.0...3 A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	CO/BO: Line PLL2 status word / Line PLL2 status Changeable: - Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p5574[0...1] A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	CI: Line PLL2 voltage signal source / Line PLL2 U s_src Changeable: T Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: p2001 Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: [0] 0 [1] 0
p5580 A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Island grid black start mode / Black start mode Changeable: T Data type: Integer16 P group: Commands Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p5581[0...8] A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Island grid times / Island grid t Changeable: T Data type: FloatingPoint32 P group: Commands Not for motor type: - Min: 0.10 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.00 [s]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: [0] 2.00 [s] [1] 1.00 [s] [2] 60.00 [s] [3] 1.00 [s] [4] 0.10 [s] [5] 1.00 [s] [6] 60.00 [s] [7] 1.00 [s] [8] 0.10 [s]

r5582[0...1]	CO: Island grid synchronization setpoint control / Island sync setp.		
A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%]	Access level: 3 Function plan: 7995 Unit selection: - Expert list: 1 Default: - [%]
p5583[0...2]	BI: Island grid synchronization signal sources / Island sync s_src		
A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Changeable: T Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 7989 Unit selection: - Expert list: 1 Default: [0] 0 [1] 0 [2] 0
p5584[0...2]	Island grid synchronization controller dynamics / Island synch dyn		
A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Changeable: T Data type: FloatingPoint32 P group: Commands Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.00 [ms]	Access level: 3 Function plan: 7995 Unit selection: - Expert list: 1 Default: [0] 100.00 [ms] [1] 100.00 [ms] [2] 100.00 [ms]
p5585[0...1]	Island grid synchronization voltage thresholds / Island sync U_thr		
A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Changeable: T Data type: FloatingPoint32 P group: Commands Not for motor type: - Min: 0.0 [V]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 300.0 [V]	Access level: 3 Function plan: 7995 Unit selection: - Expert list: 1 Default: [0] 35.0 [V] [1] 3.5 [V]

p5586[0...6] A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Island grid scaling values / Island scal_val Changeable: T Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 0.1 [%] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 200.0 [%] Access level: 3 Function plan: 7995 Unit selection: - Expert list: 1 Default: [0] 3.0 [%] [1] 0.5 [%] [2] 1.0 [%] [3] 1.0 [%] [4] 4.0 [%] [5] 0.4 [%] [6] 2.0 [%]
p5588[0...2] A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Grid droop control asymmetry times / Grid droop asym T Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: 0.0 [ms] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000000.0 [ms] Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0.0 [ms]
p5589 A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Grid droop control asymmetry angle / Grid droop asym A Changeable: T, U Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -1.0 [°] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 360.0 [°] Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -1.0 [°]
p5590[0...8] A_INF (Line droop ctrl), R_INF (Line droop ctrl)	CI: Grid droop control asymmetry setpoint signal sources / Gr_dr_asym s_src Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: [0] 5594[0] [1] 5594[1] [2] 5594[2] [3] 5594[3] [4] 5594[4] [5] 5594[5] [6] 5594[6] [7] 5594[7] [8] 5594[8]

p5591	BI: Grid droop control asymmetry activation / Gr_droop asym act		
A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Changeable: T, U Data type: Unsigned32 / Binary P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0
r5592.0...5	CO/BO: Grid droop control asymmetry status word / Gr_droop asym ZSW		
A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Changeable: - Data type: Unsigned16 P group: Closed-loop control Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p5594[0...8]	CO: Grid droop control asymmetry fixed setpoints / Gr_droop_asym fix		
A_INF (Line droop ctrl), R_INF (Line droop ctrl)	Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: 300.00 [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 100.00 [%]
r5600	Pe energy-saving mode ID / Pe mode ID		
CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: Integer16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: 2381, 2382 Unit selection: - Expert list: 1 Default: -
p5602[0...1]	Pe energy-saving mode pause time minimal / Pe mod t_pause min		
CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 300000 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4294967295 [ms]	Access level: 3 Function plan: 2381 Unit selection: - Expert list: 1 Default: [0] 300000 [ms] [1] 480000 [ms]
p5606[0...1]	Pe energy-saving mode time of maximum stay / Pe t_max_stay		
CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4294967295 [ms]	Access level: 3 Function plan: 2381 Unit selection: - Expert list: 1 Default: 4294967295 [ms]

p5611 CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Pe energy-saving properties general / Pe properties gen Changeable: T Data type: Unsigned32 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2381, 2382 Unit selection: - Expert list: 1 Default: 0000 bin
r5613.0...1 CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	CO/BO: Pe energy-saving active/inactive / Pe save act/inact Changeable: - Data type: Unsigned8 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2382 Unit selection: - Expert list: 1 Default: -
r6311[0...1] A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	CO: Line PLL2 frequency / Line PLL2 f Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Hz]	Calculation: - Dynamic index: - Unit group: - Scaling: p0514 Max: - [Hz]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [Hz]
r6313 A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	CO: Line PLL2 smoothed voltage / Line PLL2 U smth Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Vrms]	Calculation: - Dynamic index: - Unit group: 5_1 Scaling: p2001 Max: - [Vrms]	Access level: 2 Function plan: 6799, 8026 Unit selection: p0505 Expert list: 1 Default: - [Vrms]
r6314 A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	CO: Line PLL2 phase angle / Line PLL2 ph_angle Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°]	Calculation: - Dynamic index: - Unit group: - Scaling: p2005 Max: - [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [°]
r6316 A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	CO: Line PLL2 line supply angle measured / Line PLL2 ang meas Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°]	Calculation: - Dynamic index: - Unit group: - Scaling: p2005 Max: - [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [°]

p6397 VECTOR, VECTOR_AC	Motor Module phase shift second system / MM ph_sh 2nd sys Changeable: T Data type: Integer16 P group: Converter Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p6420[0...1] A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Phase shift input voltage VSM to the drive converter / INF U VSM/conv Changeable: T Data type: FloatingPoint32 P group: All groups Not for motor type: - Min: -180.00 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 179.90 [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [°]
p6421[0...1] A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Line supply voltage sensing gain adaptation / U_line gain Changeable: T Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 50.000 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 200.000 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100.000 [%]
p6422 A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Line supply voltage rotating field direction / U_line field dir Changeable: T Data type: Integer16 P group: Converter Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p6423 A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	PLL dynamic / PLL dynamic Changeable: T Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 2.000 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 500.000 [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 20.000 [%]
p6425 A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Line voltage active/react. power comp. smoothing time constant / U_line p/q t_smth Changeable: T Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: 1.000 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 5000.000 [ms]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 100.000 [ms]

r6440 A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Transf phase offset identified / Tr ph_shift ident Changeable: - Data type: FloatingPoint32 P group: All groups Not for motor type: - Min: - [°] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [°] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [°]
r6441 A_INF (Line transf), A_INF_840 (Line transf), R_INF (Line transf)	Transformer gain adaptation identified / Transf gain ident Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [%] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%] Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: - [%]
p6700[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Voltage model angle smoothing / U_mod ang smooth Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: ASM, PMSM, REL, RESM Min: 0 [ms] Calculation: - Dynamic index: DDS, p0180 Unit group: - Scaling: - Max: 100 [ms] Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0 [ms]
p6870[0...n] VECTOR (n/M), VECTOR_AC (n/M)	VSM offset voltage u1 - u2 / VSM offset u1 - u2 Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -100.000 [V] Calculation: - Dynamic index: p0150 Unit group: - Scaling: - Max: 100.000 [V] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [V]
p6871[0...n] VECTOR (n/M), VECTOR_AC (n/M)	VSM offset voltage u2 - u3 / VSM offset u2 - u3 Changeable: T Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: -100.000 [V] Calculation: - Dynamic index: p0150 Unit group: - Scaling: - Max: 100.000 [V] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [V]
p6903[0...n] VECTOR (n/M), VECTOR_AC (n/M)	Voltage actual values offset mode / U_ActVal offs mode Changeable: T, U Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 0 Calculation: - Dynamic index: p0150 Unit group: - Scaling: - Max: 1 Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1

r6991[0...4]	Recorder settings display / Rec setting displ		
A_INF (Rec), A_INF_840 (Rec), B_INF (Rec), B_INF_840 (Rec), R_INF (Rec), S_INF (Rec), S_INF_840 (Rec), SERVO (Rec), SERVO_840 (Rec), SERVO_AC (Rec), SERVO_DBSI (Rec), VECTOR (Rec), VECTOR_AC (Rec)	Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: 8144 Unit selection: - Expert list: 1 Default: -
r6992.0...15	CO/BO: Recorder status word / Rec ZSW		
A_INF (Rec), A_INF_840 (Rec), B_INF (Rec), B_INF_840 (Rec), R_INF (Rec), S_INF (Rec), S_INF_840 (Rec), SERVO (Rec), SERVO_840 (Rec), SERVO_AC (Rec), SERVO_DBSI (Rec), VECTOR (Rec), VECTOR_AC (Rec)	Changeable: - Data type: Unsigned16 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: 8144, 8145 Unit selection: - Expert list: 1 Default: -
p6993[0...2]	Recorder trigger 2 bit mask / Rec trig 2 mask		
A_INF (Rec), A_INF_840 (Rec), B_INF (Rec), B_INF_840 (Rec), R_INF (Rec), S_INF (Rec), S_INF_840 (Rec), SERVO (Rec), SERVO_840 (Rec), SERVO_AC (Rec), SERVO_DBSI (Rec), VECTOR (Rec), VECTOR_AC (Rec)	Changeable: T, U Data type: Unsigned32 P group: - Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 4 Function plan: 8144 Unit selection: - Expert list: 1 Default: 0001 hex
p6994[0...2]	CI: Recorder trigger 2 signal source / Rec trig 2 S_src		
A_INF (Rec), A_INF_840 (Rec), B_INF (Rec), B_INF_840 (Rec), R_INF (Rec), S_INF (Rec), S_INF_840 (Rec), SERVO (Rec), SERVO_840 (Rec), SERVO_AC (Rec), SERVO_DBSI (Rec), VECTOR (Rec), VECTOR_AC (Rec)	Changeable: T, U Data type: Unsigned32 / Integer32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: 8144 Unit selection: - Expert list: 1 Default: 0

p6996[0...63]	Recorder signals / Rec sig		
SERVO (Rec),	Changeable: T, U	Calculation: -	Access level: 4
SERVO_840 (Rec),	Data type: Unsigned32	Dynamic index: -	Function plan: 8144
SERVO_AC (Rec),	P group: Commands	Unit group: -	Unit selection: -
SERVO_DBSI (Rec),	Not for motor type: -	Scaling: -	Expert list: 1
VECTOR (Rec),	Min:	Max:	Default:
VECTOR_AC (Rec)	0	996553699	[0] 3600
			[1] 3700
			[2] 3701
			[3] 3703
			[4] 3705
			[5] 3706
			[6] 3707
			[7] 3708
			[8] 3709
			[9] 3710
			[10] 3711
			[11] 3712
			[12] 3713
			[13] 3714
			[14] 3715
			[15] 3716
			[16] 3717
			[17] 3718
			[18] 5600
			[19] 6000
			[20] 6100
			[21] 6300
			[22] 6600
			[23] 6800
			[24] 6900
			[25] 6901
			[26] 6902
			[27] 6906
			[28] 7000
			[29] 7200
			[30] 7300
			[31] 7400
			[32] 7500
			[33] 7600
			[34] 7700
			[35] 7800
			[36] 8000
			[37] 8200
			[38] 8300
			[39] 8400
			[...] ...

p6996[0...63]	Recorder signals / Rec sig		
A_INF (Rec), A_INF_840 (Rec), R_INF (Rec)	Changeable: T, U Data type: Unsigned32 P group: Commands Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 996553699	Access level: 4 Function plan: 8144 Unit selection: - Expert list: 1 Default: [0] 3600 [1] 3700 [2] 3701 [3] 3703 [4] 3705 [5] 3706 [6] 3707 [7] 3708 [8] 3709 [9] 3710 [10] 3713 [11] 3714 [12] 3715 [13] 3716 [14] 3717 [15] 3718 [16] 6600 [17] 6900 [18] 6901 [19] 6902 [20] 6906 [21] 6800 [22] 7000 [23] 7400 [24] 7500 [25] 7600 [26] 7700 [27] 7800 [28] 8200 [29] 8800 [30] 9400 [31] 89800 [32] 89900 [33] 7201 [34] 340200 [35] 355400 [36] 366100 [37] 366200 [38] 183800 [39] 183900 [...] ...

p6996[0...63]	Recorder signals / Rec sig		
B_INF (Rec), B_INF_840 (Rec)	Changeable: T, U Data type: Unsigned32 P group: Commands Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 996553699	Access level: 4 Function plan: 8144 Unit selection: - Expert list: 1 Default: [0] 3600 [1] 3700 [2] 3701 [3] 3703 [4] 3711 [5] 3712 [6] 6600 [7] 6800 [8] 7000 [9] 8200 [10] 9400 [11] 89800 [12] 89900 [13] 7200 [14] 183800 [15] 183900 [16] 723000 [17] 723001 [18] 703100 [19...63] 0

p6996[0...63]	Recorder signals / Rec sig		
S_INF (Rec),	Changeable: T, U	Calculation: -	Access level: 4
S_INF_840 (Rec)	Data type: Unsigned32	Dynamic index: -	Function plan: 8144
	P group: Commands	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	996553699	[0] 3600
			[1] 3700
			[2] 3701
			[3] 3703
			[4] 3705
			[5] 3706
			[6] 3707
			[7] 3708
			[8] 3709
			[9] 3710
			[10] 3711
			[11] 3712
			[12] 3713
			[13] 3714
			[14] 3715
			[15] 3716
			[16] 3717
			[17] 3718
			[18] 6600
			[19] 6900
			[20] 6901
			[21] 6902
			[22] 6906
			[23] 6800
			[24] 7000
			[25] 7600
			[26] 7700
			[27] 7800
			[28] 9400
			[29] 89800
			[30] 89900
			[31] 7200
			[32] 183800
			[33] 183900
			[34] 340500
			[35] 345200
			[36] 344501
			[37] 344602
			[38] 344700
			[39] 366100
			[...] ...

r6997	CO: Recorder sequencer state / Rec state		
A_INF (Rec), A_INF_840 (Rec), B_INF (Rec), B_INF_840 (Rec), R_INF (Rec), S_INF (Rec), S_INF_840 (Rec), SERVO (Rec), SERVO_840 (Rec), SERVO_AC (Rec), SERVO_DBSI (Rec), VECTOR (Rec), VECTOR_AC (Rec)	Changeable: - Data type: Integer16 P group: Closed-loop control Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 60	Access level: 4 Function plan: 8145 Unit selection: - Expert list: 1 Default: -
p6998[0...4]	BI: Recorder trigger 1 signal sources / Rec trig 1 S_src		
A_INF (Rec), A_INF_840 (Rec), B_INF (Rec), B_INF_840 (Rec), R_INF (Rec), S_INF (Rec), S_INF_840 (Rec), SERVO (Rec), SERVO_840 (Rec), SERVO_AC (Rec), SERVO_DBSI (Rec), VECTOR (Rec), VECTOR_AC (Rec)	Changeable: T, U Data type: Unsigned32 / Binary P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: 8144 Unit selection: - Expert list: 1 Default: [0] 1 [1...4] 0
p6999[0...4]	Recorder parameterization / Rec par		
A_INF (Rec), A_INF_840 (Rec), B_INF (Rec), B_INF_840 (Rec), R_INF (Rec), S_INF (Rec), S_INF_840 (Rec), SERVO (Rec), SERVO_840 (Rec), SERVO_AC (Rec), SERVO_DBSI (Rec), VECTOR (Rec), VECTOR_AC (Rec)	Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2000	Access level: 4 Function plan: 8144, 8145 Unit selection: - Expert list: 1 Default: [0] 1 [1] 1000 [2] 900 [3] 0 [4] 0
r7000	CO: Par_circuit No. of active power units / Qty active PU		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: Unsigned16 P group: Modulation Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

p7001[0...n]	Par_circuit power units enable / PU enable		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: T Data type: Integer16 P group: Modulation Not for motor type: - Min: 0	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
r7002[0...n]	CO: Par_circuit status power units / Status PU		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: Integer16 P group: Modulation Not for motor type: - Min: 0	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p7003	Par_circuit winding system / Wind_sys		
VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: C2(2) Data type: Integer16 P group: Converter Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p7010	Par_circuit current asymmetry alarm threshold / i_asym A thresh		
A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: T, U Data type: FloatingPoint32 P group: Modulation Not for motor type: - Min: 2 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: 100 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 20 [%]
p7011	Par_circuit DC link voltage asymmetry alarm threshold / Vdc_dissym A thrsh		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: T, U Data type: FloatingPoint32 P group: Modulation Not for motor type: - Min: 2 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: 100 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 10 [%]

p7015	Par_circuit holding brake power unit data set / Brake PDS		
VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: T Data type: Integer16 P group: Converter Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 99	Access level: 3 Function plan: 2701, 2814 Unit selection: - Expert list: 1 Default: 99
r7020[0...n]	CO: Par_circuit deviation current in phase U / Phase U curr dev		
A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [A]	Calculation: - Dynamic index: PDS, p0120 Unit group: 6_5 Scaling: p2002 Max: - [A]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [A]
r7021[0...n]	CO: Par_circuit deviation current in phase V / Phase V curr dev		
A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [A]	Calculation: - Dynamic index: PDS, p0120 Unit group: 6_5 Scaling: p2002 Max: - [A]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [A]
r7022[0...n]	CO: Par_circuit deviation current in phase W / Phase W curr dev		
A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [A]	Calculation: - Dynamic index: PDS, p0120 Unit group: 6_5 Scaling: p2002 Max: - [A]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [A]
r7025	CO: Par_circuit max. deviation currents phase U / Phase U Max i_dev		
A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [A]	Calculation: - Dynamic index: - Unit group: 6_5 Scaling: p2002 Max: - [A]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [A]
r7026	CO: Par_circuit max. deviation currents phase V / Phase V Max i_dev		
A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [A]	Calculation: - Dynamic index: - Unit group: 6_5 Scaling: p2002 Max: - [A]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [A]

r7027	CO: Par_circuit max. deviation currents phase W / Phase W Max i_dev		
A_INF (Parallel),	Changeable: -	Calculation: -	Access level: 3
A_INF_840 (Parallel),	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
R_INF (Parallel), S_INF	P group: Displays, signals	Unit group: 6_5	Unit selection: p0505
(Parallel), S_INF_840	Not for motor type: -	Scaling: p2002	Expert list: 1
(Parallel), VECTOR	Min:	Max:	Default:
(Parallel),	- [A]	- [A]	- [A]
VECTOR_AC (Parallel)			

r7030[0...n]	CO: Par_circuit DC link voltage deviation / Vdc deviation		
A_INF (Parallel),	Changeable: -	Calculation: -	Access level: 3
A_INF_840 (Parallel),	Data type: FloatingPoint32	Dynamic index: PDS, p0120	Function plan: -
B_INF (Parallel),	P group: Displays, signals	Unit group: -	Unit selection: -
B_INF_840 (Parallel),	Not for motor type: -	Scaling: p2001	Expert list: 1
R_INF (Parallel), S_INF	Min:	Max:	Default:
(Parallel), S_INF_840	- [V]	- [V]	- [V]
(Parallel), VECTOR			
(Parallel),			
VECTOR_AC (Parallel)			

r7031	CO: Par_circuit DC link voltage maximum deviation / Vdc deviation max.		
A_INF (Parallel),	Changeable: -	Calculation: -	Access level: 3
A_INF_840 (Parallel),	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
B_INF (Parallel),	P group: Displays, signals	Unit group: -	Unit selection: -
B_INF_840 (Parallel),	Not for motor type: -	Scaling: p2001	Expert list: 1
R_INF (Parallel), S_INF	Min:	Max:	Default:
(Parallel), S_INF_840	- [V]	- [V]	- [V]
(Parallel), VECTOR			
(Parallel),			
VECTOR_AC (Parallel)			

p7035[0...n]	Par_circuit circulating current control operating mode / I_cct_ctrl mode		
VECTOR (Parallel),	Changeable: T, U	Calculation: -	Access level: 3
VECTOR_AC (Parallel)	Data type: Integer16	Dynamic index: DDS, p0180	Function plan: -
	P group: Modulation	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	1	1

p7035	Infeed par_circuit circulating current control operating mode / I_cct_ctrl mode		
A_INF (Parallel),	Changeable: T, U	Calculation: -	Access level: 3
A_INF_840 (Parallel),	Data type: Integer16	Dynamic index: -	Function plan: -
R_INF (Parallel), S_INF	P group: Modulation	Unit group: -	Unit selection: -
(Parallel), S_INF_840	Not for motor type: -	Scaling: -	Expert list: 1
(Parallel)	Min:	Max:	Default:
	0	1	1

p7036[0...n]	Par_circuit circulating current control proportional gain / Circ_I Kp		
VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: T, U	Calculation: CALC_MOD_CON	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: -
	P group: Modulation	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: 0.00000 [ohm]	Max: 200.00000 [ohm]	Default: 0.00000 [ohm]

p7036	Infeed par_cct circulating current controller proportional gain / Circ_I Kp		
A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Modulation	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: 0.00000 [%]	Max: 1000.00000 [%]	Default: 100.00000 [%]

p7037[0...n]	Par_circuit circulating current control integral time / I_circ Tn		
VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: T, U	Calculation: CALC_MOD_CON	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: -
	P group: Modulation	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: 2.0	Max: 1000.0	Default: 4.0

p7037	Infeed par_cct circulating current control integral time / I_circ Tn		
A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Modulation	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: 0.0 [%]	Max: 100000.0 [%]	Default: 100.0 [%]

p7038[0...n]	Par_circuit circulating current control limit / I_circ limit		
VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: T, U	Calculation: CALC_MOD_ALL	Access level: 3
	Data type: FloatingPoint32	Dynamic index: DDS, p0180	Function plan: -
	P group: Modulation	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: 1 [%]	Max: 100 [%]	Default: 50 [%]

p7038	Infeed par_circuit circulating current control limit / I_circ limit		
A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Modulation	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min: 1 [%]	Max: 100 [%]	Default: 100 [%]

p7040[0...n]	Par_circuit correction valve lockout time phase U / Comp t_lockout U		
A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: T, U Data type: FloatingPoint32 P group: Modulation Not for motor type: - Min: -1000000.00 [μs]	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 1000000.00 [μs]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [μs]
p7042[0...n]	Par_circuit correction valve lockout time phase V / Comp t_lockout V		
A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: T, U Data type: FloatingPoint32 P group: Modulation Not for motor type: - Min: -1000000.00 [μs]	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 1000000.00 [μs]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [μs]
p7044[0...n]	Par_circuit correction valve lockout time phase W / Comp t_lockout W		
A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: T, U Data type: FloatingPoint32 P group: Modulation Not for motor type: - Min: -1000000.00 [μs]	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 1000000.00 [μs]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [μs]
r7050[0...n]	Par_circuit circulating current phase U / Circ_I_phase U		
A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [A]	Calculation: - Dynamic index: PDS, p0120 Unit group: 6_5 Scaling: p2002 Max: - [A]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [A]
r7051[0...n]	Par_circuit circulating current phase V / Circ_I_phase V		
A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [A]	Calculation: - Dynamic index: PDS, p0120 Unit group: 6_5 Scaling: p2002 Max: - [A]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [A]
r7052[0...n]	Par_circuit circulating current phase W / Circ_I_phase W		
A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [A]	Calculation: - Dynamic index: PDS, p0120 Unit group: 6_5 Scaling: p2002 Max: - [A]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [A]

r7100[0...99]	Par_circuit ring buffer fault/alarm code / Fault/alarm code		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: Unsigned32 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r7101[0...99]	Par_circuit ring buffer data set number / Ring buffer Ds_no		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: Unsigned32 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r7102[0...99]	Par_circuit ring buffer fault/alarm received / F/A received		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: Unsigned32 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r7103[0...99]	Par_circuit ring buffer fault/alarm gone / F/A gone		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: Unsigned32 P group: Displays, signals Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r7200[0...n]	Par_circuit power unit overload I2t / PU overload I2t		
A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [%]	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: PERCENT Max: - [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [%]

r7201[0...n]	CO: Par_circuit power unit temperatures max. inverter / PU temp max inv		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: PDS, p0120 Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [°C]
r7202[0...n]	Par_circuit power unit temperatures max. depletion layer / PU TempMaxDepLayer		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: PDS, p0120 Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [°C]
r7203[0...n]	CO: Par_circuit power unit temperatures max. rectifier / PU temp max rect		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: PDS, p0120 Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [°C]
r7204[0...n]	CO: Par_circuit power unit temperatures air intake / PU temp air intake		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: PDS, p0120 Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [°C]
r7205[0...n]	Par_circuit power unit temperatures electronics / PU temp electr		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: PDS, p0120 Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [°C]

r7206[0...n]	Par_circuit power unit temperatures inverter 1 / PU temp inv 1		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: PDS, p0120 Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [°C]
r7207[0...n]	Par_circuit power unit temperatures inverter 2 / PU temp inv 2		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: PDS, p0120 Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [°C]
r7208[0...n]	Par_circuit power unit temperatures inverter 3 / PU temp inv 3		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: PDS, p0120 Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [°C]
r7209[0...n]	Par_circuit power unit temperatures inverter 4 / PU temp inv 4		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: PDS, p0120 Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [°C]
r7210[0...n]	Par_circuit power unit temperatures inverter 5 / PU temp inv 5		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: PDS, p0120 Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [°C]

r7211[0...n]	Par_circuit power unit temperatures inverter 6 / PU temp inv 6		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: PDS, p0120 Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [°C]
r7212[0...n]	Par_circuit power unit temperatures inverter 1 / PU temp rect 1		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: PDS, p0120 Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [°C]
r7213[0...n]	Par_circuit power unit temperatures inverter 2 / PU temp rect 2		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: PDS, p0120 Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [°C]
r7214[0...n]	Par_circuit power unit temperatures depletion layer 1 / PU temp DepLayer 1		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: PDS, p0120 Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [°C]
r7215[0...n]	Par_circuit power unit temperatures depletion layer 2 / PU temp DepLayer 2		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: PDS, p0120 Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [°C]

r7216[0...n]	Par_circuit power unit temperatures depletion layer 3 / PU temp DepLayer 3		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: PDS, p0120 Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [°C]

r7217[0...n]	Par_circuit power unit temperatures depletion layer 4 / PU temp DepLayer 4		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: PDS, p0120 Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [°C]

r7218[0...n]	Par_circuit power unit temperatures depletion layer 5 / PU temp DepLayer 5		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: PDS, p0120 Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [°C]

r7219[0...n]	Par_circuit power unit temperatures depletion layer 6 / PU temp DepLayer 6		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: PDS, p0120 Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [°C]

r7220[0...n]	CO: Par_circuit drive output current maximum / Drv I_outp max		
VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [Arms]

r7220[0...n] A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel)	Infeed par_circuit absolute current value motoring permissible / INF I_abs mot perm Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [Arms]
r7221[0...n] A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel)	Infeed par_circuit absolute current regenerating permissible / INF I_absRegenPerm Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [Arms]
r7222[0...n] A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	CO: Par_circuit absolute current actual value / I_act abs val Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: PDS, p0120 Unit group: 6_2 Scaling: p2002 Max: - [Arms]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [Arms]
r7223[0...n] A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	CO: Par_circuit phase current actual value phase U / I_phase U act val Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [A]	Calculation: - Dynamic index: PDS, p0120 Unit group: 6_5 Scaling: p2002 Max: - [A]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [A]
r7224[0...n] A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	CO: Par_circuit phase current actual value phase V / I_phase V act val Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [A]	Calculation: - Dynamic index: PDS, p0120 Unit group: 6_5 Scaling: p2002 Max: - [A]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [A]
r7225[0...n] A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	CO: Par_circuit phase current actual value phase W / I_phase W act val Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [A]	Calculation: - Dynamic index: PDS, p0120 Unit group: 6_5 Scaling: p2002 Max: - [A]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [A]

r7226[0...n]	CO: Par_circuit phase current actual value phase U offset / I_phase U offset		
A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel) - [A]	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min:	Calculation: - Dynamic index: PDS, p0120 Unit group: 6_5 Scaling: p2002 Max: - [A]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [A]

r7227[0...n]	CO: Par_circuit phase current actual value phase V offset / I_phase V offset		
A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel) - [A]	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min:	Calculation: - Dynamic index: PDS, p0120 Unit group: 6_5 Scaling: p2002 Max: - [A]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [A]

r7228[0...n]	CO: Par_circuit phase current actual value phase W offset / I_phase W offset		
A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel) - [A]	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min:	Calculation: - Dynamic index: PDS, p0120 Unit group: 6_5 Scaling: p2002 Max: - [A]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [A]

r7229[0...n]	CO: Par_circuit phase current actual value sum U, V, W / I_phase sum UVW		
A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel) - [A]	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min:	Calculation: - Dynamic index: PDS, p0120 Unit group: 6_5 Scaling: p2002 Max: - [A]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [A]

r7230[0...n]	CO: Par_circuit DC link voltage actual value / Vdc_act		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [V]	Calculation: - Dynamic index: PDS, p0120 Unit group: 5_2 Scaling: p2001 Max: - [V]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [V]

r7231[0...n]	CO: Par_circuit phase voltage actual value phase U / U_phase U act val		
S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Displays, signals Not for motor type: - Min: - [V]	Calculation: - Dynamic index: PDS, p0120 Unit group: 5_3 Scaling: p2001 Max: - [V]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [V]

r7231[0...n]	CO: Par_circuit phase voltage actual value phase U / U_phase U act val		
A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel)	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: PDS, p0120	Function plan: -
	P group: Displays, signals	Unit group: 5_3	Unit selection: p0505
	Not for motor type: -	Scaling: p2001	Expert list: 1
	Min:	Max:	Default:
	- [V]	- [V]	- [V]

r7232[0...n]	CO: Par_circuit phase voltage actual value phase V / U_phase V act val		
S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: PDS, p0120	Function plan: -
	P group: Displays, signals	Unit group: 5_3	Unit selection: p0505
	Not for motor type: -	Scaling: p2001	Expert list: 1
	Min:	Max:	Default:
	- [V]	- [V]	- [V]

r7232[0...n]	CO: Par_circuit phase voltage actual value phase V / U_phase V act val		
A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel)	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: PDS, p0120	Function plan: -
	P group: Displays, signals	Unit group: 5_3	Unit selection: p0505
	Not for motor type: -	Scaling: p2001	Expert list: 1
	Min:	Max:	Default:
	- [V]	- [V]	- [V]

r7233[0...n]	CO: Par_circuit phase voltage actual value phase W / U_phase W act val		
S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: PDS, p0120	Function plan: -
	P group: Displays, signals	Unit group: 5_3	Unit selection: p0505
	Not for motor type: -	Scaling: p2001	Expert list: 1
	Min:	Max:	Default:
	- [V]	- [V]	- [V]

r7233[0...n]	CO: Par_circuit phase voltage actual value phase W / U_phase W act val		
A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel)	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: PDS, p0120	Function plan: -
	P group: Displays, signals	Unit group: 5_3	Unit selection: p0505
	Not for motor type: -	Scaling: p2001	Expert list: 1
	Min:	Max:	Default:
	- [V]	- [V]	- [V]

r7240[0...n]	Par_circuit gating unit status word 1 / Gating unit ZSW1		
VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: -	Calculation: -	Access level: 4
	Data type: Unsigned16	Dynamic index: PDS, p0120	Function plan: -
	P group: Displays, signals	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-

r7250[0...4]	Par_circuit power unit rated power / PU P_{rated}		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: - [kW]	Calculation: - Dynamic index: - Unit group: 14_6 Scaling: - Max: - [kW]	Access level: 2 Function plan: - Unit selection: p0100 Expert list: 1 Default: - [kW]
r7251[0...4]	Par_circuit power unit rated current / PU PI_{rated}		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Arms]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: - [Arms]
r7252[0...4]	Par_circuit maximum power unit current / PU I_{max}		
A_INF (Parallel), A_INF_840 (Parallel), B_INF (Parallel), B_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel), VECTOR (Parallel), VECTOR_AC (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Converter Not for motor type: - Min: - [Arms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Arms]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: - [Arms]
r7300[0...n]	CO: Par_circuit VSM input line voltage u₁ - u₂ / VSM inp u₁-u₂		
A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [V]	Calculation: - Dynamic index: p0140 Unit group: - Scaling: p2001 Max: - [V]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [V]
r7301[0...n]	CO: Par_circuit VSM input line voltage u₂ - u₃ / VSM inp u₂-u₃		
A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel)	Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [V]	Calculation: - Dynamic index: p0140 Unit group: - Scaling: p2001 Max: - [V]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [V]

r7305[0...n] A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel)	Par_circuit VSM temperature evaluation status / VSM temp status Changeable: - Data type: Unsigned16 P group: Terminals Not for motor type: - Min: -	Calculation: - Dynamic index: p0140 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r7306[0...n] A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel)	CO: Par_connect VSM temperature actual value / VSM Temp_ActVal Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [°C]	Calculation: - Dynamic index: p0140 Unit group: 21_1 Scaling: p2006 Max: - [°C]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [°C]
r7310[0...n] A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel)	CO: Par_circuit VSM 10 V input CT1 actual value / VSM CT 1 I_act Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [A]	Calculation: - Dynamic index: p0140 Unit group: - Scaling: p2002 Max: - [A]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [A]
r7311[0...n] A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel)	CO: Par_circuit VSM 10 V input CT2 actual value / VSM CT 2 I_act Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [A]	Calculation: - Dynamic index: p0140 Unit group: - Scaling: p2002 Max: - [A]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [A]
r7315[0...n] A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel)	CO: Par_circuit VSM 10 V input 1 actual value / VSM inp 1 U_act Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [V]	Calculation: - Dynamic index: p0140 Unit group: - Scaling: p2001 Max: - [V]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [V]
r7316[0...n] A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel)	CO: Par_circuit VSM 10 V input 2 actual value / VSM inp 2 U_act Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [V]	Calculation: - Dynamic index: p0140 Unit group: - Scaling: p2001 Max: - [V]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [V]

r7320[0...n] A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel)	Par_circuit VSM line filter capacitance phase U / VSM filt C phase U Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [μF]	Calculation: - Dynamic index: p0140 Unit group: - Scaling: - Max: - [μF]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [μF]
r7321[0...n] A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel)	Par_circuit VSM line filter capacitance phase V / VSM filt C phase V Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [μF]	Calculation: - Dynamic index: p0140 Unit group: - Scaling: - Max: - [μF]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [μF]
r7322[0...n] A_INF (Parallel), A_INF_840 (Parallel), R_INF (Parallel), S_INF (Parallel), S_INF_840 (Parallel)	Par_circuit VSM line filter capacitance phase W / VSM filt C phase W Changeable: - Data type: FloatingPoint32 P group: Closed-loop control Not for motor type: - Min: - [μF]	Calculation: - Dynamic index: p0140 Unit group: - Scaling: - Max: - [μF]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [μF]
r7740[0...n] A_INF, A_INF_840, B_INF, B_INF_840, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	IGBT power cycling counter valve 1 / IGBT load count 1 Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r7741[0...n] A_INF, A_INF_840, B_INF, B_INF_840, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	IGBT power cycling counter valve 2 / IGBT load count 2 Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r7742[0...n] A_INF, A_INF_840, B_INF, B_INF_840, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	IGBT power cycling counter valve 3 / IGBT load count 3 Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -

r7743[0...n] A_INF, A_INF_840, B_INF, B_INF_840, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	IGBT power cycling counter valve 4 / IGBT load count 4 Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r7744[0...n] A_INF, A_INF_840, B_INF, B_INF_840, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	IGBT power cycling counter valve 5 / IGBT load count 5 Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r7745[0...n] A_INF, A_INF_840, B_INF, B_INF_840, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	IGBT power cycling counter valve 6 / IGBT load count 6 Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r7758[0...19] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	KHP Control Unit serial number / KHP CU ser_no Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p7759[0...19] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	KHP Control Unit reference serial number / KHP CU ref ser_no Changeable: T Data type: Unsigned8 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r7760.0...12 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	CO/BO: Write protection/know-how protection status / Wr_prot/KHP stat Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r7760	Write protection/know-how protection status / Wr_prot/KHP stat		
A_INF, A_INF_840, B_INF, B_INF_840, CU_LINK, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, HUB, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41, TM54F_MA, TM54F_SL, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p7761	Write protection / Write protection		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p7762	Write protection multi-master fieldbus system access behavior / Fieldbus acc_behav		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p7763	KHP OEM exception list number of indices for p7764 / KHP OEM qty p7764		
A_INF, A_INF_840, B_INF, B_INF_840, CU_LINK, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, HUB, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41, TM54F_MA, TM54F_SL, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned16 P group: - Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 500	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1

p7764[0...n]	KHP OEM exception list / KHP OEM excep list		
CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: p7763	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	65535	[0] 7766 [1...499] 0

p7764[0...n]	KHP OEM exception list / KHP OEM excep list		
A_INF, B_INF, CU_LINK, ENC, HLA, HUB, R_INF, S_INF, SERVO, SERVO_AC, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41, TM54F_MA, TM54F_SL, VECTOR, VECTOR_AC	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: p7763	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	65535	0

p7765	KHP configuration / KHP config		
CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0000 bin

p7766[0...29]	KHP password input / KHP passw input		
CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 0
	Min:	Max:	Default:
	-	-	-

p7767[0...29]	KHP password new / KHP passw new		
CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 0
	Min:	Max:	Default:
	-	-	-

p7768[0...29] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	KHP password confirmation / KHP passw confirm Changeable: T, U Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
p7769[0...20] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	KHP memory card reference serial number / KHP mem ref ser_no Changeable: T Data type: Unsigned8 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p7770 A_INF, A_INF_840, B_INF, B_INF_840, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, HUB, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41, TM54F_MA, TM54F_SL, VECTOR, VECTOR_AC	NVRAM action / NVRAM action Changeable: T Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p7775 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	NVRAM data backup/import/delete / NVRAM backup Changeable: C1, T, U Data type: Integer16 P group: All groups Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 17	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p7786[0...n] A_INF, A_INF_840, B_INF, B_INF_840, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Service report / Service report Changeable: T, U Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin

p7788	Power unit sign-of-life monitoring tolerance window / PU SoL monit tol		
A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned16 P group: Converter Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 10

p7789	Power unit sign-of-life monitoring fault threshold / PU SoL monit F_thr		
A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned16 P group: Converter Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 1

p7790[0...15]	Component trace signal / Comp trace sig		
A_INF, B_INF, R_INF (Parallel), S_INF, SERVO, VECTOR	Changeable: T, U Data type: Integer16 P group: Converter Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 9	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: [0] 2 [1] 3 [2] 4 [3] 7 [4] 8 [5] 9 [6] 5 [7] 0 [8] 6 [9] 1 [10...15] 0

p7791	Component trace trigger / Comp trace trigger		
A_INF, B_INF, R_INF (Parallel), S_INF, SERVO, VECTOR	Changeable: T, U Data type: Integer16 P group: Converter Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0

p7792 A_INF, B_INF, R_INF (Parallel), S_INF, SERVO, VECTOR	Upload component trace data / Upload comp trace Changeable: T, U Data type: Integer16 P group: Converter Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0
p7820 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	DRIVE-CLiQ component component number / DQ compo_no Changeable: T, U Data type: Unsigned16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0
p7821 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	DRIVE-CLiQ component parameter number / DQ para_no Changeable: T, U Data type: Unsigned16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0
p7822[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	DRIVE-CLiQ component parameter index/number / DQ para_index/qty Changeable: T, U Data type: Unsigned16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: [0] 0 [1] 1
r7823[0...254] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	DRIVE-CLiQ component read parameter value / Read DQ value Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r7825[0...6] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	DRIVE-CLiQ component versions / DQ comp version Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

p7826 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Firmware update automatic / FW update auto Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
r7827 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Firmware update progress display / FW update progress Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [%]
p7828[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Firmware download component number / FW downl comp_no Changeable: T, U Data type: Unsigned16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 399	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p7829 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Activate firmware download / FW download act Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: -1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p7830 ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Telegram diagnostics selection / Telegr diag sel Changeable: T Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0
r7831[0...23] ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Telegram diagnostics signals / Telegr diag sig Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 15157	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -

r7832[0...23]	Telegram diagnostics numerical format / Telegr diag format		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: -1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 14	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r7833[0...23]	Telegram diagnostics unsigned / Telegr diag unsign		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r7834[0...23]	Telegram diagnostics signed / Telegr diag sign		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Integer32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r7835[0...23]	Telegram diagnostics real / Telegr diag real		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r7836[0...23]	Telegram diagnostics unit / Telegr diag unit		
ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: -1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 147	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r7843[0...20]	Memory card serial number / Mem_card ser.no		
CU_I_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -

r7844[0...2] CU_I_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Memory card/device memory firmware version / Mem_crd/dev_mem FW Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r7850[0...n] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Drive object operational/not operational / DO ready for oper Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: -32786	Calculation: - Dynamic index: r0095 Unit group: - Scaling: - Max: 32767	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p7852 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Number of indices for r7853 / Qty indices r7853 Changeable: T, U Data type: Unsigned16 P group: - Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 200	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 1
r7853[0...n] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Component available/not available / Comp present Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: p7852 Unit group: - Scaling: - Max: FFFF hex	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p7857 A_INF, A_INF_840, B_INF, B_INF_840, CU_LINK, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, HUB, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41, TM54F_MA, TM54F_SL, VECTOR, VECTOR_AC	Sub-boot mode / Sub-boot mode Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 1

p7859[0...199] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Component number global / Comp_no global Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: -32786	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 32767	Access level: 4 Function plan: - Unit selection: - Expert list: 0 Default: 0
r7867 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Status/configuration changes global / Changes global Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r7868[0...24] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Configuration changes drive object reference / Config_chng DO ref Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r7869[0...24] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Status changes drive object reference / Status_chng DO ref Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r7870[0...8] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Configuration changes global / Config_chng global Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r7871[0...15] CU_LINK, HUB, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41	Configuration changes drive object / Config_chng DO Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -

r7871[0...15] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Configuration changes drive object / Config_chng DO Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r7871[0...15] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Configuration changes drive object / Config_chng DO Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r7871[0...15] A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	Configuration changes drive object / Config_chng DO Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r7871[0...15] TM54F_MA, TM54F_SL	Configuration changes drive object / Config_chng DO Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r7871[0...15] ENC, ENC_840	Configuration changes drive object / Config_chng DO Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r7872[0...3] All objects	Drive object status changes / DO stat_chng Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -

p7900[0...23] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Drive objects priority / DO priority Changeable: T, U Data type: Unsigned16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0
r7901[0...81] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Sampling times / t_sample Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [µs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [µs]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [µs]
r7903 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Hardware sampling times still assignable / HW t_samp free Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p8500[0...7] CU_I_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	BI: Input signal bit-serially 0 / Input_sig bit 0 Changeable: T, U Data type: Unsigned32 / Binary P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2195 Unit selection: - Expert list: 1 Default: 0
p8500[0...7] CU_LINK, CU_NX_840	BI: Send data transfer bit-serially 0 / Send trans bit 0 Changeable: T, U Data type: Unsigned32 / Binary P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2194 Unit selection: - Expert list: 1 Default: 0
p8501[0...21] CU_I_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	BI: Input signal bit-serially 1 / Input_sig bit 1 Changeable: T, U Data type: Unsigned32 / Binary P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2195 Unit selection: - Expert list: 1 Default: 0

p8501[0...21]	BI: Send data transfer bit-serially 1 / Send trans bit 1		
CU_NX_840	Changeable: T, U	Calculation: -	Access level: 2
	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: 2194
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	[0] 722.0
			[1] 722.1
			[2] 722.2
			[3] 722.3
			[4...7] 0
			[8] 722.8
			[9] 722.9
			[10] 722.10
			[11] 722.11
			[12...15] 0
			[16] 722.16
			[17] 722.17
			[18...21] 0

p8501[0...21]	BI: Send data transfer bit-serially 1 / Send trans bit 1		
CU_LINK	Changeable: T, U	Calculation: -	Access level: 2
	Data type: Unsigned32 / Binary	Dynamic index: -	Function plan: 2194
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	[0] 722.0
			[1] 722.1
			[2] 722.2
			[3] 722.3
			[4] 722.4
			[5] 722.5
			[6] 722.6
			[7] 722.7
			[8] 722.8
			[9] 722.9
			[10] 722.10
			[11] 722.11
			[12] 722.12
			[13] 722.13
			[14] 722.14
			[15] 722.15
			[16] 722.16
			[17] 722.17
			[18] 0
			[19] 0
			[20] 722.20
			[21] 722.21

p8502 CU_I_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	CI: Input signal word-serially 0 / Input_sig word 0 Changeable: T, U Data type: Unsigned32 / Integer32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: -	Access level: 2 Function plan: 2195 Unit selection: - Expert list: 1 Default: 0
p8502 CU_LINK, CU_NX_840	CI: Send data transfer wordwise 0 / Send trans word 0 Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2194 Unit selection: - Expert list: 1 Default: 0
p8503 CU_I_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	CI: Input signal word-serially 1 / Input_sig word 1 Changeable: T, U Data type: Unsigned32 / Integer32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: -	Access level: 2 Function plan: 2195 Unit selection: - Expert list: 1 Default: 0
p8503 CU_LINK, CU_NX_840	CI: Send data transfer wordwise 1 / Send trans word 1 Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2194 Unit selection: - Expert list: 1 Default: 0
p8504 CU_I_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	CI: Input signal word-serially 2 / Input_sig word 2 Changeable: T, U Data type: Unsigned32 / Integer32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: -	Access level: 2 Function plan: 2195 Unit selection: - Expert list: 1 Default: 0
p8504 CU_LINK, CU_NX_840	CI: Send data transfer wordwise 2 / Send trans word 2 Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2194 Unit selection: - Expert list: 1 Default: 0

p8505	CI: Input signal word-serially 3 / Input_sig word 3		
CU_I_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: T, U Data type: Unsigned32 / Integer32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: -	Access level: 2 Function plan: 2195 Unit selection: - Expert list: 1 Default: 0

p8505	CI: Send data transfer wordwise 3 / Send trans word 3		
CU_LINK, CU_NX_840	Changeable: T, U Data type: Unsigned32 / FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2194 Unit selection: - Expert list: 1 Default: 0

r8510.0...7	BO: Output signal bit-serially 0 / Outp_sig bit 0		
CU_I_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2195 Unit selection: - Expert list: 1 Default: -

r8510.0...7	BO: Receive data transfer bit-serially 0 / Recv trans bit 0		
CU_LINK, CU_NX_840	Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2194 Unit selection: - Expert list: 1 Default: -

r8511.0...21	BO: Output signal bit-serially 1 / Outp_sig bit 1		
CU_I_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2195 Unit selection: - Expert list: 1 Default: -

r8511.0...21	BO: Receive data transfer bit-serially 1 / Recv trans bit 1		
CU_LINK, CU_NX_840	Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2194 Unit selection: - Expert list: 1 Default: -

r8512 CU_I_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	CO: Output signal wordwise 0 / Outp_sig word 0 Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 2 Function plan: 2195 Unit selection: - Expert list: 1 Default: - [%]
r8512 CU_LINK, CU_NX_840	CO: Receive data transfer wordwise 0 / Recv trans word 0 Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2194 Unit selection: - Expert list: 1 Default: -
r8513 CU_I_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	CO: Output signal wordwise 1 / Outp_sig word 1 Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 2 Function plan: 2195 Unit selection: - Expert list: 1 Default: - [%]
r8513 CU_LINK, CU_NX_840	CO: Receive data transfer wordwise 1 / Recv trans word 1 Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2194 Unit selection: - Expert list: 1 Default: -
r8514 CU_I_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	CO: Output signal wordwise 2 / Outp_sig word 2 Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 2 Function plan: 2195 Unit selection: - Expert list: 1 Default: - [%]
r8514 CU_LINK, CU_NX_840	CO: Receive data transfer wordwise 2 / Recv trans word 2 Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2194 Unit selection: - Expert list: 1 Default: -

r8515 CU_I_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	CO: Output signal wordwise 3 / Outp_sig word 3 Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: PERCENT Max: - [%]	Access level: 2 Function plan: 2195 Unit selection: - Expert list: 1 Default: - [%]
r8515 CU_LINK, CU_NX_840	CO: Receive data transfer wordwise 3 / Recv trans word 3 Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2194 Unit selection: - Expert list: 1 Default: -
p8520[0...3] CU_LINK, CU_NX_840	Data transfer wordwise scaling / Trans word scal Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: 0.00010	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000.00000	Access level: 2 Function plan: 2194 Unit selection: - Expert list: 1 Default: 1.00000
p8550 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	AOP LOCAL/REMOTE / AOP LOCAL/REMOTE Changeable: T, U Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 1001 bin
p8552 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	IOP speed unit / IOP speed unit Changeable: T Data type: Integer16 P group: - Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2

r8570[0...39]	Macro drive object / Macro DO		
A_INF, B_INF, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, HLA, R_INF, S_INF, SERVO, SERVO_AC, TM120, TM150, TM15DI_DO, TM31, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 0 Default: -
r8571[0...39]	Macro Binector Input (BI) / Macro BI		
A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM15DI_DO, TM31, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 0 Default: -
r8572[0...39]	Macro Connector Inputs (CI) for speed setpoints / Macro CI n_set		
A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 0 Default: -
r8573[0...39]	Macro Connector Inputs (CI) for torque setpoints / Macro CI M_set		
A_INF, A_INF_840, B_INF, B_INF_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 0 Default: -

r8585	Macro execution actual / Macro executed		
A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM150, TM15DI_DO, TM31, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 0 Default: -
r8600	CAN device type / Device type		
CU_S120_DP (CAN), CU_S120_PN (CAN)	Changeable: - Data type: Unsigned32 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8601	CAN error register / Error register		
CU_S120_DP (CAN), CU_S120_PN (CAN)	Changeable: - Data type: Unsigned8 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p8602	CAN SYNC object / SYNC object		
CU_S120_DP (CAN), CU_S120_PN (CAN)	Changeable: T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0080 hex
p8603	CAN COB-ID Emergency Message / COB-ID EMCY Msg		
CU_S120_DP (CAN), CU_S120_PN (CAN)	Changeable: T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 hex

p8604[0...1] CU_S120_DP (CAN), CU_S120_PN (CAN)	CAN life guarding / Life guarding Changeable: T Data type: Unsigned16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p8606 CU_S120_DP (CAN), CU_S120_PN (CAN)	CAN Producer Heartbeat Time / Prod Heartb Time Changeable: T Data type: Unsigned16 P group: - Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0 [ms]
r8607[0...3] CU_S120_DP (CAN), CU_S120_PN (CAN)	CAN Identity Object / Identity object Changeable: - Data type: Unsigned32 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p8608[0...1] CU_S120_DP (CAN), CU_S120_PN (CAN)	CAN Clear Bus Off Error / Clear bus off err Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p8609[0...1] CU_S120_DP (CAN), CU_S120_PN (CAN)	CAN Error Behavior / Error behavior Changeable: T Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
r8610[0...1] CU_S120_DP (CAN), CU_S120_PN (CAN)	CAN First Server SDO / First server SDO Changeable: - Data type: Unsigned32 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

p8611[0...82] CU_S120_DP (CAN), CU_S120_PN (CAN)	CAN Pre-defined Error Field / Pre_def err field Changeable: T, U Data type: Unsigned32 P group: - Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF 1000 hex	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 hex
p8612[0...1] CU_S120_DP (CAN), CU_S120_PN (CAN), SERVO (CAN), VECTOR (CAN)	CAN drive object server SDO / DO server SDO Changeable: T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0581 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8000 067F hex	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 8000 0000 hex
p8620 CU_S120_DP (CAN), CU_S120_PN (CAN)	CAN Node-ID / Node ID Changeable: T Data type: Unsigned8 P group: - Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 127	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 126
r8621 CU_S120_DP (CAN), CU_S120_PN (CAN)	CAN Node-ID active / Node ID active Changeable: - Data type: Unsigned8 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p8622 CU_S120_DP (CAN), CU_S120_PN (CAN)	CAN bit rate / Bit rate Changeable: T Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 7	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 6

p8623[0...7] CU_S120_DP (CAN), CU_S120_PN (CAN)	CAN Bit Timing selection / Bit timing select Changeable: T Data type: Unsigned32 P group: - Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 000F 7FFF hex	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: [0] 1405 hex [1] 1605 hex [2] 1C05 hex [3] 1C0B hex [4] 1C17 hex [5] 1C3B hex [6] 0002 1C15 hex [7] 0004 1C2B hex
p8630[0...2] CU_S120_DP (CAN), CU_S120_PN (CAN)	CAN virtual objects / Virtual objects Changeable: T, U Data type: Unsigned16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p8641 SERVO (CAN), VECTOR (CAN)	CAN Abort Connection Option Code / Abort con opt code Changeable: T Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 3
r8680[0...36] CU_S120_DP (CAN), CU_S120_PN (CAN)	CAN Diagnosis Hardware / Diagnostics HW Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p8684 CU_S120_DP (CAN), CU_S120_PN (CAN)	CAN NMT state after booting / NMT state aft boot Changeable: T Data type: Integer16 P group: - Not for motor type: - Min: 4	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 127	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 127

p8685 CU_S120_DP (CAN), CU_S120_PN (CAN)	CAN NMT states / NMT states Changeable: T, U Data type: Integer16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 129	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 127
p8699 CU_S120_DP (CAN), CU_S120_PN (CAN)	CAN: RPDO monitoring time / RPDO t_monit Changeable: T, U Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535000 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0 [ms]
p8700[0...1] SERVO (CAN), VECTOR (CAN)	CAN Receive PDO 1 / Receive PDO 1 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8000 06DF hex	Access level: 3 Function plan: 9204, 9206 Unit selection: - Expert list: 1 Default: [0] 8000 06DF hex [1] 00FE hex
p8701[0...1] SERVO (CAN), VECTOR (CAN)	CAN Receive PDO 2 / Receive PDO 2 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8000 06DF hex	Access level: 3 Function plan: 9204, 9206 Unit selection: - Expert list: 1 Default: [0] 8000 06DF hex [1] 00FE hex
p8702[0...1] SERVO (CAN), VECTOR (CAN)	CAN Receive PDO 3 / Receive PDO 3 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8000 06DF hex	Access level: 3 Function plan: 9204, 9206 Unit selection: - Expert list: 1 Default: [0] 8000 06DF hex [1] 00FE hex

p8703[0...1] SERVO (CAN), VECTOR (CAN)	CAN Receive PDO 4 / Receive PDO 4 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8000 06DF hex	Access level: 3 Function plan: 9204, 9206 Unit selection: - Expert list: 1 Default: [0] 8000 06DF hex [1] 00FE hex
p8704[0...1] SERVO (CAN), VECTOR (CAN)	CAN Receive PDO 5 / Receive PDO 5 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8000 06DF hex	Access level: 3 Function plan: 9204 Unit selection: - Expert list: 1 Default: [0] 8000 06DF hex [1] 00FE hex
p8705[0...1] SERVO (CAN), VECTOR (CAN)	CAN Receive PDO 6 / Receive PDO 6 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8000 06DF hex	Access level: 3 Function plan: 9204 Unit selection: - Expert list: 1 Default: [0] 8000 06DF hex [1] 00FE hex
p8706[0...1] SERVO (CAN), VECTOR (CAN)	CAN Receive PDO 7 / Receive PDO 7 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8000 06DF hex	Access level: 3 Function plan: 9204 Unit selection: - Expert list: 1 Default: [0] 8000 06DF hex [1] 00FE hex
p8707[0...1] SERVO (CAN), VECTOR (CAN)	CAN Receive PDO 8 / Receive PDO 8 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8000 06DF hex	Access level: 3 Function plan: 9204 Unit selection: - Expert list: 1 Default: [0] 8000 06DF hex [1] 00FE hex

p8710[0...3] SERVO (CAN), VECTOR (CAN)	CAN Receive Mapping for RPDO 1 / Mapping RPDO 1 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: 9204, 9206 Unit selection: - Expert list: 1 Default: 0000 hex
p8711[0...3] SERVO (CAN), VECTOR (CAN)	CAN Receive Mapping for RPDO 2 / Mapping RPDO 2 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: 9204, 9206 Unit selection: - Expert list: 1 Default: 0000 hex
p8712[0...3] SERVO (CAN), VECTOR (CAN)	CAN Receive Mapping for RPDO 3 / Mapping RPDO 3 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: 9204, 9206 Unit selection: - Expert list: 1 Default: 0000 hex
p8713[0...3] SERVO (CAN), VECTOR (CAN)	CAN Receive Mapping for RPDO 4 / Mapping RPDO 4 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: 9204, 9206 Unit selection: - Expert list: 1 Default: 0000 hex
p8714[0...3] SERVO (CAN), VECTOR (CAN)	CAN Receive Mapping for RPDO 5 / Mapping RPDO 5 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: 9204 Unit selection: - Expert list: 1 Default: 0000 hex
p8715[0...3] SERVO (CAN), VECTOR (CAN)	CAN Receive Mapping for RPDO 6 / Mapping RPDO 6 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: 9204 Unit selection: - Expert list: 1 Default: 0000 hex

p8716[0...3] SERVO (CAN), VECTOR (CAN)	CAN Receive Mapping for RPDO 7 / Mapping RPDO 7 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: 9204 Unit selection: - Expert list: 1 Default: 0000 hex
p8717[0...3] SERVO (CAN), VECTOR (CAN)	CAN Receive Mapping for RPDO 8 / Mapping RPDO 8 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: 9204 Unit selection: - Expert list: 1 Default: 0000 hex
p8720[0...4] SERVO (CAN), VECTOR (CAN)	CAN Transmit PDO 1 / Transmit PDO 1 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: C000 06DF hex	Access level: 3 Function plan: 9208, 9210 Unit selection: - Expert list: 1 Default: [0] C000 06DF hex [1] 00FE hex [2] 0000 hex [3] 0000 hex [4] 0000 hex
p8721[0...4] SERVO (CAN), VECTOR (CAN)	CAN Transmit PDO 2 / Transmit PDO 2 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: C000 06DF hex	Access level: 3 Function plan: 9208, 9210 Unit selection: - Expert list: 1 Default: [0] C000 06DF hex [1] 00FE hex [2] 0000 hex [3] 0000 hex [4] 0000 hex

p8722[0...4] SERVO (CAN), VECTOR (CAN)	CAN Transmit PDO 3 / Transmit PDO 3 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: C000 06DF hex	Access level: 3 Function plan: 9208, 9210 Unit selection: - Expert list: 1 Default: [0] C000 06DF hex [1] 00FE hex [2] 0000 hex [3] 0000 hex [4] 0000 hex
p8723[0...4] SERVO (CAN), VECTOR (CAN)	CAN Transmit PDO 4 / Transmit PDO 4 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: C000 06DF hex	Access level: 3 Function plan: 9208, 9210 Unit selection: - Expert list: 1 Default: [0] C000 06DF hex [1] 00FE hex [2] 0000 hex [3] 0000 hex [4] 0000 hex
p8724[0...4] SERVO (CAN), VECTOR (CAN)	CAN Transmit PDO 5 / Transmit PDO 5 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: C000 06DF hex	Access level: 3 Function plan: 9208 Unit selection: - Expert list: 1 Default: [0] C000 06DF hex [1] 00FE hex [2] 0000 hex [3] 0000 hex [4] 0000 hex
p8725[0...4] SERVO (CAN), VECTOR (CAN)	CAN Transmit PDO 6 / Transmit PDO 6 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: C000 06DF hex	Access level: 3 Function plan: 9208 Unit selection: - Expert list: 1 Default: [0] C000 06DF hex [1] 00FE hex [2] 0000 hex [3] 0000 hex [4] 0000 hex

p8726[0...4] SERVO (CAN), VECTOR (CAN)	CAN Transmit PDO 7 / Transmit PDO 7 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: C000 06DF hex	Access level: 3 Function plan: 9208 Unit selection: - Expert list: 1 Default: [0] C000 06DF hex [1] 00FE hex [2] 0000 hex [3] 0000 hex [4] 0000 hex
p8727[0...4] SERVO (CAN), VECTOR (CAN)	CAN Transmit PDO 8 / Transmit PDO 8 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: C000 06DF hex	Access level: 3 Function plan: 9208 Unit selection: - Expert list: 1 Default: [0] C000 06DF hex [1] 00FE hex [2] 0000 hex [3] 0000 hex [4] 0000 hex
p8730[0...3] SERVO (CAN), VECTOR (CAN)	CAN Transmit Mapping for TPDO 1 / Mapping TPDO 1 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: 9208, 9210 Unit selection: - Expert list: 1 Default: 0000 hex
p8731[0...3] SERVO (CAN), VECTOR (CAN)	CAN Transmit Mapping for TPDO 2 / Mapping TPDO 2 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: 9208, 9210 Unit selection: - Expert list: 1 Default: 0000 hex
p8732[0...3] SERVO (CAN), VECTOR (CAN)	CAN Transmit Mapping for TPDO 3 / Mapping TPDO 3 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: 9208, 9210 Unit selection: - Expert list: 1 Default: 0000 hex

p8733[0...3] SERVO (CAN), VECTOR (CAN)	CAN Transmit Mapping for TPDO 4 / Mapping TPDO 4 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: 9208, 9210 Unit selection: - Expert list: 1 Default: 0000 hex
p8734[0...3] SERVO (CAN), VECTOR (CAN)	CAN Transmit Mapping for TPDO 5 / Mapping TPDO 5 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: 9208 Unit selection: - Expert list: 1 Default: 0000 hex
p8735[0...3] SERVO (CAN), VECTOR (CAN)	CAN Transmit Mapping for TPDO 6 / Mapping TPDO 6 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: 9208 Unit selection: - Expert list: 1 Default: 0000 hex
p8736[0...3] SERVO (CAN), VECTOR (CAN)	CAN Transmit Mapping for TPDO 7 / Mapping TPDO 7 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: 9208 Unit selection: - Expert list: 1 Default: 0000 hex
p8737[0...3] SERVO (CAN), VECTOR (CAN)	CAN Transmit Mapping for TPDO 8 / Mapping TPDO 8 Changeable: C1(3), T Data type: Unsigned32 P group: Communications Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: 9208 Unit selection: - Expert list: 1 Default: 0000 hex
r8739 CU_S120_DP (CAN), CU_S120_PN (CAN)	Minimum CAN processing time / t_processing min Changeable: - Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: - [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [μs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [μs]

r8742[0...1] CU_S120_DP (CAN), CU_S120_PN (CAN)	CAN PDO available number / PDO available no. Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8743[0...7] CU_S120_DP (CAN), CU_S120_PN (CAN)	CAN device module assignment / Device mod assign Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p8744 SERVO (CAN), VECTOR (CAN)	CAN PDO mapping configuration / PDO Mapping config Changeable: C2, T Data type: Integer16 P group: - Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 2 Function plan: 9204, 9206, 9208, 9210 Unit selection: - Expert list: 1 Default: 2
r8745[0...15] SERVO (CAN), VECTOR (CAN)	CO: CAN free PZD receive objects 16 bit / Free PZD rcv 16 Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p8746[0...15] SERVO (CAN), VECTOR (CAN)	CI: CAN free PZD send objects 16 bit / Free PZD send 16 Changeable: T, U Data type: Unsigned32 / Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
r8747[0...7] SERVO (CAN), VECTOR (CAN)	CO: CAN free PZD receive objects 32 bit / Free PZD rcv 32 Changeable: - Data type: Integer32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

p8748[0...7] SERVO (CAN), VECTOR (CAN)	CI: CAN free PZD send objects 32 bit / Free PZD send 32 Changeable: T, U Data type: Unsigned32 / Integer32 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
r8750[0...15] SERVO (CAN), VECTOR (CAN)	CAN mapped 16-bit receive objects / RPDO 16 mapped Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8751[0...15] SERVO (CAN), VECTOR (CAN)	CAN mapped 16-bit transmit objects / TPDO 16 mapped Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8760[0...14] SERVO (CAN), VECTOR (CAN)	CAN mapped 32-bit receive objects / RPDO 32 mapped Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8761[0...14] SERVO (CAN), VECTOR (CAN)	CAN mapped 32-bit transmit objects / TPDO 32 mapped Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8762 SERVO (CAN), VECTOR (CAN)	CO: CAN operating mode display / Op mode display Changeable: - Data type: Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r8784 SERVO (CAN), VECTOR (CAN)	CO: CAN status word / Status word Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9226 Unit selection: - Expert list: 1 Default: -
p8785 SERVO (CAN), VECTOR (CAN)	BI: CAN status word bit 8 / Status word bit 8 Changeable: T Data type: Unsigned32 / Binary P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9226 Unit selection: - Expert list: 1 Default: 0
p8786 SERVO (CAN), VECTOR (CAN)	BI: CAN status word bit 14 / Status word bit 14 Changeable: T Data type: Unsigned32 / Binary P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9226 Unit selection: - Expert list: 1 Default: 0
p8787 SERVO (CAN), VECTOR (CAN)	BI: CAN status word bit 15 / Status word bit 15 Changeable: T Data type: Unsigned32 / Binary P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 9226 Unit selection: - Expert list: 1 Default: 0
p8790 SERVO (CAN), VECTOR (CAN)	CAN control word - auto interconnection / STW interc auto Changeable: C1(3), T Data type: Integer16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p8791 SERVO (CAN), VECTOR (CAN)	CAN stop option code / Stop opt_code Changeable: C1(3), T Data type: Integer16 P group: Communications Not for motor type: - Min: -1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -1

r8792[0] SERVO (CAN), VECTOR (CAN)	CO: CAN velocity mode I16 setpoint / Vel mod I16 set Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8795.0...15 SERVO (CAN), VECTOR (CAN)	CO/BO: CAN control word / Control word Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8796[0] SERVO (CAN), VECTOR (CAN)	CO: CAN profile velocity mode I32 setpoints / Pr vel mo I32 set Changeable: - Data type: Integer32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8797[0] SERVO (CAN), VECTOR (CAN)	CO: CAN profile torque mode I16 setpoints / Pr Tq mod I16 set Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p8798[0...1] SERVO (CAN), VECTOR (CAN)	CAN speed conversion factor / n_conv_factor Changeable: T Data type: Unsigned32 P group: - Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
p8806[0...53] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Identification and Maintenance 1 / I&M 1 Changeable: T, U Data type: Unsigned8 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

p8807[0...15] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Identification and Maintenance 2 / I&M 2 Changeable: T, U Data type: Unsigned8 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default:
p8808[0...53] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Identification and Maintenance 3 / I&M 3 Changeable: T, U Data type: Unsigned8 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default:
r8809[0...53] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Identification and Maintenance 4 / I&M 4 Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p8811 CU_S120_DP (PN CBE20), CU_S120_PN (PN CBE20)	SINAMICS Link project selection / Project sel Changeable: C1(1) Data type: Integer16 P group: Communications Not for motor type: - Min: 8	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 64	Access level: 3 Function plan: 2197, 2198 Unit selection: - Expert list: 1 Default: 64
p8812[0...1] CU_S120_DP (PN CBE20), CU_S120_PN (PN CBE20)	SINAMICS Link clock cycle settings / Clock cyc set Changeable: C1(1) Data type: Unsigned16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2000	Access level: 3 Function plan: 2197, 2198 Unit selection: - Expert list: 1 Default: [0] 1 [1] 2000
p8815[0...1] CU_S120_DP, CU_S120_PN	IF1/IF2 PZD functionality selection / IF1/IF2 PZD fct Changeable: C1(1) Data type: Integer16 P group: Communications Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1

p8829	CBE2x remote controller number / CBE2x rem ctrl num		
CU_S120_DP (PN CBE20, PN CBE25, PN CBE25), CU_S120_PN (PN CBE20, PN CBE25, PN CBE25)	Changeable: C1(1) Data type: Integer16 P group: Communications Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
p8835	CBE20 firmware selection / CBE20 FW sel		
CU_S120_DP (PN CBE20), CU_S120_PN (PN CBE20)	Changeable: C1(1) Data type: Integer16 P group: Communications Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 99	Access level: 3 Function plan: 2197, 2198 Unit selection: - Expert list: 1 Default: 1
p8836	SINAMICS link node address / Node address		
CU_S120_DP (PN CBE20), CU_S120_PN (PN CBE20)	Changeable: C1(1) Data type: Unsigned16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 64	Access level: 3 Function plan: 2198 Unit selection: - Expert list: 1 Default: 0
p8837	IF2 STW1.10 = 0 mode / IF2 STW1.10=0		
A_INF, A_INF_840, B_INF, B_INF_840, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: T Data type: Integer16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2
p8839[0...1]	PZD interface hardware assignment / PZD IF HW assign		
CU_S120_DP, CU_S120_PN	Changeable: C1(1) Data type: Integer16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 99	Access level: 3 Function plan: 2197, 2198 Unit selection: - Expert list: 1 Default: 99

p8840	COMM BOARD monitoring time / CB t_monit		
CU_S120_DP (COMM BOARD, COMM BOARD, PN CBE20, PN CBE20), CU_S120_PN (COMM BOARD, COMM BOARD, PN CBE20, PN CBE20)	Changeable: T, U Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 0 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535000 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 20 [ms]
p8841[0...239]	COMM BOARD send configuration data / CB s config_dat		
CU_S120_DP (COMM BOARD, COMM BOARD, PN CBE20, PN CBE20), CU_S120_PN (COMM BOARD, COMM BOARD, PN CBE20, PN CBE20)	Changeable: T, U Data type: Unsigned16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p8842	Activate COMM BOARD send configuration / CB s config act		
CU_S120_DP (COMM BOARD, COMM BOARD, PN CBE20, PN CBE20), CU_S120_PN (COMM BOARD, COMM BOARD, PN CBE20, PN CBE20)	Changeable: T, U Data type: Unsigned16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: 2199, 2200 Unit selection: - Expert list: 1 Default: 0
r8843.0...2	BO: IF2 PZD state / IF2 PZD state		
CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: Unsigned8 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2410 Unit selection: - Expert list: 1 Default: -
p8844	IF2 fault delay / IF2 F delay		
A_INF, A_INF_840, B_INF, B_INF_840, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: T, U Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 0 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100 [s]	Access level: 3 Function plan: 2410 Unit selection: - Expert list: 1 Default: 0 [s]

p8848 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	IF2 PZD sampling time / IF2 PZD t_sample Changeable: C1(3) Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 1.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 16.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 4.00 [ms]
r8849[0...139] CU_S120_DP (COMM BOARD, COMM BOARD, PN CBE20, PN CBE20), CU_S120_PN (COMM BOARD, COMM BOARD, PN CBE20, PN CBE20)	COMM BOARD receive configuration data / CB r config_dat Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8850[0...19] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	CO: IF2 PZD receive word / IF2 PZD recv word Changeable: - Data type: Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2491 Unit selection: - Expert list: 1 Default: -
r8850[0...19] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41	CO: IF2 PZD receive word / IF2 PZD recv word Changeable: - Data type: Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2485, 2491, 9204, 9206 Unit selection: - Expert list: 1 Default: -
r8850[0...31] VECTOR, VECTOR_AC	CO: IF2 PZD receive word / IF2 PZD recv word Changeable: - Data type: Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2485, 2491, 9204, 9206 Unit selection: - Expert list: 1 Default: -

r8850[0...9] A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	CO: IF2 PZD receive word / IF2 PZD recv word Changeable: - Data type: Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2491 Unit selection: - Expert list: 1 Default: -
r8850[0...4] TB30, TM120, TM150, TM15DI_DO, TM31	CO: IF2 PZD receive word / IF2 PZD recv word Changeable: - Data type: Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2491 Unit selection: - Expert list: 1 Default: -
r8850[0...3] ENC, ENC_840	CO: IF2 PZD receive word / IF2 PZD recv word Changeable: - Data type: Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2485, 2491, 9204, 9206 Unit selection: - Expert list: 1 Default: -
p8851[0...24] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	CI: IF2 PZD send word / IF2 PZD send word Changeable: T, U Data type: Unsigned32 / Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2493, 9210 Unit selection: - Expert list: 1 Default: 0
p8851[0...27] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41	CI: IF2 PZD send word / IF2 PZD send word Changeable: T, U Data type: Unsigned32 / Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2487, 9208 Unit selection: - Expert list: 1 Default: 0
p8851[0...31] VECTOR, VECTOR_AC	CI: IF2 PZD send word / IF2 PZD send word Changeable: T, U Data type: Unsigned32 / Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2487, 9208 Unit selection: - Expert list: 1 Default: 0

p8851[0...9] A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	CI: IF2 PZD send word / IF2 PZD send word Changeable: T, U Data type: Unsigned32 / Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2493, 9210 Unit selection: - Expert list: 1 Default: 0
p8851[0...4] TB30, TM120, TM150, TM15DI_DO, TM31	CI: IF2 PZD send word / IF2 PZD send word Changeable: T, U Data type: Unsigned32 / Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2493, 9210 Unit selection: - Expert list: 1 Default: 0
p8851[0...11] ENC, ENC_840	CI: IF2 PZD send word / IF2 PZD send word Changeable: T, U Data type: Unsigned32 / Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2487, 9208 Unit selection: - Expert list: 1 Default: 0
r8853[0...24] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	IF2 diagnostics PZD send / IF2 diag PZD send Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2493 Unit selection: - Expert list: 1 Default: -
r8853[0...27] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41	IF2 diagnostics PZD send / IF2 diag PZD send Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2487, 9208, 9210 Unit selection: - Expert list: 1 Default: -
r8853[0...31] VECTOR, VECTOR_AC	IF2 diagnostics PZD send / IF2 diag PZD send Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2487, 9208, 9210 Unit selection: - Expert list: 1 Default: -

r8853[0...9] A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	IF2 diagnostics PZD send / IF2 diag PZD send Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2493 Unit selection: - Expert list: 1 Default: -
r8853[0...4] TB30, TM120, TM150, TM15DI_DO, TM31	IF2 diagnostics PZD send / IF2 diag PZD send Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2493 Unit selection: - Expert list: 1 Default: -
r8853[0...11] ENC, ENC_840	IF2 diagnostics PZD send / IF2 diag PZD send Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2487, 9208, 9210 Unit selection: - Expert list: 1 Default: -
r8854 CU_S120_DP (COMM BOARD, COMM BOARD, PN CBE20, PN CBE20), CU_S120_PN (COMM BOARD, COMM BOARD, PN CBE20, PN CBE20)	COMM BOARD state / CB state Changeable: - Data type: Integer16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8858[0...39] CU_S120_DP (COMM BOARD, COMM BOARD, PN CBE20, PN CBE20), CU_S120_PN (COMM BOARD, COMM BOARD, PN CBE20, PN CBE20)	COMM BOARD read diagnostics channel / CB diag_chan read Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8859[0...7] CU_S120_DP (COMM BOARD, COMM BOARD, PN CBE20, PN CBE20), CU_S120_PN (COMM BOARD, COMM BOARD, PN CBE20, PN CBE20)	COMM BOARD identification data / CB ident_data Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r8860[0...18] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41	CO: IF2 PZD receive double word / IF2 PZD recv DW Changeable: - Data type: Integer32 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2485, 9204, 9206 Unit selection: - Expert list: 1 Default: -
r8860[0...30] VECTOR, VECTOR_AC	CO: IF2 PZD receive double word / IF2 PZD recv DW Changeable: - Data type: Integer32 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2485, 9204, 9206 Unit selection: - Expert list: 1 Default: -
r8860[0...2] ENC, ENC_840	CO: IF2 PZD receive double word / IF2 PZD recv DW Changeable: - Data type: Integer32 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2485, 9204, 9206 Unit selection: - Expert list: 1 Default: -
p8861[0...26] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41	CI: IF2 PZD send double word / IF2 PZD send DW Changeable: T, U Data type: Unsigned32 / Integer32 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2487, 9208, 9210 Unit selection: - Expert list: 1 Default: 0
p8861[0...30] VECTOR, VECTOR_AC	CI: IF2 PZD send double word / IF2 PZD send DW Changeable: T, U Data type: Unsigned32 / Integer32 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2487, 9208, 9210 Unit selection: - Expert list: 1 Default: 0
p8861[0...10] ENC, ENC_840	CI: IF2 PZD send double word / IF2 PZD send DW Changeable: T, U Data type: Unsigned32 / Integer32 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: 4000H Max: -	Access level: 3 Function plan: 2487, 9208, 9210 Unit selection: - Expert list: 1 Default: 0

r8863[0...26] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41	IF2 diagnostics PZD send double word / IF2 diag send DW Changeable: - Data type: Unsigned32 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2487 Unit selection: - Expert list: 1 Default: -
r8863[0...30] VECTOR, VECTOR_AC	IF2 diagnostics PZD send double word / IF2 diag send DW Changeable: - Data type: Unsigned32 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2487 Unit selection: - Expert list: 1 Default: -
r8863[0...10] ENC, ENC_840	IF2 diagnostics PZD send double word / IF2 diag send DW Changeable: - Data type: Unsigned32 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2487 Unit selection: - Expert list: 1 Default: -
r8867[0...1] A_INF, A_INF_840, B_INF, B_INF_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	IF2 PZD maximum interconnected / IF2 PZDmaxIntercon Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

p8870[0...15]	SINAMICS Link PZD receive word / PZD recv word		
A_INF (PN CBE20), B_INF (PN CBE20), CU_S120_DP (PN CBE20), CU_S120_PN (PN CBE20), ENC (PN CBE20), ENC_840 (PN CBE20), HLA (PN CBE20), HLA_840 (PN CBE20), HLA_DBSI (PN CBE20), R_INF (PN CBE20), S_INF (PN CBE20), SERVO (PN CBE20), TB30 (PN CBE20), TM120 (PN CBE20), TM15 (PN CBE20), TM150 (PN CBE20), TM15DI_DO (PN CBE20), TM17 (PN CBE20), TM31 (PN CBE20), TM41 (PN CBE20)	Changeable: T Data type: Unsigned16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 32	Access level: 3 Function plan: 2198, 2199 Unit selection: - Expert list: 1 Default: 0

p8870[0...31]	SINAMICS Link PZD receive word / PZD recv word		
VECTOR (PN CBE20)	Changeable: T Data type: Unsigned16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 32	Access level: 3 Function plan: 2198, 2199 Unit selection: - Expert list: 1 Default: 0

p8871[0...15]	SINAMICS Link PZD send word / PZD send word		
A_INF (PN CBE20), B_INF (PN CBE20), CU_S120_DP (PN CBE20), CU_S120_PN (PN CBE20), ENC (PN CBE20), ENC_840 (PN CBE20), HLA (PN CBE20), HLA_840 (PN CBE20), HLA_DBSI (PN CBE20), R_INF (PN CBE20), S_INF (PN CBE20), SERVO (PN CBE20), TB30 (PN CBE20), TM120 (PN CBE20), TM15 (PN CBE20), TM150 (PN CBE20), TM15DI_DO (PN CBE20), TM17 (PN CBE20), TM31 (PN CBE20), TM41 (PN CBE20)	Changeable: T Data type: Unsigned16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 32	Access level: 3 Function plan: 2198, 2199 Unit selection: - Expert list: 1 Default: 0

p8871[0...31]	SINAMICS Link PZD send word / PZD send word		
VECTOR (PN CBE20)	Changeable: T Data type: Unsigned16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 32	Access level: 3 Function plan: 2198, 2199 Unit selection: - Expert list: 1 Default: 0
p8872[0...15]	SINAMICS Link PZD receive address / PZD recv adr.		
A_INF (PN CBE20), B_INF (PN CBE20), CU_S120_DP (PN CBE20), CU_S120_PN (PN CBE20), ENC (PN CBE20), ENC_840 (PN CBE20), HLA (PN CBE20), HLA_840 (PN CBE20), HLA_DBSI (PN CBE20), R_INF (PN CBE20), S_INF (PN CBE20), SERVO (PN CBE20), TB30 (PN CBE20), TM120 (PN CBE20), TM15 (PN CBE20), TM150 (PN CBE20), TM15DI_DO (PN CBE20), TM17 (PN CBE20), TM31 (PN CBE20), TM41 (PN CBE20)	Changeable: T Data type: Unsigned16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 64	Access level: 3 Function plan: 2198, 2199 Unit selection: - Expert list: 1 Default: 0
p8872[0...31]	SINAMICS Link PZD receive address / PZD recv adr.		
VECTOR (PN CBE20)	Changeable: T Data type: Unsigned16 P group: Communications Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 64	Access level: 3 Function plan: 2198, 2199 Unit selection: - Expert list: 1 Default: 0
r8874[0...19]	IF2 diagnostics bus address PZD receive / IF2 diag addr recv		
CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r8874[0...19] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41	IF2 diagnostics bus address PZD receive / IF2 diag addr rcv Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8874[0...31] VECTOR, VECTOR_AC	IF2 diagnostics bus address PZD receive / IF2 diag addr rcv Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8874[0...9] A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	IF2 diagnostics bus address PZD receive / IF2 diag addr rcv Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8874[0...4] TB30, TM120, TM150, TM15DI_DO, TM31	IF2 diagnostics bus address PZD receive / IF2 diag addr rcv Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8874[0...3] ENC, ENC_840	IF2 diagnostics bus address PZD receive / IF2 diag addr rcv Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8875[0...19] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	IF2 diagnostics telegram offset PZD receive / IF diag offs rcv Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r8875[0...19] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41	IF2 diagnostics telegram offset PZD receive / IF diag offs rcv Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8875[0...31] VECTOR, VECTOR_AC	IF2 diagnostics telegram offset PZD receive / IF diag offs rcv Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8875[0...9] A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	IF2 diagnostics telegram offset PZD receive / IF diag offs rcv Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8875[0...4] TB30, TM120, TM150, TM15DI_DO, TM31	IF2 diagnostics telegram offset PZD receive / IF diag offs rcv Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8875[0...3] ENC, ENC_840	IF2 diagnostics telegram offset PZD receive / IF diag offs rcv Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8876[0...24] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	IF2 diagnostics telegram offset PZD send / IF2 diag offs send Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r8876[0...27] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41	IF2 diagnostics telegram offset PZD send / IF2 diag offs send Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8876[0...31] VECTOR, VECTOR_AC	IF2 diagnostics telegram offset PZD send / IF2 diag offs send Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8876[0...9] A_INF, A_INF_840, B_INF, B_INF_840, R_INF, S_INF, S_INF_840	IF2 diagnostics telegram offset PZD send / IF2 diag offs send Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8876[0...4] TB30, TM120, TM150, TM15DI_DO, TM31	IF2 diagnostics telegram offset PZD send / IF2 diag offs send Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8876[0...11] ENC, ENC_840	IF2 diagnostics telegram offset PZD send / IF2 diag offs send Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

p8880[0...15]	BI: IF2 binector-connector converter status word 1 / Bin/con ZSW1		
A_INF, A_INF_840, B_INF, B_INF_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned32 / Binary P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2489 Unit selection: - Expert list: 1 Default: 0
p8881[0...15]	BI: IF2 binector-connector converter status word 2 / Bin/con ZSW2		
A_INF, A_INF_840, B_INF, B_INF_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned32 / Binary P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2489 Unit selection: - Expert list: 1 Default: 0
p8882[0...15]	BI: IF2 binector-connector converter status word 3 / Bin/con ZSW3		
A_INF, A_INF_840, B_INF, B_INF_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned32 / Binary P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2489 Unit selection: - Expert list: 1 Default: 0

p8883[0...15]	BI: IF2 binector-connector converter status word 4 / Bin/con ZSW4		
A_INF, A_INF_840, B_INF, B_INF_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned32 / Binary P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2489 Unit selection: - Expert list: 1 Default: 0
p8884[0...15]	BI: IF2 binector-connector converter status word 5 / Bin/con ZSW5		
A_INF, A_INF_840, B_INF, B_INF_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned32 / Binary P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2489 Unit selection: - Expert list: 1 Default: 0
p8888[0...4]	IF2 invert binector-connector converter status word / Bin/con ZSW inv		
A_INF, A_INF_840, B_INF, B_INF_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2489 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin

r8889[0...4]	CO: IF2 send binector-connector converter status word / Bin/con ZSW send		
A_INF, A_INF_840, B_INF, B_INF_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8890.0...15	BO: IF2 PZD1 receive bit-serial / IF2 PZD1 recv bitw		
A_INF, A_INF_840, B_INF, B_INF_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2485, 2491, 9204, 9206 Unit selection: - Expert list: 1 Default: -
r8891.0...15	BO: IF2 PZD2 receive bit-serial / IF2 PZD2 recv bitw		
A_INF, A_INF_840, B_INF, B_INF_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2485, 2491, 9204, 9206 Unit selection: - Expert list: 1 Default: -

r8892.0...15	BO: IF2 PZD3 receive bit-serial / IF2 PZD3 recv bitw		
CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, _ SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2485, 9204, 9206 Unit selection: - Expert list: 1 Default: -
r8893.0...15	BO: IF2 PZD4 receive bit-serial / IF2 PZD4 recv bitw		
CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, _ SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2485, 9204, 9206 Unit selection: - Expert list: 1 Default: -
r8894.0...15	BO: IF2 connector-binector converter binector output / Con/bin outp		
A_INF, A_INF_840, B_INF, B_INF_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2485, 2491 Unit selection: - Expert list: 1 Default: -

r8895.0...15	BO: IF2 connector-binector converter binector output / Con/bin outp		
A_INF, A_INF_840, B_INF, B_INF_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2485, 2491 Unit selection: - Expert list: 1 Default: -
p8898[0...1]	IF2 invert connector-binector converter binector output / Con/bin outp inv		
A_INF, A_INF_840, B_INF, B_INF_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2485, 2491 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
p8899[0...1]	CI: IF2 connector-binector converter signal source / Con/bin S_src		
A_INF, A_INF_840, B_INF, B_INF_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	Changeable: T, U Data type: Unsigned32 / Integer16 P group: Communications Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2485, 2491 Unit selection: - Expert list: 1 Default: 0

p8900[0...239] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	IE Name of Station / IE Name Stat Changeable: T, U Data type: Unsigned8 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p8901[0...3] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	IE IP address / IE IP addr Changeable: T, U Data type: Unsigned8 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p8902[0...3] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	IE default gateway / IE Def Gateway Changeable: T, U Data type: Unsigned8 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p8903[0...3] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	IE Subnet Mask / IE Subnet Mask Changeable: T, U Data type: Unsigned8 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p8904 CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	IE DHCP mode / IE DHCP mode Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p8905 CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	IE Interface configuration / IE IF config Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p8908 CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Activate FTP / Act FTP Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
r8909 CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	PN device ID / PN device ID Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8910[0...239] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	IE Name of Station actual / IE Name Stat act Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r8911[0...3] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	IE IP address actual / IE IP addr act Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r8912[0...3] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	IE default gateway actual / IE Def Gateway act Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r8913[0...3] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	IE Subnet Mask actual / IE Subnet Mask act Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -

r8914 CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	IE DHCP mode actual / IE DHCP mode act Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
r8915[0...5] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	IE MAC address / IE MAC addr Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 00FF hex	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -
p8920[0...239] CU_S_AC_PN, CU_S120_PN	PN Name of Station / PN Name Stat Changeable: T, U Data type: Unsigned8 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p8921[0...3] CU_S_AC_PN, CU_S120_PN	PN IP address / PN IP addr Changeable: T, U Data type: Unsigned8 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p8922[0...3] CU_S_AC_PN, CU_S120_PN	PN Default Gateway / PN Def Gateway Changeable: T, U Data type: Unsigned8 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p8923[0...3] CU_S_AC_PN, CU_S120_PN	PN Subnet Mask / PN Subnet Mask Changeable: T, U Data type: Unsigned8 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p8924 CU_S_AC_PN, CU_S120_PN	PN DHCP Mode / PN DHCP mode Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p8925 CU_S_AC_PN, CU_S120_PN	PN interface configuration / PN IF config Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p8929 CU_S_AC_PN, CU_S120_PN	PN remote controller number / PN rem ctrl num Changeable: C1(1) Data type: Integer16 P group: Communications Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
r8930[0...239] CU_S_AC_PN, CU_S120_PN	PN Name of Station actual / PN Name Stat act Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8931[0...3] CU_S_AC_PN, CU_S120_PN	PN IP address actual / PN IP addr act Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8932[0...3] CU_S_AC_PN, CU_S120_PN	PN Default Gateway actual / PN Def Gateway act Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r8933[0...3] CU_S_AC_PN, CU_S120_PN	PN Subnet Mask actual / PN Subnet Mask act Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8934 CU_S_AC_PN, CU_S120_PN	PN DHCP Mode actual / PN DHCP Mode act Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8935[0...5] CU_S_AC_PN, CU_S120_PN	PN MAC address / PN MAC addr Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 00FF hex	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8936[0...1] CU_S_AC_PN, CU_S120_PN	PN cyclic connection state / PN cyc conn state Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 13	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8937[0...5] CU_S_AC_PN, CU_S120_PN	PN diagnostics / PN diag Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8939 CU_S_AC_PN, CU_S120_PN	PN DAP ID / PN DAP ID Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

p8940[0...239]	CBE2x Name of Station / CBE2x Name Stat		
CU_S120_DP (PN	Changeable: T, U	Calculation: -	Access level: 3
CBE20, PN CBE20, PN	Data type: Unsigned8	Dynamic index: -	Function plan: -
CBE25, PN CBE25),	P group: -	Unit group: -	Unit selection: -
CU_S120_PN (PN	Not for motor type: -	Scaling: -	Expert list: 1
CBE20, PN CBE20, PN	Min:	Max:	Default:
CBE25, PN CBE25)	-	-	-
p8941[0...3]	CBE2x IP address / CBE2x IP addr		
CU_S120_DP (PN	Changeable: T, U	Calculation: -	Access level: 3
CBE20, PN CBE20, PN	Data type: Unsigned8	Dynamic index: -	Function plan: -
CBE25, PN CBE25),	P group: -	Unit group: -	Unit selection: -
CU_S120_PN (PN	Not for motor type: -	Scaling: -	Expert list: 1
CBE20, PN CBE20, PN	Min:	Max:	Default:
CBE25, PN CBE25)	0	255	0
p8942[0...3]	CBE2x Default Gateway / CBE2x Def Gateway		
CU_S120_DP (PN	Changeable: T, U	Calculation: -	Access level: 3
CBE20, PN CBE20, PN	Data type: Unsigned8	Dynamic index: -	Function plan: -
CBE25, PN CBE25),	P group: -	Unit group: -	Unit selection: -
CU_S120_PN (PN	Not for motor type: -	Scaling: -	Expert list: 1
CBE20, PN CBE20, PN	Min:	Max:	Default:
CBE25, PN CBE25)	0	255	0
p8943[0...3]	CBE2x Subnet Mask / CBE2x Subnet Mask		
CU_S120_DP (PN	Changeable: T, U	Calculation: -	Access level: 3
CBE20, PN CBE20, PN	Data type: Unsigned8	Dynamic index: -	Function plan: -
CBE25, PN CBE25),	P group: -	Unit group: -	Unit selection: -
CU_S120_PN (PN	Not for motor type: -	Scaling: -	Expert list: 1
CBE20, PN CBE20, PN	Min:	Max:	Default:
CBE25, PN CBE25)	0	255	0
p8944	CBE2x DHCP Mode / CBE2x DHCP Mode		
CU_S120_DP (PN	Changeable: T, U	Calculation: -	Access level: 3
CBE20, PN CBE20, PN	Data type: Integer16	Dynamic index: -	Function plan: -
CBE25, PN CBE25),	P group: -	Unit group: -	Unit selection: -
CU_S120_PN (PN	Not for motor type: -	Scaling: -	Expert list: 1
CBE20, PN CBE20, PN	Min:	Max:	Default:
CBE25, PN CBE25)	0	3	0
p8945	CBE2x interface configuration / CBE2x int config		
CU_S120_DP (PN	Changeable: T, U	Calculation: -	Access level: 3
CBE20, PN CBE20, PN	Data type: Integer16	Dynamic index: -	Function plan: -
CBE25, PN CBE25),	P group: -	Unit group: -	Unit selection: -
CU_S120_PN (PN	Not for motor type: -	Scaling: -	Expert list: 1
CBE20, PN CBE20, PN	Min:	Max:	Default:
CBE25, PN CBE25)	0	3	0

r8950[0...239]	CBE2x Name of Station actual / CBE2x Name act		
CU_S120_DP (PN	Changeable: -	Calculation: -	Access level: 3
CBE20, PN CBE20, PN	Data type: Unsigned8	Dynamic index: -	Function plan: -
CBE25, PN CBE25),	P group: -	Unit group: -	Unit selection: -
CU_S120_PN (PN	Not for motor type: -	Scaling: -	Expert list: 1
CBE20, PN CBE20, PN	Min:	Max:	Default:
CBE25, PN CBE25)	-	-	-
r8951[0...3]	CBE2x IP Address actual / CBE2x IP addr		
CU_S120_DP (PN	Changeable: -	Calculation: -	Access level: 3
CBE20, PN CBE20, PN	Data type: Unsigned8	Dynamic index: -	Function plan: -
CBE25, PN CBE25),	P group: -	Unit group: -	Unit selection: -
CU_S120_PN (PN	Not for motor type: -	Scaling: -	Expert list: 1
CBE20, PN CBE20, PN	Min:	Max:	Default:
CBE25, PN CBE25)	0	255	-
r8952[0...3]	CBE2x Default Gateway actual / CBE2x def GW act		
CU_S120_DP (PN	Changeable: -	Calculation: -	Access level: 3
CBE20, PN CBE20, PN	Data type: Unsigned8	Dynamic index: -	Function plan: -
CBE25, PN CBE25),	P group: -	Unit group: -	Unit selection: -
CU_S120_PN (PN	Not for motor type: -	Scaling: -	Expert list: 1
CBE20, PN CBE20, PN	Min:	Max:	Default:
CBE25, PN CBE25)	0	255	-
r8953[0...3]	CBE2x Subnet Mask actual / CBE2x Sub Mask act		
CU_S120_DP (PN	Changeable: -	Calculation: -	Access level: 3
CBE20, PN CBE20, PN	Data type: Unsigned8	Dynamic index: -	Function plan: -
CBE25, PN CBE25),	P group: -	Unit group: -	Unit selection: -
CU_S120_PN (PN	Not for motor type: -	Scaling: -	Expert list: 1
CBE20, PN CBE20, PN	Min:	Max:	Default:
CBE25, PN CBE25)	0	255	-
r8954	CBE2x DHCP Mode actual / CBE2x DHCP act		
CU_S120_DP (PN	Changeable: -	Calculation: -	Access level: 3
CBE20, PN CBE20, PN	Data type: Integer16	Dynamic index: -	Function plan: -
CBE25, PN CBE25),	P group: -	Unit group: -	Unit selection: -
CU_S120_PN (PN	Not for motor type: -	Scaling: -	Expert list: 1
CBE20, PN CBE20, PN	Min:	Max:	Default:
CBE25, PN CBE25)	0	3	-
r8955[0...5]	CBE2x MAC address / CBE2x MAC Addr		
CU_S120_DP (PN	Changeable: -	Calculation: -	Access level: 3
CBE20, PN CBE20, PN	Data type: Unsigned8	Dynamic index: -	Function plan: -
CBE25, PN CBE25),	P group: -	Unit group: -	Unit selection: -
CU_S120_PN (PN	Not for motor type: -	Scaling: -	Expert list: 1
CBE20, PN CBE20, PN	Min:	Max:	Default:
CBE25, PN CBE25)	0000 hex	00FF hex	-

r8956[0...1] CU_S120_DP (PN CBE25), CU_S120_PN (PN CBE25)	CBE25 cyclic connection state / CBE25 cyc conn st Changeable: - Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 13	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8957[0...5] CU_S120_DP (PN CBE25), CU_S120_PN (PN CBE25)	CBE25 diagnostics / CBE25 diagn Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8959 CU_S120_DP (PN CBE20, PN CBE20, PN CBE25, PN CBE25), CU_S120_PN (PN CBE20, PN CBE20, PN CBE25, PN CBE25)	CBE2x DAP ID / CBE2x DAP ID Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8960[0...3] A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM150, TM15DI_DO, TM31, TM41, VECTOR, VECTOR_AC	PN subslot controller assignment / PN subslot assign Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8961[0...3] CU_S_AC_PN, CU_S120_PN	PN IP Address Remote Controller 1 / IP Addr Rem Ctrl1 Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r8962[0...3] CU_S_AC_PN, CU_S120_PN	PN IP Address Remote Controller 2 / IP Addr Rem Ctrl2 Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p8969 CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	PROFIsafe wait for clock synchronization / PS wait sync Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
r8970[0...3] A_INF (PN CBE20), B_INF (PN CBE20), CU_S120_DP (PN CBE20, PN CBE20, PN CBE25, PN CBE25), CU_S120_PN (PN CBE20, PN CBE20, PN CBE25, PN CBE25), ENC (PN CBE20), ENC_840 (PN CBE20), HLA (PN CBE20), HLA_840 (PN CBE20), HLA_DBSI (PN CBE20), R_INF (PN CBE20), S_INF (PN CBE20), SERVO (PN CBE20), SERVO_AC (PN CBE20), TB30 (PN CBE20), TM120 (PN CBE20), TM15 (PN CBE20), TM150 (PN CBE20), TM15DI_DO (PN CBE20), TM17 (PN CBE20), TM31 (PN CBE20), TM41 (PN CBE20), VECTOR (PN CBE20), VECTOR_AC (PN CBE20)	CBE2x subslot controller assignment / CBE2x subslot Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r8971[0...3] CU_S120_DP (PN CBE20, PN CBE20, PN CBE25, PN CBE25), CU_S120_PN (PN CBE20, PN CBE20, PN CBE25, PN CBE25)	CBE2x IP Address Remote Controller 1 / CBE2x IP Rem Ctrl1 Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r8972[0...3]	CBE2x IP Address Remote Controller 2 / CBE2x IP Rem Ctrl2		
CU_S120_DP (PN CBE20, PN CBE20, PN CBE25, PN CBE25), CU_S120_PN (PN CBE20, PN CBE20, PN CBE25, PN CBE25)	Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p8985[0...1]	BI: Web server enable of the interface / Webserv enab		
CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: T Data type: Unsigned32 / Binary P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: [0] 1 [1] 1
p8986	Web server configuration / Web serv config		
CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: T Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0101 bin
p8987[0...1]	Web server port assignment / WebServ PortAssign		
CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: T Data type: Unsigned16 P group: - Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 32767	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: [0] 80 [1] 443
p9206[0...2]	Topology direct access / Topo access		
CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Changeable: T Data type: Unsigned32 P group: Topology Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

r9207 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Topology direct access integer value / Topo access int Changeable: - Data type: Unsigned32 P group: Topology Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9208[0...50] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Topology direct access string / Topo access string Changeable: - Data type: Unsigned8 P group: Topology Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p9210 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Flashing component number / Flash comp_no. Changeable: T, U Data type: Unsigned16 P group: Topology Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 499	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p9211 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Flash function / Flash fct. Changeable: T, U Data type: Integer16 P group: Topology Not for motor type: - Min: -1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -1
r9220 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Statistics number of entries / Stat entries qty Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p9221 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Statistic components Id / Statistic comp Id Changeable: T Data type: Unsigned8 P group: - Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 00FF hex	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0002 hex

r9222[0...n] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Statistic DRIVE-CLiQ acyclic communication / Statistic Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: r9220 Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p9300 HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion monitoring clock cycle (Motor Module) / SI Mtn clock MM Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 500.00 [µs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 25000.00 [µs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 12000.00 [µs]
p9301 SERVO_AC, VECTOR_AC	SI Motion enable safety functions (Motor Module) / SI Mtn enable MM Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
p9301 HLA, HLA_DBSI, SERVO, SERVO_DBSI, VECTOR	SI Motion enable safety functions (Motor Module) / SI Mtn enable MM Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
p9302 SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion axis type (Motor Module) / SI Mtn AxisType MM Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p9303	SI Motion SCA (SN) enable (MM) / SI Mtn SCA enab MM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
p9305	SI Motion SP modulo value (Motor Module) / SI mtn SP mod MM		
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 737280 [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0 [°]
p9306	SI Motion function specification (Motor Module) / SI Mtn fct_spc MM		
HLA, HLA_DBSI	Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p9306	SI Motion function specification (Motor Module) / SI Mtn fct_spc MM		
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p9307	SI Motion function configuration MM / SI mtn config MM		
HLA	Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 bin
p9307	SI Motion function configuration MM / SI mtn config MM		
HLA_DBSI	Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0010 bin

p9307 SERVO_AC, VECTOR_AC	SI Motion function configuration MM / SI mtn config MM Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 bin
p9307 SERVO_DBSI	SI Motion function configuration MM / SI mtn config MM Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0010 bin
p9307 SERVO, VECTOR	SI Motion function configuration MM / SI mtn config MM Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 bin
p9309 SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion behavior during pulse suppression (Motor Module) / SI Mtn behav IL MM Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 1111 1111 bin
p9311 HLA, HLA_DBSI	SI Motion actual value sensing clock cycle (Motor Module) / SI Mtn act clk MM Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0000 [µs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 25000.0000 [µs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0000 [µs]
p9311 SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion actual value sensing clock cycle (Motor Module) / SI Mtn act clk MM Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0000 [µs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 25000.0000 [µs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0000 [µs]

p9312	Select SI Motion safety functions without selection (MM) / SI Mtn w/o sel MM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0001 0000 bin
p9313	SI Motion non safety-relevant measuring steps POS1 (MM) / nsrPOS1 MM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 22000
p9314	SI Motion absolute encoder linear measuring steps (MM) / EncLinMeasStep MM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 0 [nm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4294967295 [nm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100 [nm]
p9315	SI Motion coarse position value configuration (Motor Module) / SI Mtn s config MM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
p9316	SI Motion encoder configuration, safety functions (Motor Module) / SI Mtn enc_cfg MM		
HLA, HLA_DBSI	Changeable: C2(95) Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0001 bin
p9316	SI Motion encoder configuration, safety functions (Motor Module) / SI Mtn enc_cfg MM		
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 bin

p9317	SI Motion linear scale grid division (Motor Module) / SI Mtn grid MM
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [nm] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 250000000.00 [nm] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 10000.00 [nm]
p9318	SI Motion encoder pulses per revolution (Motor Module) / SI Mtn p/rev MM
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 0 Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 16777215 Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2048
p9319	SI Motion fine resolution G1_XIST1 (Motor Module) / SI Mtn G1_XIST1 MM
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 2 Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 18 Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 11
p9320	SI Motion spindle pitch (Motor Module) / SI Mtn sp_pitch MM
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.1000 [mm] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8388.0000 [mm] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 10.0000 [mm]
p9321[0...7]	SI Motion gearbox encoder (motor)/load denom (Motor Module) / SI Mtn gearDenomMM
HLA, HLA_DBSI	Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 1 Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147000000 Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
p9321[0...7]	SI Motion gearbox encoder (motor)/load denom (Motor Module) / SI Mtn gearDenomMM
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 1 Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147000000 Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1

p9322[0...7] HLA, HLA_DBSI	SI Motion gearbox encoder (motor)/load numerator (Motor Module) / SI Mtn gear num MM Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147000000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
p9322[0...7] SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion gearbox encoder (motor)/load numerator (Motor Module) / SI Mtn gear num MM Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147000000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
p9323 HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion red. coarse position value valid bits (Motor Module) / Valid bits MM Changeable: C2(95) Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 16	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 9
p9324 HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion redundant coarse pos. value fine resolution bits (MM) / SI Mtn fine bit MM Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: -16	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 16	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -2
p9325 HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion redundant coarse pos. value relevant bits (MM) / Relevant bits MM Changeable: C2(95) Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 16	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 16
p9326 HLA, HLA_DBSI	SI Motion encoder assignment (Motor Module) / SI Mtn encoder MM Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2

p9326	SI Motion encoder assignment (Motor Module) / SI Mtn encoder MM		
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
p9328[0...11]	SI Motion Sensor Module Node Identifier (Motor Module) / SI Mtn SM Ident MM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned8 P group: Safety Integrated Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 00FF hex	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 hex
p9329	SI Motion Gx_XIST1 coarse pos safe most significant bit (MM) / Gx_XIST1 MSB MM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 31	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 14
p9330	SI Motion standstill tolerance (Motor Module) / SI Mtn SOS Tol MM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.000 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.000 [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1.000 [mm]
p9330	SI Motion standstill tolerance (Motor Module) / SI Mtn SOS Tol MM		
SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.000 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.000 [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1.000 [°]
p9331[0...3]	SI Motion SLS limit values (Motor Module) / SI Mtn SLS lim MM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [mm/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000000.00 [mm/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2000.00 [mm/min]

p9331[0...3] SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	SI Motion SLS limit values (Motor Module) / SI Mtn SLS lim MM Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000000.00 [rpm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2000.00 [rpm]
p9334[0...1] HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SLP upper limit values (Motor Module) / SI Mtn SLP uplimMM Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: -2147000.000 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147000.000 [mm]	Access level: 3 Function plan: 2822 Unit selection: - Expert list: 1 Default: 100000.000 [mm]
p9334[0...1] SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	SI Motion SLP upper limit values (Motor Module) / SI Mtn SLP uplimMM Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: -2147000.000 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147000.000 [°]	Access level: 3 Function plan: 2822 Unit selection: - Expert list: 1 Default: 100000.000 [°]
p9335[0...1] HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SLP lower limit values (Motor Module) / SI Mtn SLPlowLimMM Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: -2147000.000 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147000.000 [mm]	Access level: 3 Function plan: 2822 Unit selection: - Expert list: 1 Default: -100000.000 [mm]
p9335[0...1] SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	SI Motion SLP lower limit values (Motor Module) / SI Mtn SLPlowLimMM Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: -2147000.000 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147000.000 [°]	Access level: 3 Function plan: 2822 Unit selection: - Expert list: 1 Default: -100000.000 [°]
p9336[0...29] HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SCA (SN) plus cam position (MM) / SI Mtn SCA+ MM Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: -2147000.000 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147000.000 [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 10.000 [mm]

p9336[0...29] SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	SI Motion SCA (SN) plus cam position (MM) / SI Mtn SCA+ MM Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: -2147000.000 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147000.000 [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 10.000 [°]
p9337[0...29] HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SCA (SN) minus cam position (MM) / SI Mtn SCA- MM Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: -2147000.000 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147000.000 [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -10.000 [mm]
p9337[0...29] SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	SI Motion SCA (SN) minus cam position (MM) / SI Mtn SCA- MM Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: -2147000.000 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147000.000 [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -10.000 [°]
p9339[0...7] HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion gearbox direction of rotation reversal (Motor Module) / SI Mtn grbx rev MM Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p9340 HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SCA (SN) tolerance (MM) / SI Mtn SCA tol MM Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0010 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10.0000 [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.1000 [mm]
p9340 SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	SI Motion SCA (SN) tolerance (MM) / SI Mtn SCA tol MM Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0010 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10.0000 [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.1000 [°]

p9341	SI Motion encoder comparison algorithm (Motor Module) / Enc comp algo MM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 255
p9342	SI Motion act val comparison tol (crosswise) (Motor Module) / SI Mtn actV tol MM		
HLA, HLA_DBSI	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0010 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 360.0000 [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.1000 [mm]
p9342	SI Motion act val comparison tol (crosswise) (Motor Module) / SI Mtn actV tol MM		
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0010 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 360.0000 [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.1000 [mm]
p9342	SI Motion act val comparison tol (crosswise) (Motor Module) / SI Mtn actV tol MM		
SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0010 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 360.0000 [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.1000 [°]
p9343	SI Motion gearbox switching position tolerance (MM) / SI Mtn grbx tol MM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Integer32 P group: Safety Integrated Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
p9344	SI Motion actual value comparison tolerance (referencing) (MM) / SI mtn ref tol MM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0000 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 36.0000 [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0100 [mm]

p9344	SI Motion actual value comparison tolerance (referencing) (MM) / SI mtn ref tol MM
SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0000 [°] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 36.0000 [°] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0100 [°]

p9345	SI Motion SSM filter time (Motor Module) / SI Mtn SSM filt MM
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [µs] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 500000.00 [µs] Access level: 3 Function plan: 2823 Unit selection: - Expert list: 1 Default: 0.00 [µs]

p9346	SI Motion SSM velocity limit (Motor Module) / SI Mtn SSM v_limMM
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [mm/min] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000000.00 [mm/min] Access level: 3 Function plan: 2823 Unit selection: - Expert list: 1 Default: 20.00 [mm/min]

p9346	SI Motion SSM velocity limit (Motor Module) / SI Mtn SSM v_limMM
SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [rpm] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000000.00 [rpm] Access level: 3 Function plan: 2823 Unit selection: - Expert list: 1 Default: 20.00 [rpm]

p9347	SI Motion SSM velocity hysteresis (Motor Module) / SI Mtn SSM Hyst MM
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0010 [mm/min] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 500.0000 [mm/min] Access level: 3 Function plan: 2823 Unit selection: - Expert list: 1 Default: 10.0000 [mm/min]

p9347	SI Motion SSM velocity hysteresis (Motor Module) / SI Mtn SSM Hyst MM
SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0010 [rpm] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 500.0000 [rpm] Access level: 3 Function plan: 2823 Unit selection: - Expert list: 1 Default: 10.0000 [rpm]

p9348	SI Motion SAM actual velocity tolerance (Motor Module) / SI Mtn SAM tol MM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [mm/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 120000.00 [mm/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 300.00 [mm/min]
p9348	SI Motion SAM actual velocity tolerance (Motor Module) / SI Mtn SAM tol MM		
SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 120000.00 [rpm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 300.00 [rpm]
p9349	SI Motion slip velocity tolerance (Motor Module) / SI Mtn slip MM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [mm/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6000.00 [mm/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 6.00 [mm/min]
p9349	SI Motion slip velocity tolerance (Motor Module) / SI Mtn slip MM		
SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6000.00 [rpm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 6.00 [rpm]
p9351	SI Motion SLS(SG) changeover/SOS (SBH) delay time (MM) / SI SLS/SOS t MM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 600000000.00 [μs]	Access level: 3 Function plan: 2819, 2820 Unit selection: - Expert list: 1 Default: 100000.00 [μs]
p9352	SI Motion transition time STOP C to SOS (Motor Module) / SI Mtn t C->SOS MM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 600000000.00 [μs]	Access level: 3 Function plan: 2819 Unit selection: - Expert list: 1 Default: 100000.00 [μs]

p9353	SI Motion transition time STOP D to SOS (Motor Module) / SI Mtn t D->SOS MM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [µs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 600000000.00 [µs]	Access level: 3 Function plan: 2819 Unit selection: - Expert list: 1 Default: 100000.00 [µs]
p9354	SI Motion transition time STOP E to SOS (Motor Module) / SI Mtn t E->SOS MM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [µs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 600000000.00 [µs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100000.00 [µs]
p9355	SI Motion transition time STOP F to STOP B (Motor Module) / SI Mtn t F->B MM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [µs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 600000000.00 [µs]	Access level: 3 Function plan: 2819 Unit selection: - Expert list: 1 Default: 0.00 [µs]
p9356	SI Motion STOP A delay time (Motor Module) / SI Mtn IL t_del MM		
HLA, HLA_DBSI	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [µs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3600000000.00 [µs]	Access level: 3 Function plan: 2819 Unit selection: - Expert list: 1 Default: 100000.00 [µs]
p9356	SI Motion STOP A delay time (Motor Module) / SI Mtn IL t_del MM		
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [µs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3600000000.00 [µs]	Access level: 3 Function plan: 2819 Unit selection: - Expert list: 1 Default: 100000.00 [µs]
p9357	SI Motion STO test time (Motor Module) / SI Mtn IL t MM		
HLA, HLA_DBSI	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [µs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000000.00 [µs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 500000.00 [µs]

p9357	SI Motion STO test time (Motor Module) / SI Mtn IL t MM		
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000000.00 [μs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100000.00 [μs]
p9358	SI Motion acceptance test mode time limit (Motor Module) / SI Mtn acc t MM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 5000000.00 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100000000.00 [μs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 40000000.00 [μs]
p9360	SI Motion STO shutdown velocity (Motor Module) / SI Mtn IL v_sh MM		
HLA, HLA_DBSI	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [mm/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6000.00 [mm/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [mm/min]
p9360	SI Motion STO shutdown velocity (Motor Module) / SI Mtn IL v_sh MM		
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [mm/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6000.00 [mm/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [mm/min]
p9360	SI Motion pulse suppression shutdown speed (Motor Module) / SI Mtn IL n_sh MM		
SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6000.00 [rpm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [rpm]
p9362[0...1]	SI Motion SLP stop response (Motor Module) / SI mtn SLP stop MM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 14	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2

p9363[0...3] HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SLS stop response (Motor Module) / SI Mtn SLS Stop MM Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 14	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2
p9364 HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SDI tolerance (Motor Module) / SI Mtn SDI tol MM Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.001 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 360.000 [mm]	Access level: 3 Function plan: 2824 Unit selection: - Expert list: 1 Default: 12.000 [mm]
p9364 SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	SI Motion SDI tolerance (Motor Module) / SI Mtn SDI tol MM Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.001 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 360.000 [°]	Access level: 3 Function plan: 2824 Unit selection: - Expert list: 1 Default: 12.000 [°]
p9365 HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SDI delay time (Motor Module) / SI Mtn SDI t MM Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [µs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 600000000.00 [µs]	Access level: 3 Function plan: 2824 Unit selection: - Expert list: 1 Default: 100000.00 [µs]
p9366 HLA, HLA_DBSI	SI Motion SDI stop response (Motor Module) / SI Mtn SDI Stop MM Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 14	Access level: 3 Function plan: 2824 Unit selection: - Expert list: 1 Default: 1
p9366 SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SDI stop response (Motor Module) / SI Mtn SDI Stop MM Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 14	Access level: 3 Function plan: 2824 Unit selection: - Expert list: 1 Default: 1

p9367	SI Motion switchover velocity to SOS/SLS level (MM) / SI Mtn v_SOS/SG MM		
HLA_DBSI, SERVO_DBSI	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [mm/min]	1000.00 [mm/min]	0.00 [mm/min]

p9367	SI Motion switchover velocity to SOS/SLS level (MM) / SI Mtn v_SOS/SG MM		
SERVO_DBSI (Safety rot)	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [rpm]	1000.00 [rpm]	0.00 [rpm]

p9368	SI Motion SAM/SBR velocity limit (Motor Module) / SI Mtn SAM v_limMM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [mm/min]	1000.00 [mm/min]	0.00 [mm/min]

p9368	SI Motion SAM/SBR velocity limit (Motor Module) / SI Mtn SAM v_limMM		
SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [rpm]	1000.00 [rpm]	0.00 [rpm]

p9369	SI Motion transition time to SOS/SLS level after standstill (MM) / SI Mtn t SOS/SG MM		
HLA_DBSI, SERVO_DBSI	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [μs]	10000000.00 [μs]	100000.00 [μs]

p9370	SI Motion acceptance test mode (Motor Module) / SI Mtn acc_mod MM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0000 hex	00AC hex	0000 hex

r9371	SI Motion acceptance test status (Motor Module) / SI Mtn acc_stat MM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 00AC hex	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p9374	SI Motion safe position scaling (Motor Module) / SI mtn SP scal MM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Integer32 P group: Safety Integrated Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1000
p9377	SI Motion SLP delay time (Motor Module) / SI mtn SLP t MM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [µs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 600000000.00 [µs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [µs]
p9380	SI Motion stop response delay bus failure (Motor Module) / SI Mtn t to IL MM		
HLA_840, SERVO_840	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [µs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 800000.00 [µs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [µs]
p9380	SI Motion stop response delay bus failure (Motor Module) / SI Mtn t to IL MM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [µs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 800000.00 [µs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [µs]
p9381	SI Motion brake ramp reference value (Motor Module) / SI Mtn ramp ref MM		
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 600.0000 [mm/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 240000.0000 [mm/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1500.0000 [mm/min]

p9381	SI Motion brake ramp reference value (Motor Module) / SI Mtn ramp ref MM		
SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 600.0000 [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 240000.0000 [rpm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1500.0000 [rpm]
p9382	SI Motion brake ramp delay time (Motor Module) / SI Mtn rp t_del MM		
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 10000.00 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 99000000.00 [μs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 250000.00 [μs]
p9383	SI Motion brake ramp monitoring time (Motor Module) / SI Mtn rp t_mon MM		
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 500.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3600000.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 10000.00 [ms]
p9385	SI Motion actual value sensing sensorless fault tolerance (MM) / ActVal sl tol MM		
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Integer32 P group: Safety Integrated Not for motor type: - Min: -1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -1
p9386	SI Motion actual value sensing sensorless delay time (MM) / ActVal sl t_del MM		
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 5.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100.00 [ms]
p9387	SI Motion actual value sensing sensorless filter time (MM) / Actv sl t_filt MM		
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100000.00 [μs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 25000.00 [μs]

p9388 SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion actual value sensing sensorless minimum current (MM) / ActVal sl l_min MM Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 10.00 [%]
p9389 SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion actual value sensing sensorless accel. limit (MM) / ActVal sl a_lim MM Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 10.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3300.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100.00 [%]
r9390[0...3] HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion version safety motion monitoring (Motor Module) / SI Mtn Version MM Changeable: - Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9398[0...1] HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion actual checksum SI parameters (Motor Module) / SI Mtn act CRC MM Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p9399[0...1] HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion reference checksum SI parameters (Motor Module) / SI Mtn setp CRC MM Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 hex
r9406[0...19] All objects	PS file parameter number parameter not transferred / PS par_no n transf Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: -

r9407[0...19]	PS file parameter index parameter not transferred / PS parameter index		
All objects	Changeable: -	Calculation: -	Access level: 1
	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-
r9408[0...19]	PS file fault code parameter not transferred / PS fault code		
All objects	Changeable: -	Calculation: -	Access level: 1
	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-
r9409	Number of parameters to be saved / Qty par to save		
All objects	Changeable: -	Calculation: -	Access level: 4
	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-
r9450[0...29]	Reference value change parameter with unsuccessful calculation / Ref_chg par n poss		
A_INF, A_INF_840, B_INF, B_INF_840, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: -	Calculation: -	Access level: 2
	Data type: Unsigned32	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-
r9451[0...29]	Units changeover adapted parameters / Unit_chngov par		
A_INF, A_INF_840, B_INF, B_INF_840, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TM41, VECTOR, VECTOR_AC	Changeable: -	Calculation: -	Access level: 1
	Data type: Unsigned32	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-

r9481	Number of BICO interconnections / BICO count		
A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_LINK, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41, TM54F_MA, TM54F_SL, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r9482[0...n]	BICO interconnections BI/CI parameters / BICO BI/CI par		
A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_LINK, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41, TM54F_MA, TM54F_SL, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: r9481 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -

r9483[0...n]			
A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_LINK, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41, TM54F_MA, TM54F_SL, VECTOR, VECTOR_AC	BICO interconnections BO/CO parameters / BICO BO/CO par		
	Changeable: - Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: r9481 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
p9484			
A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_LINK, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41, TM54F_MA, TM54F_SL, VECTOR, VECTOR_AC	BICO interconnections search signal source / BICO S_src srch		
	Changeable: T, U Data type: Unsigned32 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0

r9485	BICO interconnections signal source search count / BICO S_src srchQty		
A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_LINK, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41, TM54F_MA, TM54F_SL, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r9486	BICO interconnections signal source search first index / BICO S_src srchIdx		
A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_LINK, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41, TM54F_MA, TM54F_SL, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r9490	Number of BICO interconnections to other drives / Qty BICO to drive		
All objects	Changeable: - Data type: Unsigned16 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r9491[0...9]	BI/CI of BICO interconnections to other drives / BI/CI to drive		
All objects	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned32	Dynamic index: -	Function plan: -
	P group: Commands	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-
r9492[0...9]	BO/CO of BICO interconnections to other drives / BO/CO to drive		
All objects	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned32	Dynamic index: -	Function plan: -
	P group: Commands	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-
p9493[0...9]	Reset BICO interconnections to other drives / Reset BICO to drv		
All objects	Changeable: T	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	15	15
p9495	BICO behavior for deactivated drive objects / Behav for deact DO		
A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_LINK, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41, VECTOR, VECTOR_AC	Changeable: T	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	2	0

p9496	BICO behavior when activating drive objects / Behav when act DO		
A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_LINK, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41, VECTOR, VECTOR_AC	Changeable: T Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p9497	BICO interconnections to deactivated drive objects number / Interconn obj qty		
A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_LINK, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41, VECTOR, VECTOR_AC	Changeable: T Data type: Unsigned16 P group: Commands Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p9498[0...29]	BICO BI/CI parameters to deactivated drive objects / BI/CI to deact obj		
A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_LINK, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41, VECTOR, VECTOR_AC	Changeable: T Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p9499[0...29]	BICO BO/CO parameters to deactivated drive objects / BO/CO to deact obj		
A_INF, A_INF_840, B_INF, B_INF_840, CU_I_840, CU_LINK, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, ENC, ENC_840, HLA, HLA_840, HLA_DBSI, R_INF, S_INF, S_INF_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, TB30, TM120, TM15, TM150, TM15DI_DO, TM17, TM31, TM41, VECTOR, VECTOR_AC	Changeable: T Data type: Unsigned32 P group: Commands Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p9500	SI Motion monitoring clock cycle (Control Unit) / SI Mtn clock CU		
HLA_840, SERVO_840	Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.50000 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 25.00000 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 12.00000 [ms]

p9500	SI Motion monitoring clock cycle (Control Unit) / SI Mtn clock CU		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.50000 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 25.00000 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 12.00000 [ms]
p9501	SI Motion enable safety functions (Control Unit) / SI Mtn enable CU		
HLA_840, SERVO_840	Changeable: T, U Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
p9501	SI Motion enable safety functions (Control Unit) / SI Mtn enable CU		
SERVO_AC, VECTOR_AC	Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
p9501	SI Motion enable safety functions (Control Unit) / SI Mtn enable CU		
HLA, HLA_DBSI, SERVO, SERVO_DBSI, VECTOR	Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
p9502	SI Motion axis type (Control Unit) / SI Mtn ax type CU		
HLA_840, SERVO_840	Changeable: T, U Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p9502	SI Motion axis type (Control Unit) / SI Mtn ax type CU		
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p9503	SI Motion SCA (SN) enable (Control Unit) / SI Mtn SCA enab		
HLA_840, SERVO_840	Changeable: T, U Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
p9503	SI Motion SCA (SN) enable (Control Unit) / SI Mtn SCA enab		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
p9505	SI Motion SCA (SN) modulo value (Control Unit) / SI Mtn SCA modulo		
HLA_840, SERVO_840	Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 737280 [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0 [°]
p9505	SI Motion SP modulo value (Control Unit) / SI mtn SP mod CU		
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 737280 [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0 [°]
p9506	SI Motion function specification (Control Unit) / SI Mtn fct_spc CU		
HLA, HLA_DBSI	Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p9506 SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion function specification (Control Unit) / SI Mtn fct_spc CU Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p9507 HLA	SI Motion function specification (Control Unit) / SI Mtn config CU Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 bin
p9507 HLA_DBSI	SI Motion function specification (Control Unit) / SI Mtn config CU Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0010 bin
p9507 SERVO_AC, VECTOR_AC	SI Motion function specification (Control Unit) / SI Mtn config CU Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 bin
p9507 SERVO_DBSI	SI Motion function specification (Control Unit) / SI Mtn config CU Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0010 bin
p9507 SERVO, VECTOR	SI Motion function specification (Control Unit) / SI Mtn config CU Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 bin

p9509	SI Motion behavior during pulse suppression (Control Unit) / SI Mtn behav IL CU		
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 1111 1111 bin

p9510	SI Motion clock-cycle synchronous PROFIBUS master / SI Mtn sync master		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0

p9511	SI Motion actual value sensing cycle clock (Control Unit) / SI Mtn act clk CU		
HLA, HLA_DBSI	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00000 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 25.00000 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00000 [ms]

p9511	SI Motion actual value sensing cycle clock (Control Unit) / SI Mtn act clk CU		
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00000 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 25.00000 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00000 [ms]

p9512	Select SI Motion safety functions without selection (CU) / SI Mtn w/o sel CU		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0001 0000 bin

p9513	SI Motion non safety-relevant measuring steps POS1 (CU) / nsrPOS1		
HLA_840, SERVO_840	Changeable: T, U Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 22000

p9513	SI Motion non safety-relevant measuring steps POS1 (CU) / nsrPOS1		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 22000
p9514	SI Motion absolute encoder linear measuring steps (CU) / EncLinMeasStep CU		
HLA_840, SERVO_840	Changeable: T, U Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 0 [nm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4294967295 [nm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100 [nm]
p9514	SI Motion absolute encoder linear measuring steps (CU) / EncLinMeasStep CU		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 0 [nm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4294967295 [nm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100 [nm]
p9515	SI Motion encoder coarse position value config (Control Unit) / SI Mtn s config CU		
HLA_840, SERVO_840	Changeable: T, U Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
p9515	SI Motion encoder coarse position value config (Control Unit) / SI Mtn s config CU		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 0000 0000 0000 0000 bin
p9516	SI Motion encoder configuration safety functions (Control Unit) / SI Mtn enc_cfg CU		
HLA, HLA_DBSI	Changeable: C2(95) Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0001 bin

p9516 SI Motion encoder configuration safety functions (Control Unit) / SI Mtn enc_cfg CU

HLA_840, SERVO_840	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0000 0000 bin

p9516 SI Motion encoder configuration safety functions (Control Unit) / SI Mtn enc_cfg CU

SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0000 0000 bin

p9517 SI Motion linear encoder grid division (Control Unit) / SI Mtn grid CU

HLA_840, SERVO_840	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [nm]	250000000.00 [nm]	10000.00 [nm]

p9517 SI Motion linear encoder grid division (Control Unit) / SI Mtn grid CU

HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [nm]	250000000.00 [nm]	10000.00 [nm]

p9518 SI Motion encoder pulses per revolution (Control Unit) / SI Mtn puls/rev CU

HLA_840, SERVO_840	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Unsigned32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	16777215	2048

p9518 SI Motion encoder pulses per revolution (Control Unit) / SI Mtn puls/rev CU

HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Unsigned32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	16777215	2048

p9519	SI Motion fine resolution G1_XIST1 (Control Unit) / SI Mtn G1_XIST1 CU		
HLA_840, SERVO_840	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Unsigned32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	2	18	11

p9519	SI Motion fine resolution G1_XIST1 (Control Unit) / SI Mtn G1_XIST1 CU		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Unsigned32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	2	18	11

p9520	SI Motion spindle pitch (Control Unit) / SI Mtn Sp_pitch CU		
HLA_840, SERVO_840	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.1000 [mm]	8388.0000 [mm]	10.0000 [mm]

p9520	SI Motion spindle pitch (Control Unit) / SI Mtn Sp_pitch CU		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.1000 [mm]	8388.0000 [mm]	10.0000 [mm]

p9521[0...7]	SI Motion gearbox encoder/load denominator (Control Unit) / SI Mtn gear den CU		
HLA, HLA_DBSI	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Unsigned32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	1	2147000000	1

p9521[0...7]	SI Motion gearbox encoder/load denominator (Control Unit) / SI Mtn gear den CU		
HLA_840, SERVO_840	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Unsigned32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	1	2147000000	1

p9521[0...7] SI Motion gearbox enc (motor)/load denominator (Control Unit) / SI Mtn gear den CU

SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147000000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1

p9522[0...7] SI Motion gearbox encoder/load numerator (Control Unit) / SI Mtn gear num CU

HLA, HLA_DBSI	Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147000000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1

p9522[0...7] SI Motion gearbox encoder/load numerator (Control Unit) / SI Mtn gear num CU

HLA_840, SERVO_840	Changeable: T, U Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147000000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1

p9522[0...7] SI Motion gearbox encoder (motor)/load numerator (Control Unit) / SI Mtn gear num CU

SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147000000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1

p9523 SI Motion redundant coarse pos. value valid bits (Control Unit) / Valid bits CU

HLA_840, SERVO_840	Changeable: T, U Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 16	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 9

p9523 SI Motion redundant coarse pos. value valid bits (Control Unit) / Valid bits CU

HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 16	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 9

p9524 **SI Motion Redundant coarse pos. value fine resolution bits (CU) / SI Mtn fine bit CU**

HLA_840, SERVO_840	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-16	16	-2

p9524 **SI Motion Redundant coarse pos. value fine resolution bits (CU) / SI Mtn fine bit CU**

HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-16	16	-2

p9525 **SI Motion Redundant coarse pos. value relevant bits (CU) / Relevant bits CU**

HLA_840, SERVO_840	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	16	16

p9525 **SI Motion Redundant coarse pos. value relevant bits (CU) / Relevant bits CU**

HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	16	16

p9526 **SI Motion encoder assignment second channel / SI Mtn enc chan 2**

HLA, HLA_DBSI	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Unsigned32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	1	3	2

p9526 **SI Motion encoder assignment second channel / SI Mtn enc chan 2**

HLA_840, SERVO_840	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Unsigned32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	1	3	1

p9526	SI Motion encoder assignment second channel / SI Mtn enc chan 2		
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
p9529	SI Motion Gx_XIST1 coarse pos. safe most significant bit (CU) / Gx_XIST1 MSB CU		
HLA_840, SERVO_840	Changeable: T, U Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 31	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 14
p9529	SI Motion Gx_XIST1 coarse pos. safe most significant bit (CU) / Gx_XIST1 MSB CU		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 31	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 14
p9530	SI Motion standstill tolerance (Control Unit) / SI Mtn standst_tol		
HLA_840, SERVO_840	Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.000 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.000 [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1.000 [mm]
p9530	SI Motion standstill tolerance (Control Unit) / SI Mtn standst_tol		
SERVO_840 (Safety rot)	Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.000 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.000 [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1.000 [°]
p9530	SI Motion standstill tolerance (Control Unit) / SI Mtn standst_tol		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.000 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.000 [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1.000 [mm]

p9530 SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	SI Motion standstill tolerance (Control Unit) / SI Mtn standst_tol Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.000 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.000 [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1.000 [°]
p9531[0...3] HLA_840, SERVO_840	SI Motion SLS (SG) limit values (Control Unit) / SI Mtn SLS lim CU Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [mm/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000000.00 [mm/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2000.00 [mm/min]
p9531[0...3] SERVO_840 (Safety rot)	SI Motion SLS (SG) limit values (Control Unit) / SI Mtn SLS lim CU Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000000.00 [rpm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2000.00 [rpm]
p9531[0...3] HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SLS (SG) limit values (Control Unit) / SI Mtn SLS lim CU Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [mm/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000000.00 [mm/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2000.00 [mm/min]
p9531[0...3] SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	SI Motion SLS (SG) limit values (Control Unit) / SI Mtn SLS lim CU Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000000.00 [rpm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2000.00 [rpm]
p9532[0...15] HLA_840, SERVO_840	SI Motion SLS (SG) override factor (Control Unit) / SI Mtn SLS over CU Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.000 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.000 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100.000 [%]

p9532[0...15] HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SLS (SG) override factor (Control Unit) / SI Mtn SLS over CU Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.000 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.000 [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 100.000 [%]
p9533 HLA, HLA_840, HLA_DBSI	SI Motion SLS setpoint velocity limiting (Control Unit) / SI Mtn SLS set_lim Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.000 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.000 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 80.000 [%]
p9533 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SLS setpoint velocity limiting (Control Unit) / SI Mtn SLS set_lim Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.000 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.000 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 80.000 [%]
p9534[0...1] HLA_840, SERVO_840	SI Motion SLP (SE) upper limit values (Control Unit) / SI Mtn SLP up lim Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: -2147000.000 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147000.000 [mm]	Access level: 3 Function plan: 2822 Unit selection: - Expert list: 1 Default: 100000.000 [mm]
p9534[0...1] SERVO_840 (Safety rot)	SI Motion SLP (SE) upper limit values (Control Unit) / SI Mtn SLP up lim Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: -2147000.000 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147000.000 [°]	Access level: 3 Function plan: 2822 Unit selection: - Expert list: 1 Default: 100000.000 [°]
p9534[0...1] HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SLP (SE) upper limit values (Control Unit) / SI Mtn SLP up lim Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: -2147000.000 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147000.000 [mm]	Access level: 3 Function plan: 2822 Unit selection: - Expert list: 1 Default: 100000.000 [mm]

p9534[0...1]	SI Motion SLP (SE) upper limit values (Control Unit) / SI Mtn SLP up lim		
SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: -2147000.000 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147000.000 [°]	Access level: 3 Function plan: 2822 Unit selection: - Expert list: 1 Default: 100000.000 [°]

p9535[0...1]	SI Motion SLP (SE) lower limit values (Control Unit) / SI Mtn SLP low lim		
HLA_840, SERVO_840	Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: -2147000.000 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147000.000 [mm]	Access level: 3 Function plan: 2822 Unit selection: - Expert list: 1 Default: -100000.000 [mm]

p9535[0...1]	SI Motion SLP (SE) lower limit values (Control Unit) / SI Mtn SLP low lim		
SERVO_840 (Safety rot)	Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: -2147000.000 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147000.000 [°]	Access level: 3 Function plan: 2822 Unit selection: - Expert list: 1 Default: -100000.000 [°]

p9535[0...1]	SI Motion SLP (SE) lower limit values (Control Unit) / SI Mtn SLP low lim		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: -2147000.000 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147000.000 [mm]	Access level: 3 Function plan: 2822 Unit selection: - Expert list: 1 Default: -100000.000 [mm]

p9535[0...1]	SI Motion SLP (SE) lower limit values (Control Unit) / SI Mtn SLP low lim		
SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: -2147000.000 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147000.000 [°]	Access level: 3 Function plan: 2822 Unit selection: - Expert list: 1 Default: -100000.000 [°]

p9536[0...29]	SI Motion SCA (SN) plus cam position (Control Unit) / SI Mtn SCA+		
HLA_840, SERVO_840	Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: -2147000.000 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147000.000 [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 10.000 [mm]

p9536[0...29]	SI Motion SCA (SN) plus cam position (Control Unit) / SI Mtn SCA+		
SERVO_840 (Safety rot)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-2147000.000 [°]	2147000.000 [°]	10.000 [°]

p9536[0...29]	SI Motion SCA (SN) plus cam position (Control Unit) / SI Mtn SCA+		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-2147000.000 [mm]	2147000.000 [mm]	10.000 [mm]

p9536[0...29]	SI Motion SCA (SN) plus cam position (Control Unit) / SI Mtn SCA+		
SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-2147000.000 [°]	2147000.000 [°]	10.000 [°]

p9537[0...29]	SI Motion SCA (SN) plus cam position (Control Unit) / SI Mtn SCA-		
HLA_840, SERVO_840	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-2147000.000 [mm]	2147000.000 [mm]	-10.000 [mm]

p9537[0...29]	SI Motion SCA (SN) plus cam position (Control Unit) / SI Mtn SCA-		
SERVO_840 (Safety rot)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-2147000.000 [°]	2147000.000 [°]	-10.000 [°]

p9537[0...29]	SI Motion SCA (SN) plus cam position (Control Unit) / SI Mtn SCA-		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-2147000.000 [mm]	2147000.000 [mm]	-10.000 [mm]

p9537[0...29]	SI Motion SCA (SN) plus cam position (Control Unit) / SI Mtn SCA-		
SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: -2147000.000 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2147000.000 [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -10.000 [°]

p9538[0...29]	SI Motion SCA (SN) cam track assignment (Control Unit) / SI Mtn SCA assign.		
HLA_840, SERVO_840	Changeable: T, U Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 100	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 414	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: [0] 100 [1] 101 [2] 102 [3] 103 [4] 104 [5] 105 [6] 106 [7] 107 [8] 108 [9] 109 [10] 110 [11] 111 [12] 112 [13] 113 [14] 114 [15] 200 [16] 201 [17] 202 [18] 203 [19] 204 [20] 205 [21] 206 [22] 207 [23] 208 [24] 209 [25] 210 [26] 211 [27] 212 [28] 213 [29] 214

p9538[0...29] SI Motion SCA (SN) cam track assignment (Control Unit) / SI Mtn SCA assign.SERVO, SERVO_AC,
SERVO_DBSI,
VECTOR,
VECTOR_AC**Changeable:** T, U
Data type: Unsigned32
P group: Safety Integrated
Not for motor type: -
Min:
100**Calculation:** -
Dynamic index: -
Unit group: -
Scaling: -
Max:
414**Access level:** 4
Function plan: -
Unit selection: -
Expert list: 1
Default:
[0] 100
[1] 101
[2] 102
[3] 103
[4] 104
[5] 105
[6] 106
[7] 107
[8] 108
[9] 109
[10] 110
[11] 111
[12] 112
[13] 113
[14] 114
[15] 200
[16] 201
[17] 202
[18] 203
[19] 204
[20] 205
[21] 206
[22] 207
[23] 208
[24] 209
[25] 210
[26] 211
[27] 212
[28] 213
[29] 214

p9539[0...7] SI Motion gearbox direction of rotation reversal (Control Unit) / SI Mtn grbx rev CU

HLA_840, SERVO_840

Changeable: T, U
Data type: Integer16
P group: Safety Integrated
Not for motor type: -
Min:
0**Calculation:** -
Dynamic index: -
Unit group: -
Scaling: -
Max:
1**Access level:** 3
Function plan: -
Unit selection: -
Expert list: 1
Default:
0

p9539[0...7] HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion gearbox direction of rotation reversal (Control Unit) / SI Mtn grbx rev CU Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p9540 HLA_840, SERVO_840	SI Motion SCA (SN) tolerance (Control Unit) / SI Mtn SCA tol CU Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0010 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10.0000 [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.1000 [mm]
p9540 SERVO_840 (Safety rot)	SI Motion SCA (SN) tolerance (Control Unit) / SI Mtn SCA tol CU Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0010 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10.0000 [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.1000 [°]
p9540 HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SCA (SN) tolerance (Control Unit) / SI Mtn SCA tol CU Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0010 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10.0000 [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.1000 [mm]
p9540 SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	SI Motion SCA (SN) tolerance (Control Unit) / SI Mtn SCA tol CU Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0010 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10.0000 [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.1000 [°]
p9541 HLA_840, SERVO_840	SI Motion encoder comparison algorithm (CU) / Enc comp algo Changeable: T, U Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 255

p9541	SI Motion encoder comparison algorithm (CU) / Enc comp algo		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 255
p9542	SI Motion act val comparison tol (crosswise) (Control Unit) / SI Mtn act tol CU		
HLA, HLA_DBSI	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0010 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 360.0000 [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.1000 [mm]
p9542	SI Motion act val comparison tol (crosswise) (Control Unit) / SI Mtn act tol CU		
HLA_840, SERVO_840	Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0010 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 360.0000 [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.1000 [mm]
p9542	SI Motion act val comparison tol (crosswise) (Control Unit) / SI Mtn act tol CU		
SERVO_840 (Safety rot)	Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0010 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 360.0000 [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.1000 [°]
p9542	SI Motion act val comparison tol (crosswise) (Control Unit) / SI Mtn act tol CU		
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0010 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 360.0000 [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.1000 [mm]
p9542	SI Motion act val comparison tol (crosswise) (Control Unit) / SI Mtn act tol CU		
SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0010 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 360.0000 [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.1000 [°]

p9543	SI Motion gearbox switching position tolerance factor (CU) / SI Mtn grbx tol CU		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Integer32 P group: Safety Integrated Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
p9544	SI Motion actual value comparison tolerance (referencing) (CU) / SI Mtn ref tol		
HLA_840, SERVO_840	Changeable: C2(95), T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0000 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 36.0000 [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0100 [mm]
p9544	SI Motion actual value comparison tolerance (referencing) (CU) / SI Mtn ref tol		
SERVO_840 (Safety rot)	Changeable: C2(95), T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0000 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 36.0000 [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0100 [°]
p9544	SI Motion actual value comparison tolerance (referencing) (CU) / SI Mtn ref tol		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0000 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 36.0000 [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0100 [mm]
p9544	SI Motion actual value comparison tolerance (referencing) (CU) / SI Mtn ref tol		
SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0000 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 36.0000 [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.0100 [°]
p9545	SI Motion SSM (SGA n < nx) filter time (Control Unit) / SI Mtn SSM filt CU		
HLA_840, SERVO_840	Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 500.00 [ms]	Access level: 3 Function plan: 2823 Unit selection: - Expert list: 1 Default: 0.00 [ms]

p9545	SI Motion SSM (SGA n < nx) filter time (Control Unit) / SI Mtn SSM filt CU		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 500.00 [ms]	Access level: 3 Function plan: 2823 Unit selection: - Expert list: 1 Default: 0.00 [ms]

p9546	SI Motion SSM (SGA n < nx) velocity limit (CU) / SI Mtn SSM v_limCU		
HLA_840, SERVO_840	Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [mm/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000000.00 [mm/min]	Access level: 3 Function plan: 2823 Unit selection: - Expert list: 1 Default: 20.00 [mm/min]

p9546	SI Motion SSM (SGA n < nx) velocity limit (CU) / SI Mtn SSM v_limCU		
SERVO_840 (Safety rot)	Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000000.00 [rpm]	Access level: 3 Function plan: 2823 Unit selection: - Expert list: 1 Default: 20.00 [rpm]

p9546	SI Motion SSM (SGA n < nx) velocity limit (CU) / SI Mtn SSM v_limCU		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [mm/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000000.00 [mm/min]	Access level: 3 Function plan: 2823 Unit selection: - Expert list: 1 Default: 20.00 [mm/min]

p9546	SI Motion SSM (SGA n < nx) velocity limit (CU) / SI Mtn SSM v_limCU		
SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000000.00 [rpm]	Access level: 3 Function plan: 2823 Unit selection: - Expert list: 1 Default: 20.00 [rpm]

p9547	SI Motion SSM (SGA n < nx) velocity hysteresis (CU) / SI Mtn SSM hyst CU		
HLA_840, SERVO_840	Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0010 [mm/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 500.0000 [mm/min]	Access level: 3 Function plan: 2823 Unit selection: - Expert list: 1 Default: 10.0000 [mm/min]

p9547 SERVO_840 (Safety rot)	SI Motion SSM (SGA n < nx) velocity hysteresis (CU) / SI Mtn SSM hyst CU Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0010 [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 500.0000 [rpm]	Access level: 3 Function plan: 2823 Unit selection: - Expert list: 1 Default: 10.0000 [rpm]
p9547 HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SSM (SGA n < nx) velocity hysteresis (CU) / SI Mtn SSM hyst CU Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0010 [mm/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 500.0000 [mm/min]	Access level: 3 Function plan: 2823 Unit selection: - Expert list: 1 Default: 10.0000 [mm/min]
p9547 SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	SI Motion SSM (SGA n < nx) velocity hysteresis (CU) / SI Mtn SSM hyst CU Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.0010 [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 500.0000 [rpm]	Access level: 3 Function plan: 2823 Unit selection: - Expert list: 1 Default: 10.0000 [rpm]
p9548 HLA_840, SERVO_840	SI Motion SAM actual velocity tolerance (Control Unit) / SI Mtn SAM tol CU Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [mm/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 120000.00 [mm/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 300.00 [mm/min]
p9548 SERVO_840 (Safety rot)	SI Motion SAM actual velocity tolerance (Control Unit) / SI Mtn SAM tol CU Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 120000.00 [rpm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 300.00 [rpm]
p9548 HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SAM actual velocity tolerance (Control Unit) / SI Mtn SAM tol CU Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [mm/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 120000.00 [mm/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 300.00 [mm/min]

p9548	SI Motion SAM actual velocity tolerance (Control Unit) / SI Mtn SAM tol CU		
SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 120000.00 [rpm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 300.00 [rpm]

p9549	SI Motion slip velocity tolerance (Control Unit) / SI Mtn slip tol		
HLA_840, SERVO_840	Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [mm/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6000.00 [mm/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 6.00 [mm/min]

p9549	SI Motion slip velocity tolerance (Control Unit) / SI Mtn slip tol		
SERVO_840 (Safety rot)	Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6000.00 [rpm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 6.00 [rpm]

p9549	SI Motion slip velocity tolerance (Control Unit) / SI Mtn slip tol		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [mm/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6000.00 [mm/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 6.00 [mm/min]

p9549	SI Motion slip velocity tolerance (Control Unit) / SI Mtn slip tol		
SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6000.00 [rpm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 6.00 [rpm]

p9550	SI Motion SGE changeover tolerance time (Control Unit) / SI Mtn SGE chg tol		
HLA_840, SERVO_840	Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 500.00 [ms]

p9550 HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SGE changeover tolerance time (Control Unit) / SI Mtn SGE chg tol Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000.00 [ms]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 500.00 [ms]
p9551 HLA_840, SERVO_840	SI Motion SLS(SG) changeover/SOS (SBH) delay time (CU) / SI SLS/SOS t CU Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 600000.00 [ms]	Access level: 3 Function plan: 2819, 2820 Unit selection: - Expert list: 1 Default: 100.00 [ms]
p9551 HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SLS(SG) changeover/SOS (SBH) delay time (CU) / SI SLS/SOS t CU Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 600000.00 [ms]	Access level: 3 Function plan: 2819, 2820 Unit selection: - Expert list: 1 Default: 100.00 [ms]
p9552 HLA_840, SERVO_840	SI Motion transition time STOP C to SOS (SBH) (Control Unit) / SI Mtn t C->SOS CU Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 600000.00 [ms]	Access level: 3 Function plan: 2819 Unit selection: - Expert list: 1 Default: 100.00 [ms]
p9552 HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion transition time STOP C to SOS (SBH) (Control Unit) / SI Mtn t C->SOS CU Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 600000.00 [ms]	Access level: 3 Function plan: 2819 Unit selection: - Expert list: 1 Default: 100.00 [ms]
p9553 HLA_840, SERVO_840	SI Motion transition time STOP D to SOS (SBH) (Control Unit) / SI Mtn t D->SOS CU Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 600000.00 [ms]	Access level: 3 Function plan: 2819 Unit selection: - Expert list: 1 Default: 100.00 [ms]

p9553	SI Motion transition time STOP D to SOS (SBH) (Control Unit) / SI Mtn t D->SOS CU		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 600000.00 [ms]	Access level: 3 Function plan: 2819 Unit selection: - Expert list: 1 Default: 100.00 [ms]

p9554	SI Motion transition time STOP E to SOS (SBH) (Control Unit) / SI Mtn t E->SOS CU		
HLA_840, SERVO_840	Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 600000.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100.00 [ms]

p9554	SI Motion transition time STOP E to SOS (SBH) (Control Unit) / SI Mtn t E->SOS CU		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 600000.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100.00 [ms]

p9555	SI Motion transition time STOP F to STOP B (Control Unit) / SI Mtn t F->B CU		
HLA_840, SERVO_840	Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 600000.00 [ms]	Access level: 3 Function plan: 2819 Unit selection: - Expert list: 1 Default: 0.00 [ms]

p9555	SI Motion transition time STOP F to STOP B (Control Unit) / SI Mtn t F->B CU		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 600000.00 [ms]	Access level: 3 Function plan: 2819 Unit selection: - Expert list: 1 Default: 0.00 [ms]

p9556	SI Motion STOP A delay time (Control Unit) / SI Mtn IL t_del CU		
HLA, HLA_DBSI	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3600000.00 [ms]	Access level: 3 Function plan: 2819 Unit selection: - Expert list: 1 Default: 100.00 [ms]

p9556 HLA_840, SERVO_840	SI Motion STOP A delay time (Control Unit) / SI Mtn IL t_del CU Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3600000.00 [ms]	Access level: 3 Function plan: 2819 Unit selection: - Expert list: 1 Default: 100.00 [ms]
p9556 SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion STOP A delay time (Control Unit) / SI Mtn IL t_del CU Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3600000.00 [ms]	Access level: 3 Function plan: 2819 Unit selection: - Expert list: 1 Default: 100.00 [ms]
p9557 HLA_840	SI Motion STO test time (Control Unit) / SI Mtn IL t_test Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 500.00 [ms]
p9557 HLA, HLA_DBSI	SI Motion STO test time (Control Unit) / SI Mtn IL t_test Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 500.00 [ms]
p9557 SERVO_840	SI Motion STO test time (Control Unit) / SI Mtn IL t_test Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100.00 [ms]
p9557 SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion STO test time (Control Unit) / SI Mtn IL t_test Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100.00 [ms]

p9558	SI Motion acceptance test mode time limit (Control Unit) / SI Mtn acc t CU		
HLA_840, SERVO_840	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	5000.00 [ms]	100000.00 [ms]	40000.00 [ms]

p9558	SI Motion acceptance test mode time limit (Control Unit) / SI Mtn acc t CU		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	5000.00 [ms]	100000.00 [ms]	40000.00 [ms]

p9559	SI Motion forced checking procedure timer (Control Unit) / SI Mtn dyn timer		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [h]	9000.00 [h]	8.00 [h]

p9560	SI Motion STO shutdown velocity (Control Unit) / SI Mtn IL v_shutCU		
HLA, HLA_DBSI	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [mm/min]	6000.00 [mm/min]	0.00 [mm/min]

p9560	SI Motion STO shutdown velocity (Control Unit) / SI Mtn IL v_shutCU		
HLA_840, SERVO_840	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [mm/min]	6000.00 [mm/min]	0.00 [mm/min]

p9560	SI Motion pulse suppression shutdown speed (Control Unit) / SI Mtn IL n_shutCU		
SERVO_840 (Safety rot)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [rpm]	6000.00 [rpm]	0.00 [rpm]

p9560 SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion STO shutdown velocity (Control Unit) / SI Mtn IL v_shutCU Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [mm/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6000.00 [mm/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [mm/min]
p9560 SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	SI Motion pulse suppression shutdown speed (Control Unit) / SI Mtn IL n_shutCU Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6000.00 [rpm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [rpm]
p9561 HLA_840, SERVO_840	SI Motion SLS (SG) stop response (Control Unit) / SI Mtn SLS resp Changeable: T, U Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 14	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 5
p9561 HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SLS (SG) stop response (Control Unit) / SI Mtn SLS resp Changeable: T, U Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 14	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 5
p9562[0...1] HLA_840, SERVO_840	SI Motion SLP (SE) stop response (Control Unit) / SI Mtn SLP Stop CU Changeable: C2(95), T, U Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 2	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2
p9562[0...1] HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SLP (SE) stop response (Control Unit) / SI Mtn SLP Stop CU Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 14	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2

p9563[0...3]	SI Motion SLS (SG)-specific stop response (Control Unit) / SI Mtn SLS stop CU		
HLA, HLA_DBSI	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	14	2

p9563[0...3]	SI Motion SLS (SG)-specific stop response (Control Unit) / SI Mtn SLS stop CU		
HLA_840, SERVO_840	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	14	2

p9563[0...3]	SI Motion SLS (SG)-specific stop response (Control Unit) / SI Mtn SLS stop CU		
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	14	2

p9564	SI Motion SDI tolerance (Control Unit) / SI Mtn SDI tol CU		
HLA_840, SERVO_840	Changeable: T, U	Calculation: -	Access level: 4
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 2824
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.001 [mm]	360.000 [mm]	12.000 [mm]

p9564	SI Motion SDI tolerance (Control Unit) / SI Mtn SDI tol CU		
SERVO_840 (Safety rot)	Changeable: T, U	Calculation: -	Access level: 4
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 2824
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.001 [°]	360.000 [°]	12.000 [°]

p9564	SI Motion SDI tolerance (Control Unit) / SI Mtn SDI tol CU		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 2824
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.001 [mm]	360.000 [mm]	12.000 [mm]

p9564 SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	SI Motion SDI tolerance (Control Unit) / SI Mtn SDI tol CU Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.001 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 360.000 [°]	Access level: 3 Function plan: 2824 Unit selection: - Expert list: 1 Default: 12.000 [°]
p9565 HLA_840, SERVO_840	SI Motion SDI delay time (Control Unit) / SI Mtn SDI t CU Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 600000.00 [ms]	Access level: 4 Function plan: 2824 Unit selection: - Expert list: 1 Default: 100.00 [ms]
p9565 HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SDI delay time (Control Unit) / SI Mtn SDI t CU Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 600000.00 [ms]	Access level: 3 Function plan: 2824 Unit selection: - Expert list: 1 Default: 100.00 [ms]
p9566 HLA, HLA_DBSI	SI Motion SDI stop response (Control Unit) / SI Mtn SDI Stop CU Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 14	Access level: 3 Function plan: 2824 Unit selection: - Expert list: 1 Default: 1
p9566 HLA_840, SERVO_840	SI Motion SDI stop response (Control Unit) / SI Mtn SDI Stop CU Changeable: T, U Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 14	Access level: 4 Function plan: 2824 Unit selection: - Expert list: 1 Default: 1
p9566 SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SDI stop response (Control Unit) / SI Mtn SDI Stop CU Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 14	Access level: 3 Function plan: 2824 Unit selection: - Expert list: 1 Default: 1

p9567	SI Motion switchover velocity to SOS/SLS level (CU) / SI Mtn v_SOS/SG CU		
HLA, HLA_DBSI, SERVO_DBSI	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [mm/min]	1000.00 [mm/min]	0.00 [mm/min]

p9567	SI Motion switchover velocity to SOS/SLS level (CU) / SI Mtn v_SOS/SG CU		
HLA_840, SERVO_840	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [mm/min]	1000.00 [mm/min]	0.00 [mm/min]

p9567	SI Motion switchover velocity to SOS/SLS level (CU) / SI Mtn v_SOS/SG CU		
SERVO_840 (Safety rot)	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [rpm]	1000.00 [rpm]	0.00 [rpm]

p9567	SI Motion switchover velocity to SOS/SLS level (CU) / SI Mtn v_SOS/SG CU		
SERVO_DBSI (Safety rot)	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [rpm]	1000.00 [rpm]	0.00 [rpm]

p9568	SI Motion SAM/SBR velocity limit (Control Unit) / SI Mtn SAM v_limCU		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [mm/min]	1000.00 [mm/min]	0.00 [mm/min]

p9568	SI Motion SAM/SBR velocity limit (Control Unit) / SI Mtn SAM v_limCU		
SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [rpm]	1000.00 [rpm]	0.00 [rpm]

p9569 **SI Motion transition time to SOS/SLS level after standstill (CU) / SI Mtn t SOS/SG CU**

HLA_840, SERVO_840	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [ms]	10000.00 [ms]	100.00 [ms]

p9569 **SI Motion transition time to SOS/SLS level after standstill (CU) / SI Mtn t SOS/SG CU**

HLA_DBSI, SERVO_DBSI	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [ms]	10000.00 [ms]	100.00 [ms]

p9570 **SI Motion acceptance test mode (Control Unit) / SI Mtn Acc_mode**

HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0000 hex	00AC hex	0000 hex

r9571 **SI Motion acceptance test status (Control Unit) / SI Mtn acc_status**

HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: -	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0000 hex	00AC hex	-

p9572 **SI Motion reference position (Control Unit) / SI mtn rel_pos**

HLA, HLA_DBSI	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-737280.000 [mm]	737280.000 [mm]	0.000 [mm]

p9572 **SI Motion reference position (Control Unit) / SI mtn rel_pos**

SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-737280.000 [mm]	737280.000 [mm]	0.000 [mm]

p9572 SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	SI Motion reference position (Control Unit) / SI mtn rel_pos Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: -737280.000 [°] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 737280.000 [°] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.000 [°]
p9573 HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion accept reference position (Control Unit) / SI mtn set_ref_pos Changeable: T, U Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0 Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 263 Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p9574 HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion safe position scaling (Control Unit) / SI mtn SP scal CU Changeable: C2(95) Data type: Integer32 P group: Safety Integrated Not for motor type: - Min: 1 Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100000 Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1000
p9575 HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion acceptance test SLP (SE) (Control Unit) / SI Mtn accept SLP Changeable: T, U Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0000 hex Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 00AC hex Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 hex
p9577 HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SLP delay time (Control Unit) / SI Mtn SLP t CU Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 600000.00 [ms] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [ms]
p9580 HLA_840, SERVO_840	SI Motion stop response delay bus failure (Control Unit) / SI Mtn t to IL CU Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 800.00 [ms] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [ms]

p9580 HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion stop response delay bus failure (Control Unit) / SI Mtn t to IL CU Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 800.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [ms]
p9581 SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion brake ramp reference value (Control Unit) / SI Mtn ramp ref CU Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 600.0000 [mm/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 240000.0000 [mm/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1500.0000 [mm/min]
p9581 SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	SI Motion brake ramp reference value (Control Unit) / SI Mtn ramp ref CU Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 600.0000 [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 240000.0000 [rpm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1500.0000 [rpm]
p9582 SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion brake ramp delay time (Control Unit) / SI Mtn rp t_del CU Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 10.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 99000.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 250.00 [ms]
p9583 SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion brake ramp monitoring time (Control Unit) / SI Mtn rp t_mon CU Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.50 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3600.00 [s]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 10.00 [s]
p9585 SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion actual value sensing sensorless fault tolerance (CU) / ActVal sl tol CU Changeable: C2(95) Data type: Integer32 P group: Safety Integrated Not for motor type: - Min: -1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -1

p9586	SI Motion actual value sensing sensorless delay time (CU) / ActVal sl t_del CU		
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	5.00 [ms]	1000.00 [ms]	100.00 [ms]
p9587	SI Motion actual value sensing sensorless filter time (CU) / Actv sl t_filt CU		
HLA_840, SERVO_840	Changeable: T, U	Calculation: -	Access level: 4
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [ms]	100.00 [ms]	25.00 [ms]
p9587	SI Motion actual value sensing sensorless filter time (CU) / Actv sl t_filt CU		
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [ms]	100.00 [ms]	25.00 [ms]
p9588	SI Motion actual value sensing sensorless minimum current (CU) / ActVal sl I_min CU		
HLA_840, SERVO_840	Changeable: T, U	Calculation: -	Access level: 4
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [%]	1000.00 [%]	10.00 [%]
p9588	SI Motion actual value sensing sensorless minimum current (CU) / ActVal sl I_min CU		
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [%]	1000.00 [%]	10.00 [%]
p9589	SI Motion act. value sensing sensorless acceleration limit (CU) / ActVal sl a_lim CU		
HLA_840, SERVO_840	Changeable: T, U	Calculation: -	Access level: 4
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	10.00 [%]	3300.00 [%]	100.00 [%]

p9589 SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion act. value sensing sensorless acceleration limit (CU) / ActVal sl a_lim CU Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 10.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3300.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 100.00 [%]
r9590[0...3] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion version safety motion monitoring (Control Unit) / SI Mtn version CU Changeable: - Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p9601 HLA, HLA_DBSI	SI enable functions integrated in the drive (Control Unit) / SI enable fct CU Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 bin
p9601 HLA_840, SERVO_840	SI enable functions integrated in the drive (Control Unit) / SI enable fct CU Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
p9601 SERVO_AC, VECTOR_AC	SI enable functions integrated in the drive (Control Unit) / SI enable fct CU Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 bin
p9601 SERVO, SERVO_DBSI, VECTOR	SI enable functions integrated in the drive (Control Unit) / SI enable fct CU Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 bin

p9602	SI enable Safe Brake Control (Control Unit) / SI enable SBC CU		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: 2814 Unit selection: - Expert list: 1 Default: 0
p9610	SI PROFIsafe address (Control Unit) / SI PROFIsafe CU		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65534	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p9611	SI PROFIsafe telegram selection (Control Unit) / SI Ps telegram CU		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 998	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 998
p9612	SI PROFIsafe failure response (Control Unit) / SI Ps fail CU		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p9620[0...7]	BI: SI signal source for STO (SH)/SS1 (Control Unit) / SI S_srcSTO/SS1 CU		
HLA, HLA_840, HLA_DBSI	Changeable: C2(95) Data type: Unsigned32 / Binary P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2810 Unit selection: - Expert list: 1 Default: 0
p9620[0...7]	BI: SI signal source for STO (SH)/SBC/SS1 (Control Unit) / SI S_srcSTO/SS1 CU		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned32 / Binary P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2810 Unit selection: - Expert list: 1 Default: 0

p9621	BI: SI Safe Brake Adapter signal source (Control Unit) / SI SBA S_src CU		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned32 / Binary P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2814 Unit selection: - Expert list: 1 Default: 0

p9622[0...1]	SI SBA relay delay times (Control Unit) / SI SBA relay t CU		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000.00 [ms]	Access level: 3 Function plan: 2814 Unit selection: - Expert list: 1 Default: [0] 100.00 [ms] [1] 65.00 [ms]

p9625[0...1]	SI HLA shutoff valve wait time (CU) / Shutoff valve t CU		
HLA, HLA_840, HLA_DBSI	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2000.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: [0] 250.00 [ms] [1] 250.00 [ms]

p9626	SI HLA shutoff valve feedback signal contact configuration (CU) / FS config CU		
HLA, HLA_840, HLA_DBSI	Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 5	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p9650	SI SGE changeover discrepancy time (Control Unit) / SI SGE chg t CU		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2000.00 [ms]	Access level: 3 Function plan: 2810 Unit selection: - Expert list: 1 Default: 500.00 [ms]

p9651 HLA, HLA_840, HLA_DBSI	SI STO/SS1 debounce time (Control Unit) / SI STO t_debou CU Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [ms]
p9651 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI STO/SBC/SS1 debounce time (Control Unit) / SI STO t_debou CU Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [ms]
p9652 HLA, HLA_DBSI	SI Safe Stop 1 delay time / SI Stop 1 t_del Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 300.00 [s]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [s]
p9652 HLA_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Safe Stop 1 delay time / SI Stop 1 t_del Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 300.00 [s]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [s]
p9653 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Safe Stop 1 drive-based braking response / SI SS1 drv resp Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p9658 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI transition time STOP F to STOP A (Control Unit) / SI STOP F->A CU Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 30000.00 [ms]	Access level: 3 Function plan: 2802 Unit selection: - Expert list: 1 Default: 0.00 [ms]

p9659 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI forced checking procedure timer / SI FCP Timer Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [h]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 9000.00 [h]	Access level: 3 Function plan: 2810 Unit selection: - Expert list: 1 Default: 8.00 [h]
r9660 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI forced checking procedure remaining time / SI FCP remain Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [h]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [h]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [h]
p9665[0...255] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motor Module parameter save / SI MM par save Changeable: T, U Data type: Unsigned8 P group: Safety Integrated Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 00FF hex	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0000 hex
p9670 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN, HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI module identification Control Unit / Module ID CU Changeable: T Data type: Unsigned32 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p9671[0...n] HLA, HLA_840, HLA_DBSI	SI module identifier Hydraulic Module / Module ID HM Changeable: C2(95), T Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p9671[0...n]	SI module identifier Motor Module / Module ID MM		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95), T Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: PDS, p0120 Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p9672	SI module identifier Power Module / Module ID PM		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95), T Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p9673	SI module identifier Sensor Module channel 1 / Module ID SM 1		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95), T Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p9674	SI module identifier Sensor Module channel 2 / Module ID SM 2		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95), T Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p9675	SI module identifier sensor channel 1 / Module ID sensor 1		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95), T Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p9676	SI module identifier sensor channel 2 / Module ID sensor 2		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95), T Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p9677[0...1]	SI Motion offset POS1 POS2 encoder / SI Mtn offset sens		
HLA_840, SERVO_840	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Unsigned32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	4294967295	0

p9677[0...1]	SI Motion offset POS1 POS2 encoder / SI Mtn offset sens		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Unsigned32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	4294967295	0

p9697	SI Motion bus failure STO/SH delay time (CU) / SI Mtn STO t CU		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [ms]	800.00 [ms]	0.00 [ms]

p9700	SI Motion copy function / SI Mtn copy fct		
HLA, HLA_DBSI	Changeable: C2(95), T, U	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0000 hex	00D0 hex	0000 hex

p9700	SI Motion copy function / SI Mtn copy fct		
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95), T, U	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0000 hex	00D0 hex	0000 hex

p9700	SI Motion copy function / SI Mtn copy fct		
TM54F_MA	Changeable: C2(95), T, U	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0000 hex	00CC hex	0000 hex

p9701	Acknowledge SI motion data change / Ackn SI Mtn dat		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95), T, U Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 00EC hex	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 hex
p9701	Acknowledge SI motion data change / Ackn SI Mtn dat		
TM54F_MA, TM54F_SL	Changeable: C2(95), T, U Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 00EC hex	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 hex
p9702	SI Acknowledge component replacement / Comp_replace ackn		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T, U Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 29	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
r9703.0...31	CO/BO: SI Motion SCA status signal (Control Unit) / SI Mtn SCA stat CU		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2840, 2905 Unit selection: - Expert list: 1 Default: -
p9705	BI: SI Motion: Test stop signal source / SI Mtn test stop		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned32 / Binary P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2837 Unit selection: - Expert list: 1 Default: 0
r9707[0...2]	CO: SI Motion diagnostics encoder position actual value GX_XIST1 / SI Mtn XIST1		
HLA_840, SERVO_840	Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r9707[0...2] HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: SI Motion diagnostics encoder position actual value GX_XIST1 / SI Mtn XIST1 Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9708[0...5] HLA_840, SERVO_840	SI Motion diagnostics safe position / SI mtn safe pos Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mm]	Access level: 3 Function plan: 2822, 2836 Unit selection: - Expert list: 1 Default: - [mm]
r9708[0...5] SERVO_840 (Safety rot)	SI Motion diagnostics safe position / SI mtn safe pos Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [°]	Access level: 3 Function plan: 2822, 2836 Unit selection: - Expert list: 1 Default: - [°]
r9708[0...5] HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion diagnostics safe position / SI mtn safe pos Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mm]	Access level: 3 Function plan: 2822, 2836 Unit selection: - Expert list: 1 Default: - [mm]
r9708[0...5] SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	SI Motion diagnostics safe position / SI mtn safe pos Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [°]	Access level: 3 Function plan: 2822, 2836 Unit selection: - Expert list: 1 Default: - [°]
r9710[0...1] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion diagnostics result list 1 / SI Mtn res_list 1 Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r9711[0...1] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion diagnostics result list 2 / SI Mtn res_list 2 Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9712 HLA, HLA_840, HLA_DBSI	CO: SI motion diagnostics position actual value on the actuator side / SI Mtn s_act act Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9712 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: SI Motion diagnostics position actual value motor side / SI Mtn s_act mot Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9713[0...5] HLA_840, SERVO_840	CO: SI Motion diagnostics position actual value load side / SI Mtn s_act load Changeable: - Data type: Integer32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9713[0...5] HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: SI Motion diagnostics position actual value load side / SI Mtn s_act load Changeable: - Data type: Integer32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9714[0...2] HLA, HLA_840, HLA_DBSI	CO: SI motion diagnostics velocity / SI Mtn diag v Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [mm/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mm/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [mm/min]

r9714[0...2] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: SI motion diagnostics velocity / SI Mtn diag v Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [mm/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mm/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [mm/min]
r9714[0...2] SERVO (Safety rot), SERVO_840 (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	CO: SI motion diagnostics velocity / SI Mtn diag v Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [rpm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [rpm]
r9718.23 SERVO_840	CO/BO: SI Motion control signals 1 / SI Mtn ctrl_sig 1 Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9718.23 HLA_840, SERVO_840 (Lin)	CO/BO: SI Motion control signals 1 / SI Mtn ctrl_sig 1 Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9718.23 HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO/BO: SI Motion control signals 1 / SI Mtn ctrl_sig 1 Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r9718.23 SERVO (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO/BO: SI Motion control signals 1 / SI Mtn ctrl_sig 1 Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -

r9719.0...31 HLA, HLA_DBSI	CO/BO: SI Motion control signals 2 / SI Mtn ctrl_sig 2 Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9719.0...31 HLA_840, SERVO_840	CO/BO: SI Motion control signals 2 / SI Mtn ctrl_sig 2 Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9719.0...31 SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO/BO: SI Motion control signals 2 / SI Mtn ctrl_sig 2 Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9720.0...28 HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO/BO: SI Motion control signals integrated in the drive / SI Mtn integ STW Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2840, 2905 Unit selection: - Expert list: 1 Default: -
r9721.0...15 HLA, HLA_DBSI	CO/BO: SI Motion status signals (Control Unit) / SI Mtn stat_sig CU Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9721.0...15 HLA_840, SERVO_840	CO/BO: SI Motion status signals / SI Mtn stat_sig Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r9721.0...15 SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO/BO: SI Motion status signals (Control Unit) / SI Mtn stat_sig CU Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9722.0...31 HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO/BO: SI Motion drive-integrated status signals (Control Unit) / SI Mtn int stat CU Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2840, 2905 Unit selection: - Expert list: 1 Default: -
r9722.0...31 SERVO (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO/BO: SI Motion drive-integrated status signals (Control Unit) / SI Mtn int stat CU Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2840, 2905 Unit selection: - Expert list: 1 Default: -
r9723.0...17 HLA, HLA_DBSI	CO/BO: SI Motion diagnostic signals integrated in the drive / SI Mtn integ diag Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9723.0...17 HLA_840, SERVO_840	CO/BO: SI Motion diagnostic signals integrated in the drive / SI Mtn integ diag Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9723.0...17 SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO/BO: SI Motion diagnostic signals integrated in the drive / SI Mtn integ diag Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r9724 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion crosswise comparison clock cycle / SI Mtn CDC clk cyc Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [ms]
r9725[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion diagnostics STOP F / SI Mtn Diag STOP F Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p9726 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion user agreement selection/de-selection / SI Mtn UserAgr sel Changeable: T, U Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 00AC hex	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 hex
r9727 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion user agreement inside the drive / SI Mtn UserAgr int Changeable: - Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2822 Unit selection: - Expert list: 1 Default: -
r9728[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion actual checksum SI parameters / SI Mtn act CRC Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p9729[0...2] HLA_840, SERVO_840	SI Motion reference checksum SI parameters / SI Mtn ref CRC Changeable: T, U Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 hex

p9729[0...2] HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion reference checksum SI parameters / SI Mtn ref CRC Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 hex
r9730 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion Safe maximum velocity / SI mtn safe v_Max Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [mm/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mm/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [mm/min]
r9730 SERVO (Safety rot), SERVO_840 (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	SI Motion Safe maximum velocity / SI mtn safe v_Max Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [rpm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [rpm]
r9731 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion safe position accuracy / SI Mtn pos acc Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [mm]
r9731 SERVO (Safety rot), SERVO_840 (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	SI Motion safe position accuracy / SI Mtn pos acc Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [°]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [°]
r9732[0...1] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion velocity resolution / SI Mtn v_res Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [mm/min]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mm/min]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [mm/min]

r9732[0...1] SERVO (Safety rot), SERVO_840 (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	SI Motion velocity resolution / SI Mtn v_res Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [rpm]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [rpm]
r9733[0...2] HLA, HLA_840, HLA_DBSI	CO: SI Motion setpoint speed limit effective / SI Mtn setp_lim Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 2820, 2824, 3630 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r9733[0...2] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO: SI Motion setpoint speed limit effective / SI Mtn setp_lim Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [rpm]	Calculation: - Dynamic index: - Unit group: 3_1 Scaling: p2000 Max: - [rpm]	Access level: 3 Function plan: 2820, 2824, 3630 Unit selection: p0505 Expert list: 1 Default: - [rpm]
r9733[0...2] SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	CO: SI Motion setpoint speed limit effective / SI Mtn setp_lim Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [m/min]	Calculation: - Dynamic index: - Unit group: 4_1 Scaling: p2000 Max: - [m/min]	Access level: 3 Function plan: 2820, 2824, 3630 Unit selection: p0505 Expert list: 1 Default: - [m/min]
r9734.0...15 HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO/BO: SI Safety Info Channel status word S_ZSW1B / SIC S_ZSW1B Changeable: - Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9735[0...1] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion diagnostics result list 3 / SI Mtn res_list 3 Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r9736[0...1] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion diagnostics result list 4 / SI Mtn res_list 4 Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9737[0...1] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion diagnostics result list 5 / SI Mtn res_list 5 Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9738[0...1] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion diagnostics result list 6 / SI Mtn res_list 6 Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9739[0...1] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion diagnostics result list 7 / SI Mtn res_list 7 Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p9740 HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion user agreement selection/de-selection MM / SI mtn UserAgr MM Changeable: T, U Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 00AC hex	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 hex
r9741 HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion user agreement inside the drive MM / SI Mtn UserAgr int Changeable: - Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2822 Unit selection: - Expert list: 1 Default: -

r9743.4...15	CO/BO: SI Safety Info Channel status word S_ZSW2B / SIC S_ZSW2B		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9744	SI message buffer changes, counter / SI msg_buffer chng		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9745[0...63]	SI components / SI comp		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned32 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9747[0...63]	SI message code / SI msg_code		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9748[0...63]	SI message time received in milliseconds / SI t_msg rcv ms		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned32 P group: Messages Not for motor type: - Min: - [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [ms]
r9749[0...63]	SI message value / SI msg_value		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Integer32 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r9750[0...63] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI diagnostic attributes / SI diag_attr Changeable: - Data type: Unsigned32 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p9752 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI message cases counter / SI msg_cases count Changeable: T, U Data type: Unsigned16 P group: Messages Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
r9753[0...63] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI message value for float values / SI msg_val float Changeable: - Data type: FloatingPoint32 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9754[0...63] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI message time received in days / SI t_msg rcv days Changeable: - Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9755[0...63] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI message time removed in milliseconds / SI t_msg rem ms Changeable: - Data type: Unsigned32 P group: Messages Not for motor type: - Min: - [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [ms]
r9756[0...63] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI message time removed in days / SI t_msg rem days Changeable: - Data type: Unsigned16 P group: Messages Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

p9761 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI password input / SI password inp Changeable: C1, T Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: 2800 Unit selection: - Expert list: 1 Default: 0000 hex
p9762 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI password new / SI password new Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: 2800 Unit selection: - Expert list: 1 Default: 0000 hex
p9763 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI password acknowledgment / SI ackn password Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: 2800 Unit selection: - Expert list: 1 Default: 0000 hex
r9765 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion forced check procedure remaining time (Control Unit) / SI Mtn dyn remain Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [h]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [h]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [h]
r9768[0...7] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI PROFIsafe receive control words (Control Unit) / SI Ps PZD rcv CU Changeable: - Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9769[0...7] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI PROFIsafe send status words (Control Unit) / SI Ps PZD send CU Changeable: - Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r9770[0...3]	SI version drive-integrated safety function (Control Unit) / SI version Drv CU		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2802 Unit selection: - Expert list: 1 Default: -

r9771	SI common functions (Control Unit) / SI common fct CU		
HLA, HLA_840, HLA_DBSI	Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2804 Unit selection: - Expert list: 1 Default: -

r9771	SI common functions (Control Unit) / SI common fct CU		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2804 Unit selection: - Expert list: 1 Default: -

r9772.0...23	CO/BO: SI status (Control Unit) / SI status CU		
HLA, HLA_840, HLA_DBSI	Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2804 Unit selection: - Expert list: 1 Default: -

r9772.0...23	CO/BO: SI status (Control Unit) / SI status CU		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2804 Unit selection: - Expert list: 1 Default: -

r9773.0...31	CO/BO: SI status (Control Unit + Hydraulic Module) / SI status CU+HM		
HLA, HLA_840, HLA_DBSI	Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2804 Unit selection: - Expert list: 1 Default: -

r9773.0...31 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO/BO: SI status (Control Unit + Motor Module) / SI status CU+MM Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2804 Unit selection: - Expert list: 1 Default: -
r9774.0...31 HLA, HLA_840, HLA_DBSI	CO/BO: SI status (group STO) / SI stat group STO Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2804 Unit selection: - Expert list: 1 Default: -
r9774.0...31 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO/BO: SI status (group STO) / SI stat group STO Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2804 Unit selection: - Expert list: 1 Default: -
r9776.0...3 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BO: SI diagnostics / SI diag Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9776.0...2 TM54F_MA	BO: SI diagnostics / SI diag Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9780 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI monitoring clock cycle (Control Unit) / SI monitor_clk CU Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [ms]	Access level: 3 Function plan: 2802 Unit selection: - Expert list: 1 Default: - [ms]

r9781[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	SI checksum to check changes (Control Unit) / SI chg chksm CU Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9782[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	SI time stamps to check changes (Control Unit) / SI chg t CU Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [h]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [h]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [h]
p9783 SERVO, SERVO_AC, SERVO_DBSI, VECTOR (n/M), VECTOR_AC (n/M)	SI Motion act. value sensing sensorless synchr. motor I_{inject} / Actv sl sync I_{inj} Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: -50.00 [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 0.00 [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -20.00 [%]
r9784[0...1] SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion diagnostics sensorless acceleration / Diag sl a Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [mm/s ²]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mm/s ²]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [mm/s ²]
r9784[0...1] SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	SI Motion diagnostics sensorless acceleration / Diag sl a Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [rev/s ²]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [rev/s ²]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [rev/s ²]
r9785[0...1] SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion diagnostics sensorless minimum current / Diag sl I_{min} Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [mA]	Calculation: - Dynamic index: - Unit group: 6_3 Scaling: - Max: - [mA]	Access level: 3 Function plan: - Unit selection: p0505 Expert list: 1 Default: - [mA]

r9786[0...2] SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion diagnostics sensorless angle / Diag sl angle Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [°] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [°] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [°]
r9787 SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion diagnostics sensorless velocity deviation / Diag sl v_dev Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [mm/min] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [mm/min] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [mm/min]
r9787 SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	SI Motion diagnostics sensorless velocity deviation / Diag sl v_dev Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [rpm] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [rpm] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [rpm]
r9793[0...9] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI diagnostics component replacement / Diag comp_replace Changeable: - Data type: Unsigned8 P group: Safety Integrated Not for motor type: - Min: - Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9794[0...19] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI crosswise comparison list (Control Unit) / SI CDC_list CU Changeable: - Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: - Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - Access level: 3 Function plan: 2802 Unit selection: - Expert list: 1 Default: -
r9795 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI diagnostics STOP F (Control Unit) / SI diag STOP F CU Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: - Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - Access level: 2 Function plan: 2802 Unit selection: - Expert list: 1 Default: -

r9798 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI actual checksum SI parameters (Control Unit) / SI act_checksum CU Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2800 Unit selection: - Expert list: 1 Default: -
p9799 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI reference checksum SI parameters (Control Unit) / SI set_checksum CU Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: 2800 Unit selection: - Expert list: 1 Default: 0000 hex
p9801 HLA, HLA_DBSI	SI enable functions integrated in the drive (Motor Module) / SI enable fct MM Changeable: C2(95) Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 bin
p9801 HLA_840, SERVO_840	SI enable functions integrated in the drive (Motor Module) / SI enable fct MM Changeable: C2(95) Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
p9801 SERVO_AC, VECTOR_AC	SI enable functions integrated in the drive (Motor Module) / SI enable fct MM Changeable: C2(95) Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 bin
p9801 SERVO, SERVO_DBSI, VECTOR	SI enable functions integrated in the drive (Motor Module) / SI enable fct MM Changeable: C2(95) Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 bin

p9802	SI enable Safe Brake Control (Motor Module) / SI enable SBC MM		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Integer32 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: 2814 Unit selection: - Expert list: 1 Default: 0
p9810	SI PROFIsafe address (Motor Module) / SI PROFIsafe MM		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65534	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p9811	SI PROFIsafe telegram selection (Motor Module) / SI Ps telegram MM		
HLA, HLA_DBSI	Changeable: C2(95) Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 998	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 998
p9811	SI PROFIsafe telegram selection (Motor Module) / SI Ps telegram MM		
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 998	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 998
p9812	SI PROFIsafe failure response (Motor Module) / SI Ps fail MM		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p9821	BI: SI Safe Brake Adapter signal source (Motor Module) / SI SBA S_src MM		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: Unsigned32 / Binary P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2814 Unit selection: - Expert list: 1 Default: 0

p9822[0...1] SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI SBA relay delay times (Motor Module) / SI SBA relay t MM Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1000000.00 [μs]	Access level: 3 Function plan: 2814 Unit selection: - Expert list: 1 Default: [0] 100000.00 [μs] [1] 65000.00 [μs]
p9825[0...1] HLA, HLA_840, HLA_DBSI	SI HLA shutoff valve wait time (MM) / Shutoff valve t MM Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2000000.00 [μs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: [0] 250000.00 [μs] [1] 250000.00 [μs]
p9826 HLA, HLA_840, HLA_DBSI	SI HLA shutoff valve feedback signal contact configuration (MM) / FS config MM Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 5	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p9850 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI SGE changeover discrepancy time (Motor Module) / SI SGE chg t MM Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2000000.00 [μs]	Access level: 3 Function plan: 2810 Unit selection: - Expert list: 1 Default: 500000.00 [μs]
p9851 HLA, HLA_840, HLA_DBSI	SI STO/SS1 debounce time (Motor Module) / SI STO t_debou MM Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100000.00 [μs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [μs]

p9851	SI STO/SBC/SS1 debounce time (Motor Module) / SI STO t_debou MM		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [µs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100000.00 [µs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [µs]
p9852	SI Safe Stop 1 delay time (Motor Module) / SI Stop 1 t_del MM		
HLA, HLA_DBSI	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 300000.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [ms]
p9852	SI Safe Stop 1 delay time (Motor Module) / SI Stop 1 t_del MM		
HLA_840, SERVO_840	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 300000.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [ms]
p9852	SI Safe Stop 1 delay time (Motor Module) / SI Stop 1 t_del MM		
SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 300000.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [ms]
p9858	SI transition time STOP F to STOP A (Motor Module) / SI STOP F->A MM		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [µs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 30000000.00 [µs]	Access level: 3 Function plan: 2802 Unit selection: - Expert list: 1 Default: 0.00 [µs]
r9870[0...3]	SI version drive-integrated safety function (Motor Module) / SI version MM		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2802 Unit selection: - Expert list: 1 Default: -

r9871 HLA, HLA_840, HLA_DBSI	SI common functions (Motor Module) / SI general fct MM Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2804 Unit selection: - Expert list: 1 Default: -
r9871 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI common functions (Motor Module) / SI general fct MM Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2804 Unit selection: - Expert list: 1 Default: -
r9872.0...26 HLA, HLA_840, HLA_DBSI	CO/BO: SI status list (Motor Module) / SI status MM Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2804 Unit selection: - Expert list: 1 Default: -
r9872.0...24 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO/BO: SI status list (Motor Module) / SI status MM Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2804 Unit selection: - Expert list: 1 Default: -
r9880 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI monitoring clock cycle (Motor Module) / SI monitor_clk MM Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [ms]	Access level: 3 Function plan: 2802 Unit selection: - Expert list: 1 Default: - [ms]
r9881[0...11] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion Sensor Module Node Identifier second channel / SI Mtn SM Ident Changeable: - Data type: Unsigned8 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r9890[0...2] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI version (Sensor Module) / SI version SM Changeable: - Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9894[0...19] HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI crosswise comparison list (Motor Module) / SI CDC_list MM Changeable: - Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2802 Unit selection: - Expert list: 1 Default: -
r9895 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI diagnostics STOP F (Motor Module) / SI diag STOP F MM Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: 2802 Unit selection: - Expert list: 1 Default: -
p9897 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion bus failure STO delay time (MM) / SI Mtn IL t_del MM Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [µs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 800000.00 [µs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0.00 [µs]
r9898 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI actual checksum SI parameters (Motor Module) / SI act_checksum MM Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2800 Unit selection: - Expert list: 1 Default: -
p9899 HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI reference checksum SI parameters (Motor Module) / SI set_checksum MM Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: 2800 Unit selection: - Expert list: 1 Default: 0000 hex

r9900 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Actual topology number of indices / Act topo indices Changeable: - Data type: Unsigned16 P group: Topology Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
r9901[0...n] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Actual topology / Act topo Changeable: - Data type: Unsigned16 P group: Topology Not for motor type: - Min: -	Calculation: - Dynamic index: r9900 Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: -
p9902 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Target topology number of indices / TargetTopo indices Changeable: - Data type: Unsigned16 P group: Topology Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 1
p9903[0...n] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Target topology / Target topo Changeable: - Data type: Unsigned16 P group: Topology Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: p9902 Unit group: - Scaling: - Max: FFFF hex	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0000 hex
p9904 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Topology comparison acknowledge differences / Topo_compare ackn Changeable: C1(1) Data type: Unsigned32 P group: Topology Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 hex
p9905 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Device specialization / Specialization Changeable: C1(1) Data type: Unsigned16 P group: Topology Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p9906 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Topology comparison comparison stage of all components / Topo_cmpr tot comp Changeable: C1(1) Data type: Integer16 P group: Topology Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 99	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p9907 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Topology comparison comparison stage of the component number / Topo_cmpr comp_no Changeable: C1(1) Data type: Unsigned8 P group: Topology Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 199	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p9908 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Topology comparison comparison stage of a component / Topo_cmpr 1 comp Changeable: C1(1) Data type: Integer16 P group: Topology Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 99	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p9909 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Topology comparison component replacement / Topo_cmpr replace Changeable: C1(1) Data type: Unsigned8 P group: Topology Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1
p9910 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Target topology accept additional components / Add comp accept Changeable: C1(1) Data type: Integer16 P group: Topology Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6	Access level: 1 Function plan: - Unit selection: - Expert list: 1 Default: 0
p9911[0...6] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Insert drive object / Drv_obj insert Changeable: C1(1) Data type: Unsigned32 P group: All groups Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 4294967295	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0

p9912[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Delete drive object / Drv_obj delete Changeable: C1(3) Data type: Unsigned16 P group: All groups Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 62	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0
p9913[0...2] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Change drive object number / Change drv_obj_no Changeable: C1(4) Data type: Unsigned16 P group: All groups Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 62	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0
p9914[0...2] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Change component number / Change comp_no Changeable: C1 Data type: Unsigned16 P group: All groups Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 199	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0
p9915 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	DRIVE-CLiQ data transfer error shutdown threshold master / DQ fault master Changeable: C1(1) Data type: Unsigned32 P group: Topology Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 0007 07FF hex	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0007 02FF hex
p9916 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	DRIVE-CLiQ data transfer error shutdown threshold slave / DQ fault slave Changeable: C1(1) Data type: Unsigned32 P group: Topology Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 0007 07FF hex	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0007 02FF hex
p9917[0...1] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Delete component / Delete comp Changeable: C1(30) Data type: Unsigned16 P group: All groups Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 199	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0

p9920[0...99] CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Licensing enter license key / Enter license key Changeable: T, U Data type: Unsigned8 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
p9921 CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Licensing activate license key / Act license key Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 0
r9925[0...99] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Firmware file incorrect / FW file incorr Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
r9926 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Firmware check status / FW check status Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: -
p9930[0...8] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	System logbook activation / SYSLOG activation Changeable: T, U Data type: Unsigned8 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0
p9931[0...188] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	System logbook module selection / SYSLOG mod select. Changeable: T, U Data type: Unsigned32 P group: - Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0000 hex

p9932 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Save system logbook EEPROM / SYSLOG EEPROM save Changeable: T, U Data type: Unsigned8 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0
r9935.0 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	BO: POWER ON delay signal / POWER ON t_delay Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r9936[0...199] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	DRIVE-CLiQ diagnostic error counter connection / DQdiag err counter Changeable: - Data type: Integer32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
p9937 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	DRIVE-CLiQ diagnostic configuration / DQ diag config Changeable: T, U Data type: Unsigned16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
p9938 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	DRIVE-CLiQ detailed diagnostics configuration / DQ diag config Changeable: T, U Data type: Integer16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 6	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0
p9939 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	DRIVE-CLiQ detailed diagnostics time interval / DQ detail t_interv Changeable: T, U Data type: FloatingPoint32 P group: - Not for motor type: - Min: 1 [s]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3600 [s]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 1 [s]

p9941 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Target topology feature delete all components / Feature delete Changeable: C1(1) Data type: Unsigned32 P group: Topology Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 0 Default: 0
p9942 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	DRIVE-CLiQ detailed diagnostics select individual connection / DQ detail conn Changeable: T, U Data type: Unsigned16 P group: - Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 199	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0
r9943 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	DRIVE-CLiQ detailed diagn. individual connection error counter / DQ det err counter Changeable: - Data type: Integer32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r9975[0...7] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	System utilization measured / Sys util meas Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [%]
r9976[0...7] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	System utilization / Sys util Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [%]
r9979 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Sampling time with largest total utilization / t_sampl lg total Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [μs]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [μs]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [μs]

r9980[0...165] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Sampling times utilization calculated / t_sampl util calc Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [%]
r9981[0...165] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Sampling times utilization measured / t_sampl util meas Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [%]
r9982[0...4] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Data memory utilization / Mem_util dat_mem Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [%]
r9983[0...4] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Measured data memory utilization (actual load) / Mem_ut dat_mem ms Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%]	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: - [%]
r9984[0...4] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Data memory utilization TEC / Data mem util TEC Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [%]
r9986[0...7] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	DRIVE-CLiQ system load / DQ system load Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [%]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [%]

r9987[0...7] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	DRIVE-CLiQ bandwidth load / DQ bandw load Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [%] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [%]
r9988[0...7] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	DRIVE-CLiQ DPRAM load / DQ DPRAM load Changeable: - Data type: FloatingPoint32 P group: - Not for motor type: - Min: - [%] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [%] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: - [%]
p9990 CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	DO memory usage actual value determination selection / Mem_use ActVal sel Changeable: T, U Data type: Unsigned16 P group: - Not for motor type: - Min: 0 Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 65535 Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 0
r9991[0...4] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Memory usage drive object actual value / Mem_use DO ActVal Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: - Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r9992[0...4] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Memory usage drive object reference value / Mem_use DO ref val Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: - Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -
r9993[0...4] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Memory utilization Technology Extension / Mem_util TEC Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: - Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: -

r9999[0...99] CU_I_840, CU_NX_840, CU_S_AC_DP, CU_S_AC_PN, CU_S120_DP, CU_S120_PN	Software error internal supplementary diagnostics / SW_err int diag Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p10000[0...5] TM54F_MA, TM54F_SL	SI TM54F communication clock cycle / TM54F comm_cycle Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00000 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 25.00000 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: [0] 12.00000 [ms] [1...5] 0.00000 [ms]
p10001 SERVO_AC, VECTOR_AC	SI Motion delay time for test stop at DO (processor 1) / SI t_delay DO P1 Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 4.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2000.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 500.00 [ms]
p10001 TM54F_MA, TM54F_SL	SI TM54F delay time for test stop at DO 0 ... DO 3 / SI t_delay DO Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 2.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2000.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 500.00 [ms]
p10002 SERVO_AC, VECTOR_AC	SI Motion F-DI changeover discrepancy time (processor 1) / SI Mtn DI chg t P1 Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 1.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2000.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 500.00 [ms]
p10002 TM54F_MA, TM54F_SL	SI TM54F F-DI changeover discrepancy time / SI F-DI chg t Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 1.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2000.00 [ms]	Access level: 3 Function plan: 2893, 2894 Unit selection: - Expert list: 1 Default: 500.00 [ms]

p10003 SERVO_AC, VECTOR_AC	SI motion forced checking procedure timer / SI Mtn dyn t Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [h] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8760.00 [h] Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 8.00 [h]
p10003 TM54F_MA	SI TM54F forced checking procedure timer / SI dyn t Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [h] Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 8760.00 [h] Access level: 3 Function plan: 2892 Unit selection: - Expert list: 1 Default: 8.00 [h]
r10004[0...1] TM54F_MA, TM54F_SL	SI TM54F parameter actual checksum / SI par CRC act Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: - Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - Access level: 3 Function plan: 2891 Unit selection: - Expert list: 1 Default: -
p10005[0...1] TM54F_MA, TM54F_SL	SI TM54F parameter reference checksum / SI par CRC target Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 0000 hex Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex Access level: 3 Function plan: 2891 Unit selection: - Expert list: 1 Default: 0000 hex
p10006 SERVO_AC, VECTOR_AC	SI Motion acknowledgment internal event F-DI (processor 1) / SI Mtn ackn int P1 Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0 Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255 Access level: 3 Function plan: 2900, 2905 Unit selection: - Expert list: 1 Default: 0
p10006 TM54F_MA, TM54F_SL	SI TM54F acknowledgment internal event input terminal / SI ackn int event Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0 Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255 Access level: 3 Function plan: 2900, 2905 Unit selection: - Expert list: 1 Default: 0

p10007 SERVO_AC, VECTOR_AC	BI: SI Motion forced checking procedure F-DO signal source / SI dynF-DI/DOs_src Changeable: C2(95) Data type: Unsigned32 / Binary P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2892 Unit selection: - Expert list: 1 Default: 0
p10007 TM54F_MA	BI: SI TM54F forced checking procedure F-DI/F-DO signal source / SI dynF-DI/DOs_src Changeable: C2(95) Data type: Unsigned32 / Binary P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2892 Unit selection: - Expert list: 1 Default: 0
p10008 TM54F_MA, TM54F_SL	SI TM54F operating mode / SI op_mod Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 4 Function plan: - Unit selection: - Expert list: 1 Default: 1
p10009 SERVO_AC, VECTOR_AC	SI Motion SLP retraction F-DI (processor 1) / SLP retrF-DI P1 Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p10009 TM54F_MA, TM54F_SL	SI TM54F SLP retract F-DI / SI SLP retr F-DI Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p10010[0...5] TM54F_MA, TM54F_SL	SI TM54F drive object assignment / SI drv_obj assign Changeable: C2(95) Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 62	Access level: 3 Function plan: 2891, 2892 Unit selection: - Expert list: 1 Default: 0

p10011[0...5]	SI TM54F drive group assignment / SI drv_gr assign		
TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: 2892
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	1	4	1
p10012[0...5]	SI TM54F Motor/Hydraulic Module Node Identifier Word 1 / SI MM/HM Node ID 1		
TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 4
	Data type: Unsigned32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0000 hex	FFFF FFFF hex	0000 hex
p10013[0...5]	SI TM54F Motor/Hydraulic Module Node Identifier Word 2 / SI MM Node ID 2		
TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 4
	Data type: Unsigned32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0000 hex	FFFF FFFF hex	0000 hex
p10014[0...5]	SI TM54F Motor/Hydraulic Module Node Identifier Word 3 / SI MM Node ID 3		
TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 4
	Data type: Unsigned32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0000 hex	FFFF FFFF hex	0000 hex
r10015	SI TM54F sampling time / SI t_sample		
TM54F_MA, TM54F_SL	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	- [ms]	- [ms]	- [ms]
p10017	SI Motion digital inputs debounce time (processor 1) / SI DI t_debounceP1		
SERVO_AC, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0.00 [ms]	100.00 [ms]	1.00 [ms]

p10017 **SI TM54F digital inputs debounce time / SI DI t_debounce**

TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	1.00 [ms]	100.00 [ms]	1.00 [ms]

p10020[0...3] **SI TM54F special operating mode selection / SI spec op sel**

TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 4
	Data type: Unsigned32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	3	1

p10021[0...3] **SI TM54F Emergency Stop stop response / SI Emergency Stop**

TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 4
	Data type: Unsigned32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	2	0

p10022 **SI Motion STO input terminal (processor 1) / SI Mtn STO F-DI P1**

SERVO_AC, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: 2900, 2905
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	255	0

p10022[0...3] **SI TM54F STO input terminal / SI STO F-DI**

TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: 2900, 2905
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	255	0

p10023 **SI Motion SS1 input terminal (processor 1) / SI Mtn SS1 F-DI P1**

SERVO_AC, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: 2900, 2905
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	255	0

p10023[0...3] SI TM54F SS1 input terminal / SI SS1 F-DI

TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: 2900, 2905
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	255	0

p10024 SI Motion SS2 input terminal (processor 1) / SI Mtn SS2 F-DI P1

SERVO_AC, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	255	0

p10024[0...3] SI TM54F SS2 input terminal / SI SS2 F-DI

TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	255	0

p10025 SI Motion SOS input terminal (processor 1) / SI Mtn SOS F-DI P1

SERVO_AC, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	255	0

p10025[0...3] SI TM54F SOS input terminal / SI SOS F-DI

TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	255	0

p10026 SI Motion SLS input terminal (processor 1) / SI Mtn SLS F-DI P1

SERVO_AC, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	255	0

p10026[0...3]	SI TM54F SLS input terminal / SI SLS F-DI		
TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	255	0
p10027	SI Motion SLS limit bit 0 input terminal (processor 1) / SI SLS lim0F-DI P1		
SERVO_AC, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	255	0
p10027[0...3]	SI TM54F SLS limit bit 0 input terminal / SI SLS lim 0 F-DI		
TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	255	0
p10028	SI Motion SLS limit bit 1 input terminal (processor 1) / SI SLS lim1F-DI P1		
SERVO_AC, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	255	0
p10028[0...3]	SI TM54F SLS limit bit 1 input terminal / SI SLS lim 1 F-DI		
TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	255	0
p10030	SI Motion SDI positive input terminal (processor 1) / SI SDI pos F-DI P1		
SERVO_AC, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	255	0

p10030[0...3] SI TM54F SDI positive input terminal / SI SDI pos F-DI

TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	255	0

p10031 SI Motion SDI negative input terminal (processor 1) / SI SDI neg F-DI P1

SERVO_AC, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	255	0

p10031[0...3] SI TM54F SDI negative input terminal / SI SDI neg F-DI

TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	255	0

p10032 SI Motion SLP select input terminal (processor 1) / SI SLS sel F-DI P1

SERVO_AC, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	255	0

p10032[0...3] SI TM54F SLP input terminal / SI SLP F-DI

TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	255	0

p10033 SI Motion SLP position range input terminal (processor 1) / SI SLP pos F-DI P1

SERVO_AC, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	255	0

p10033[0...3]	SI TM54F SLP position range input terminal / SI SLP pos F-DI		
TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	255	0
p10036[0...3]	SI TM54F special operating mode input terminal / SI spec mode F-DI		
TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 4
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	255	0
p10037[0...3]	SI TM54F agreement input terminal / SI agreement F-DI		
TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 4
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	255	0
p10038[0...3]	SI TM54F Emergency Stop input terminal / SI E-Stop F-DI		
TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 4
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	255	0
p10039	SI Motion Safe State signal selection (processor 1) / SI Safe State P1		
SERVO_AC, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Unsigned32	Dynamic index: -	Function plan: 2901, 2906
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0000 0001 bin
p10039[0...3]	SI TM54F Safe State signal selection / SI Safe State Sel		
TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Unsigned32	Dynamic index: -	Function plan: 2901, 2906
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0000 0001 bin

p10040 SERVO_AC, VECTOR_AC	SI Motion F-DI input mode (processor 1) / SI F-DI mode P1 Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
p10040 TM54F_MA, TM54F_SL	SI TM54F F-DI input mode / SI F-DI inp_mode Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
p10041 TM54F_MA, TM54F_SL	SI TM54F F-DI enable for test / SI F-DI enab test Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2892 Unit selection: - Expert list: 1 Default: 0000 0000 0000 0000 bin
p10042[0...5] SERVO_AC, VECTOR_AC	SI Motion F-DO signal sources (processor 1) / SI Mtn F-DOs_srcP1 Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 15	Access level: 3 Function plan: 2877 Unit selection: - Expert list: 1 Default: 0
p10042[0...5] TM54F_MA, TM54F_SL	SI TM54F F-DO 0 signal sources / SI F-DO 0 S_src Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 783	Access level: 3 Function plan: 2902, 2907 Unit selection: - Expert list: 1 Default: 0
p10043[0...5] TM54F_MA, TM54F_SL	SI TM54F F-DO 1 signal sources / SI F-DO 1 S_src Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 783	Access level: 3 Function plan: 2902, 2907 Unit selection: - Expert list: 1 Default: 0

p10044[0...5]	SI TM54F F-DO 2 signal sources / SI F-DO 2 S_src		
TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: 2902, 2907
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	783	0
p10045[0...5]	SI TM54F F-DO 3 signal sources / SI F-DO 3 S_src		
TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: 2902, 2907
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	783	0
p10046	SI Motion F-DO feedback signal input activation / SI F-DO FS act		
SERVO_AC, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Unsigned32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0000 bin
p10046	SI TM54F F-DO feedback signal input activation / SI F-DO FS act		
TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Unsigned32	Dynamic index: -	Function plan: 2892
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0000 bin
p10047	SI Motion F-DO test stop mode (processor 1) / SI F-DO testmodeP1		
SERVO_AC, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	1	3	2
p10047[0...3]	SI TM54F F-DO test stop mode / SI F-DO test mode		
TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	1	3	2

p10048 TM54F_MA	SI TM54F F-DI F-DO test stop configuration / SI teststop config Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
r10049 SERVO_AC, VECTOR_AC	SI Motion F-DI monitoring status (processor 1) / SI F-DI status P1 Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p10050 SERVO_AC, VECTOR_AC	SI Motion PROFIsafe F-DI transfer (processor 1) / SI Ps F-DI tran P1 Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
r10051.0...2 SERVO_AC, VECTOR_AC	CO/BO: SI Motion digital inputs status (processor 1) / SI DI status P1 Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r10051.0...9 TM54F_MA, TM54F_SL	CO/BO: SI TM54F digital inputs status / SI DI status Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2893, 2894 Unit selection: - Expert list: 1 Default: -
r10052.0 SERVO_AC, VECTOR_AC	CO/BO: SI Motion digital outputs status (processor 1) / SI DO status P1 Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -

r10052.0...3	CO/BO: SI TM54F digital outputs status / SI DO status		
TM54F_MA, TM54F_SL	Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r10053.0...3	CO/BO: SI TM54F digital inputs 20 ... 23 status / SI DI 20...23 stat		
TM54F_SL	Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2892 Unit selection: - Expert list: 1 Default: -
r10054	SI TM54F failsafe events active / SI failsafe act		
TM54F_MA, TM54F_SL	Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r10055	SI TM54F communication status drive-specific / SI comm_stat drv		
TM54F_MA, TM54F_SL	Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r10056.0	CO/BO: SI TM54F status / SI stat		
TM54F_MA	Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p10061	SI TM54F password input / SI password inp		
TM54F_MA, TM54F_SL	Changeable: T, U Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: 0000 hex	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: FFFF FFFF hex	Access level: 3 Function plan: 2891 Unit selection: - Expert list: 1 Default: 0000 hex

p10062	SI TM54F password new / SI password new		
TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Unsigned32	Dynamic index: -	Function plan: 2891
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0000 hex	FFFF FFFF hex	0000 hex
p10063	SI TM54F password acknowledgment / SI ackn password		
TM54F_MA, TM54F_SL	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: Unsigned32	Dynamic index: -	Function plan: 2891
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0000 hex	FFFF FFFF hex	0000 hex
p10070	SI TM54F module identifier / SI module ID		
TM54F_MA	Changeable: C2(95), T	Calculation: -	Access level: 3
	Data type: Unsigned32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	4294967295	0
r10090[0...3]	SI TM54F version / SI Version		
TM54F_MA, TM54F_SL	Changeable: -	Calculation: -	Access level: 3
	Data type: Unsigned16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	-
p10101	SI Motion delay time for test stop at DO (processor 2) / SI t_delay DO P2		
SERVO_AC, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	4.00 [ms]	2000.00 [ms]	500.00 [ms]
p10102	SI Motion F-DI changeover discrepancy time (processor 2) / SI Mtn F-DI t P2		
SERVO_AC, VECTOR_AC	Changeable: C2(95)	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 2893, 2894
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	1.00 [ms]	2000.00 [ms]	500.00 [ms]

p10106 SERVO_AC, VECTOR_AC	SI Motion acknowledgment internal event F-DI (processor 2) / SI ackn int evt P2 Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p10109 SERVO_AC, VECTOR_AC	SI Motion SLP retraction F-DI (processor 2) / SI SLPretractDI P2 Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p10117 SERVO_AC, VECTOR_AC	SI Motion digital inputs debounce time (processor 2) / SI DI t_debounceP2 Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.00 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100.00 [ms]	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 1.00 [ms]
p10122 SERVO_AC, VECTOR_AC	SI Motion STO input terminal (processor 2) / SI STO F-DI P2 Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p10123 SERVO_AC, VECTOR_AC	SI Motion SS1 input terminal (processor 2) / SI SS1 F-DI P2 Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p10124 SERVO_AC, VECTOR_AC	SI Motion SS2 input terminal (processor 2) / SI SS2 F-DI P2 Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p10125 SERVO_AC, VECTOR_AC	SI Motion SOS input terminal (processor 2) / SI SOS F-DI P2 Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p10126 SERVO_AC, VECTOR_AC	SI Motion SLS input terminal (processor 2) / SI SLS F-DI P2 Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p10127 SERVO_AC, VECTOR_AC	SI Motion SLS limit bit 0 input terminal (processor 2) / SI SLS lim0F-DI P2 Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p10128 SERVO_AC, VECTOR_AC	SI Motion SLS limit bit 1 input terminal (processor 2) / SI SLS lim1F-DI P2 Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p10130 SERVO_AC, VECTOR_AC	SI Motion SDI positive input terminal (processor 2) / SI SDI pos F-DI P2 Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p10131 SERVO_AC, VECTOR_AC	SI Motion SDI negative input terminal (processor 2) / SI SDI neg F-DI P2 Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p10132 SERVO_AC, VECTOR_AC	SI Motion SLP input terminal (processor 2) / SI SLP F-DI P2 Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p10133 SERVO_AC, VECTOR_AC	SI Motion SLP position range input terminal (processor 2) / SLP pos F-DI P2 Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 255	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p10139 SERVO_AC, VECTOR_AC	SI Motion Safe State signal selection (processor 2) / SI Safe State P2 Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2906 Unit selection: - Expert list: 1 Default: 0000 0001 bin
p10140 SERVO_AC, VECTOR_AC	SI Motion F-DI input mode (processor 2) / SI F-DI mode P2 Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
p10142[0...5] SERVO_AC, VECTOR_AC	SI Motion F-DO signal sources (processor 2) / SI F-DO S_src P2 Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 15	Access level: 3 Function plan: 2907 Unit selection: - Expert list: 1 Default: 0
p10146 SERVO_AC, VECTOR_AC	SI Motion test sensor feedback signal (processor 2) / SI test sens FS P2 Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2892 Unit selection: - Expert list: 1 Default: 0000 bin

p10147 SERVO_AC, VECTOR_AC	SI Motion F-DO test stop mode (processor 2) / SI F-DO testmodeP2 Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 1	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 3	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 2
r10149 SERVO_AC, VECTOR_AC	SI Motion F-DI monitoring status (processor 2) / SI F-DI status P2 Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p10150 SERVO_AC, VECTOR_AC	SI Motion PROFIsafe F-DI transfer (processor 2) / SI Ps F-DI tran P2 Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
r10151.0...2 SERVO_AC, VECTOR_AC	CO/BO: SI Motion digital inputs status (processor 2) / SI DI status P2 Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r10152.0 SERVO_AC, VECTOR_AC	CO/BO: SI Motion digital outputs status (processor 2) / SI DO status P2 Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p10201 SERVO_840	SI Motion SBT enable / SBT enable Changeable: T, U Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin

p10201 SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SBT enable / SBT enable Changeable: C2(95) Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0000 bin
p10202[0...1] SERVO_840	SI Motion SBT brake selection / SBT brake select Changeable: T, U Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p10202[0...1] SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SBT brake selection / SBT brake select Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p10203 SERVO_840	SI Motion SBT control selection / SBT control select Changeable: T, U Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: 2837 Unit selection: - Expert list: 1 Default: 0
p10203 SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SBT control selection / SBT control select Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 2	Access level: 3 Function plan: 2837 Unit selection: - Expert list: 1 Default: 0
p10204 SERVO_840	SI Motion SBT motor type / SBT motor type Changeable: T, U Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0

p10204 SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SBT motor type / SBT motor type Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p10208[0...1] SERVO_840	SI Motion SBT test torque ramp time / SBT M_test t_ramp Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 20 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000 [ms]	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1000 [ms]
p10208[0...1] SERVO_840 (Lin)	SI Motion SBT test force ramp time / SBT F_test t_ramp Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 20 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000 [ms]	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1000 [ms]
p10208[0...1] SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SBT test torque ramp time / SBT M_test t_ramp Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 20 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000 [ms]	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1000 [ms]
p10208[0...1] SERVO (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	SI Motion SBT test force ramp time / SBT F_test t_ramp Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 20 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000 [ms]	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1000 [ms]
p10209[0...1] SERVO_840	SI Motion SBT brake holding torque / SBT brake M_stop Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 1.00 [Nm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 60000.00 [Nm]	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 10.00 [Nm]

p10209[0...1] SERVO_840 (Lin)	SI Motion SBT brake holding force / SBT brake F_stop Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 1.00 [N]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100000.00 [N]	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 10.00 [N]
p10209[0...1] SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SBT brake holding torque / SBT brake M_stop Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 1.00 [Nm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 60000.00 [Nm]	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 10.00 [Nm]
p10209[0...1] SERVO (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	SI Motion SBT brake holding force / SBT brake F_stop Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 1.00 [N]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 100000.00 [N]	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 10.00 [N]
p10210[0...1] SERVO_840	SI Motion SBT test torque factor sequence 1 / SBT M_test fact 1 Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.30	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1.00	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1.00
p10210[0...1] SERVO_840 (Lin)	SI Motion SBT test force factor sequence 1 / SBT F_test fact 1 Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.30	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1.00	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1.00
p10210[0...1] SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SBT test torque factor sequence 1 / SBT M_test fact 1 Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.30	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1.00	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1.00

p10210[0...1] SERVO (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	SI Motion SBT test force factor sequence 1 / SBT F_test fact 1 Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.30	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1.00	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1.00
p10211[0...1] SERVO_840	SI Motion SBT test duration sequence 1 / SBT t_test seq 1 Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 20 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000 [ms]	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1000 [ms]
p10211[0...1] SERVO_840 (Lin)	SI Motion SBT test duration sequence 1 / SBT t_test seq 1 Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 20 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000 [ms]	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1000 [ms]
p10211[0...1] SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SBT test duration sequence 1 / SBT t_test seq 1 Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 20 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000 [ms]	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1000 [ms]
p10211[0...1] SERVO (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	SI Motion SBT test duration sequence 1 / SBT t_test seq 1 Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 20 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000 [ms]	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1000 [ms]
p10212[0...1] SERVO_840	SI Motion SBT position tolerance sequence 1 / SBT pos_tol seq 1 Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.001 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 360.000 [mm]	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1.000 [mm]

p10212[0...1] SERVO_840 (Safety rot)	SI Motion SBT position tolerance sequence 1 / SBT pos_tol seq 1 Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.001 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 360.000 [°]	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1.000 [°]
p10212[0...1] SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SBT position tolerance sequence 1 / SBT pos_tol seq 1 Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.001 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 360.000 [mm]	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1.000 [mm]
p10212[0...1] SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	SI Motion SBT position tolerance sequence 1 / SBT pos_tol seq 1 Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.001 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 360.000 [°]	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1.000 [°]
p10218 SERVO_840	SI Motion SBT test torque sign / SBT M_test sign Changeable: T, U Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: 2837 Unit selection: - Expert list: 1 Default: 0
p10218 SERVO_840 (Lin)	SI Motion SBT test force sign / SBT F_test sign Changeable: T, U Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: 2837 Unit selection: - Expert list: 1 Default: 0
p10218 SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SBT test torque sign / SBT M_test sign Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: 2837 Unit selection: - Expert list: 1 Default: 0

p10218 SERVO (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	SI Motion SBT test force sign / SBT F_test sign Changeable: C2(95) Data type: Integer16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1	Access level: 3 Function plan: 2837 Unit selection: - Expert list: 1 Default: 0
p10220[0...1] SERVO_840	SI Motion SBT test torque factor sequence 2 / SBT M_test fact 2 Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.30	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1.00	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1.00
p10220[0...1] SERVO_840 (Lin)	SI Motion SBT test force factor sequence 2 / SBT F_test fact 2 Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.30	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1.00	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1.00
p10220[0...1] SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SBT test torque factor sequence 2 / SBT M_test fact 2 Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.30	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1.00	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1.00
p10220[0...1] SERVO (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	SI Motion SBT test force factor sequence 2 / SBT F_test fact 2 Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.30	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 1.00	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1.00
p10221[0...1] SERVO_840	SI Motion SBT test duration sequence 2 / SBT t_test seq 2 Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 20 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000 [ms]	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1000 [ms]

p10221[0...1] SERVO_840 (Lin)	SI Motion SBT test duration sequence 2 / SBT t_test seq 2 Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 20 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000 [ms]	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1000 [ms]
p10221[0...1] SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SBT test duration sequence 2 / SBT t_test seq 2 Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 20 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000 [ms]	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1000 [ms]
p10221[0...1] SERVO (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	SI Motion SBT test duration sequence 2 / SBT t_test seq 2 Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 20 [ms]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 10000 [ms]	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1000 [ms]
p10222[0...1] SERVO_840	SI Motion SBT position tolerance sequence 2 / SBT pos_tol seq 2 Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.001 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 360.000 [mm]	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1.000 [mm]
p10222[0...1] SERVO_840 (Safety rot)	SI Motion SBT position tolerance sequence 2 / SBT pos_tol seq 2 Changeable: T, U Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.001 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 360.000 [°]	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1.000 [°]
p10222[0...1] SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SBT position tolerance sequence 2 / SBT pos_tol seq 2 Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.001 [mm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 360.000 [mm]	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1.000 [mm]

p10222[0...1] SERVO (Safety rot), SERVO_AC (Safety rot), SERVO_DBSI (Safety rot), VECTOR (Safety rot), VECTOR_AC (Safety rot)	SI Motion SBT position tolerance sequence 2 / SBT pos_tol seq 2 Changeable: C2(95) Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: 0.001 [°]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 360.000 [°]	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: 1.000 [°]
p10230[0...5] SERVO_840	BI: SI Motion SBT control word / SBT STW Changeable: T, U Data type: Unsigned32 / Binary P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2837 Unit selection: - Expert list: 1 Default: 0
p10230[0...5] SERVO_840 (Lin)	BI: SI Motion SBT control word / SBT STW Changeable: T, U Data type: Unsigned32 / Binary P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2837 Unit selection: - Expert list: 1 Default: 0
p10230[0...5] SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	BI: SI Motion SBT control word / SBT STW Changeable: C2(95) Data type: Unsigned32 / Binary P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2837 Unit selection: - Expert list: 1 Default: 0
p10230[0...5] SERVO (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	BI: SI Motion SBT control word / SBT STW Changeable: C2(95) Data type: Unsigned32 / Binary P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2837 Unit selection: - Expert list: 1 Default: 0
r10231 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SBT control word diagnostics / SBT STW diag Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2836, 2837 Unit selection: - Expert list: 1 Default: -

r10231 SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	SI Motion SBT control word diagnostics / SBT STW diag Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2836, 2837 Unit selection: - Expert list: 1 Default: -
r10234.11...15 HLA, HLA_840, HLA_DBSI	CO/BO: SI Safety Info Channel status word S_ZSW3B / SIC S_ZSW3B Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: -
r10234.0...15 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CO/BO: SI Safety Info Channel status word S_ZSW3B / SIC S_ZSW3B Changeable: - Data type: Unsigned32 P group: Safety Integrated Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: -
p10235 SERVO_840	CI: SI Safety Control Channel control word S_STW3B / SCC S_STW3B Changeable: T, U Data type: Unsigned32 / Integer16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2837 Unit selection: - Expert list: 1 Default: 0
p10235 SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	CI: SI Safety Control Channel control word S_STW3B / SCC S_STW3B Changeable: T Data type: Unsigned32 / Integer16 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2837 Unit selection: - Expert list: 1 Default: 0
r10240 SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	SI Motion SBT test torque diagnostics / SBT M_test diag Changeable: - Data type: FloatingPoint32 P group: Safety Integrated Not for motor type: - Min: - [Nm]	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: - [Nm]	Access level: 3 Function plan: 2836 Unit selection: - Expert list: 1 Default: - [Nm]

r10240	SI Motion SBT test force diagnostics / SBT F_test diag		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 2836
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	- [N]	- [N]	- [N]

r10241	SI Motion SBT load torque diagnostics / SBT M_load diag		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 2836
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	- [Nm]	- [Nm]	- [Nm]

r10241	SI Motion SBT load force diagnostics / SBT F_load diag		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: -	Calculation: -	Access level: 3
	Data type: FloatingPoint32	Dynamic index: -	Function plan: 2836
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	- [N]	- [N]	- [N]

r10242	SI Motion SBT state diagnostics / SBT state diag		
SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: -	Calculation: -	Access level: 3
	Data type: Integer16	Dynamic index: -	Function plan: -
	P group: Safety Integrated	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	0	16	-

p10250	CI: SI Safety Control Channel control word S_STW1B / SCC S_STW1B		
SERVO_840	Changeable: T, U	Calculation: -	Access level: 3
	Data type: Unsigned32 / Integer16	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0

p10250	CI: SI Safety Control Channel control word S_STW1B / SCC S_STW1B		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T	Calculation: -	Access level: 3
	Data type: Unsigned32 / Integer16	Dynamic index: -	Function plan: -
	P group: -	Unit group: -	Unit selection: -
	Not for motor type: -	Scaling: -	Expert list: 1
	Min:	Max:	Default:
	-	-	0

r10251.8...12	CO/BO: SI Safety Control Channel control word S_STW1B diagnostics / SCC S_STW1B diag		
HLA_840, SERVO_840	Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
r10251.8...12	CO/BO: SI Safety Control Channel control word S_STW1B diagnostics / SCC S_STW1B diag		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: - Data type: Unsigned32 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: -
p60000	PROFIdrive reference speed reference frequency / PD n_ref f_ref		
ENC, ENC_840, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI	Changeable: T Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 6.00 [rpm]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 210000.00 [rpm]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 3000.00 [rpm]
p60000	Reference velocity reference frequency / v_ref f_ref		
SERVO (Lin), SERVO_840 (Lin), SERVO_AC (Lin), SERVO_DBSI (Lin)	Changeable: T Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 0.60 [m/min]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 700.00 [m/min]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 120.00 [m/min]
p60000	PROFIdrive reference speed reference frequency / PD n_ref f_ref		
VECTOR, VECTOR_AC	Changeable: T Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 6.00 [rpm]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 210000.00 [rpm]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 3000.00 [rpm]
p60000	PROFIdrive reference velocity reference frequency / PD v_ref f_ref		
ENC (Lin_enc), ENC_840 (Lin_enc)	Changeable: T Data type: FloatingPoint32 P group: Communications Not for motor type: - Min: 0.60 [m/min]	Calculation: CALC_MOD_ALL Dynamic index: - Unit group: - Scaling: - Max: 600.00 [m/min]	Access level: 2 Function plan: - Unit selection: - Expert list: 1 Default: 120.00 [m/min]

p60022	PROFIsafe telegram selection / Ps telegram_sel		
HLA, HLA_DBSI, SERVO, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T Data type: Unsigned16 P group: Safety Integrated Not for motor type: - Min: 0	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 903	Access level: 3 Function plan: - Unit selection: - Expert list: 1 Default: 0
p60122	IF1 PROFIdrive SIC/SCC telegram selection / IF1 SIC/SCC telegr		
HLA, HLA_840, HLA_DBSI, SERVO, SERVO_840, SERVO_AC, SERVO_DBSI, VECTOR, VECTOR_AC	Changeable: T Data type: Unsigned16 P group: Communications Not for motor type: - Min: 700	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: 999	Access level: 3 Function plan: 2423 Unit selection: - Expert list: 1 Default: 999
r61000[0...239]	PROFINET Name of Station / PN Name of Station		
CU_S_AC_PN, CU_S120_DP (PN CBE20), CU_S120_PN	Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2410 Unit selection: - Expert list: 1 Default: -
r61001[0...3]	PROFINET IP of Station / PN IP of Station		
CU_S_AC_PN, CU_S120_DP (PN CBE20), CU_S120_PN	Changeable: - Data type: Unsigned8 P group: - Not for motor type: - Min: -	Calculation: - Dynamic index: - Unit group: - Scaling: - Max: -	Access level: 3 Function plan: 2410 Unit selection: - Expert list: 1 Default: -

Appendix A

A.1 List of abbreviations

Abbreviation	Source of abbreviation	Meaning
ADI4	Analog Drive Interface for 4 Axis	
AC	Adaptive Control	
ALM	Active Line Module	Infeed module for drives
UP	User Program	
AS	Automation System	
ASCII	American Standard Code for Information Interchange	American coding standard for the exchange of information
ASIC	Application Specific Integrated Circuit	User switching circuit
ASUP	Asynchronous subprogram	
AUTO		Operating mode "Automatic"
AUXFU	Auxiliary Function	Auxiliary functions
STL	Statement List	
BA	Operating mode	
Mode group	Mode group	
BERO	Proximity limit switch with feedback oscillator	
BI	Binector Input	
HHU	Handheld unit	
BICO	Binector Connector	Interconnection technology for the drive
BIN	Binary Files	Binary files
BIOS	Basic Input Output System	
BCS	Basic Coordinate System	
BO	Binector Output	
OPI	Operator Panel Interface	
CAD	Computer-Aided Design	
CAM	Computer-Aided Manufacturing	
CC	Compile Cycle	Compile cycles
CI	Connector Input	
CF-Card	Compact Flash-Card	
CNC	Computerized Numerical Control	Computer-Supported Numerical Control
CO	Connector Output	
COM Board	Communication Board	
CP	Communication Processor	
CPU	Central Processing Unit	Central processing unit
CR	Carriage Return	
CRC	Cyclic Redundancy Check	Checksum test
CRT	Cathode Ray Tube	picture tube

Abbreviation	Source of abbreviation	Meaning
CSB	Central Service Board	PLC module
CTS	Clear To Send	Signal from serial data interfaces
CUTCOM	Cutter Radius Compensation	Tool radius compensation
DB	Data block	Data block in the PLC
DBB	Data-block byte	Data block-byte in the PLC
DBW	Data-block word	Data-block word in the PLC
DBX	Data-block bit	Data-block bit in the PLC
DDE	Dynamic Data Exchange	Dynamic Data Exchange
DDS	Drive Data Set	Drive data set
DIN	Deutsche Industrie Norm (German Industry Standard)	
DIR	Directory	Directory
DLL	Dynamic Link Library	
DO	Drive Object	Drive object
DPM	Dual Port Memory	
DRAM	Dynamic Random Access Memory	Dynamic memory block
DRF	Differential Resolver Function	Differential resolver function (handwheel)
DRIVE-CLiQ	Drive Component Link with IQ	
DRY	Dry Run	DRY run feedrate
DSB	Decoding Single Block	Decoding single block
DSC	Dynamic Servo Control / Dynamic Stiffness Control	
DSR	Data Send Ready	Signals that data is ready to be sent from the serial data interfaces
DW	Data word	
DWORD	Double Word (currently 32 bits)	
E	Input	
I/O	Input/Output	
ENC	Encoder	Actual value encoder
EPROM	Erasable Programmable Read Only Memory	Erasable, electronically programmable read-only memory
ePS Network Services		Services for Internet-based remote machine maintenance
EQN		Designation for an absolute encoder with 2048 sine signals per revolution
ESR	Extended stop and retract	
ETC	ETC key	Expansion of the softkey bar in the same menu
FB	Function block	
FBS	Slimline screen	
FC	Function Call	Function block in the PLC
FEPROM	Flash-EPROM	Read and write memory
FIFO	First In - First Out	Method of storing and retrieving data in a memory
FIPO	Fine InterPOLator	
FM	Function Module	

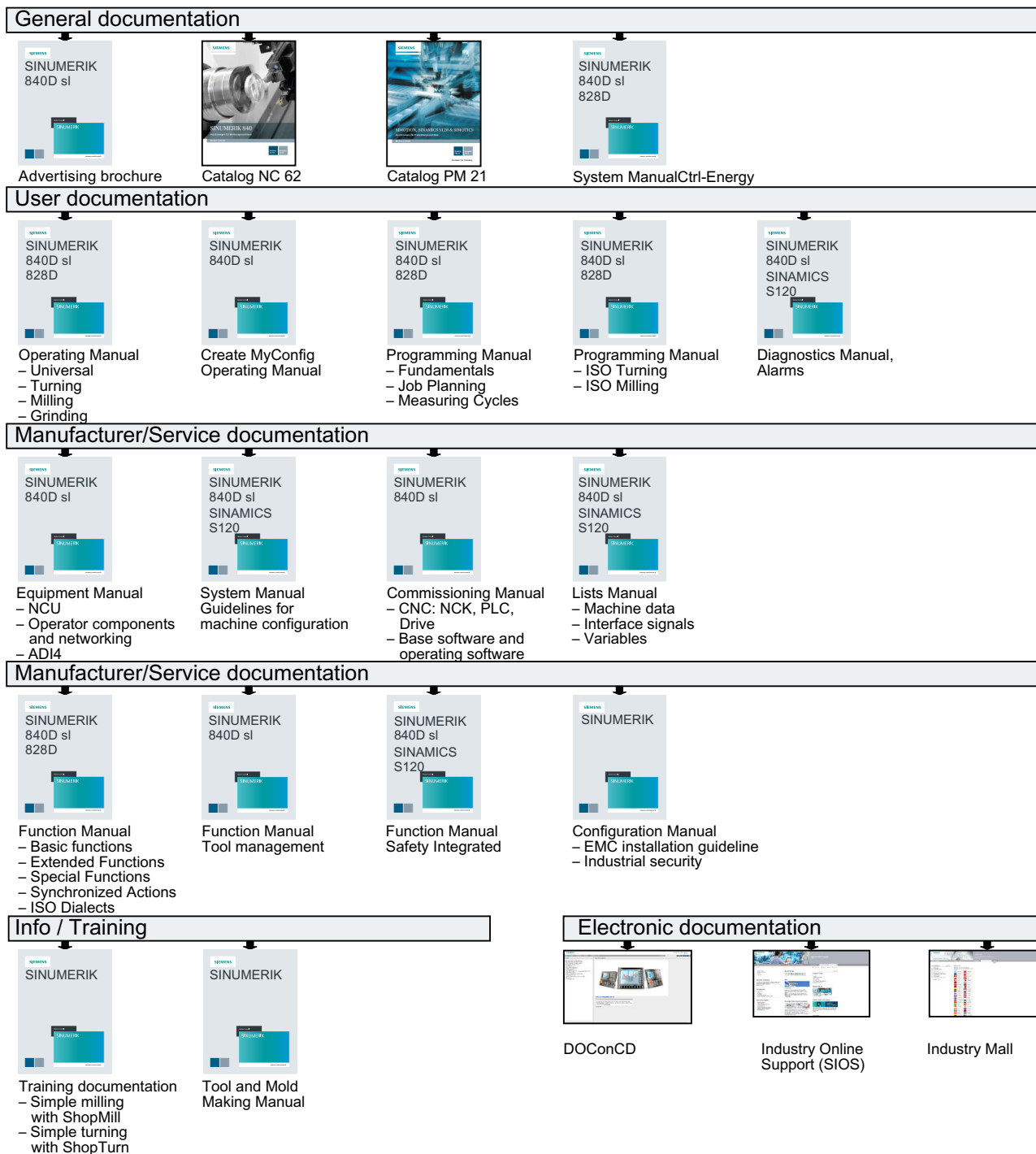
Abbreviation	Source of abbreviation	Meaning
FM-NC	Function Module Numerical Control	Numerical control
FPU	Floating Point Unit	Floating-point unit
FRA	Frame block	
FRAME	Data set	Coordinate conversion with the components work off-set, rotation, scaling, mirroring
CRC	Cutter Radius Compensation	
FST	Feed Stop	Feedrate stop
CSF	Function plan (PLC programming method)	
FW	Firmware	
GC	Global Control	PROFIBUS: Broadcast telegram
GD	Global data	
GEO	Geometry, e.g. geometry axis	
GP	Basic program	
GS	Gear stage	
GUD	Global User Data	Global user data
HD	Hard Disk	Hard disk
HEX	Abbreviation for hexadecimal number	
AuxF	Auxiliary function	
HMI	Human Machine Interface	SINUMERIK user interface
MSD	Main Spindle Drive	
HT	Handheld Terminal	Handheld unit
HW	Hardware	
IBN	Startup	
IF	Drive module pulse enable	
IK (GD)	Implicit communication (global data)	
IKA	Interpolative Compensation	Interpolatory compensation
IM	Interface Modul	Interconnection module
INC	Increment	Increment
INI	Initializing Data	Initializing data
IGBT	Insulated Gate Bipolar Transistor	
IPO	Interpolator	
ISO	International Standardization Organization	International Standards Organization
JOG	"Jogging" operating mode	
COR	Coordinate rotation	
KDV	Crosswise data comparison	Crosswise data comparison between the NC and PLC
K_v	Servo-gain factor	Gain factor of control loop
LAD	Ladder diagram	PLC programming method
LCD	Liquid Crystal Display	Liquid crystal display
LED	Light Emitting Diode	Light Emitting Diode
LF	Line Feed	
PMS		Position measuring system
LSB	Least Significant Bit	Least significant bit
LUD	Local User Data	User data

Abbreviation	Source of abbreviation	Meaning
MAC	Media Access Control	
MAIN	Main program	Main program (OB1, PLC)
MB	Megabyte	
MCI	Motion Control Interface	
MCIS	Motion Control Information System	
MCP	Machine Control Panel	Machine control panel
MD	Machine data	
MDI	"Manual Data Automatic" operating mode	Manual input
MCS	Machine coordinate system	
MPF	Main Program File	Main program (NC part program)
MPI	Multi Point Interface	Multi-point interface
MCP	Machine control panel	
NC	Numerical Control	Numerical Control
NCK	Numerical Control Kernel	Numerical control kernel
NCU	Numerical Control Unit	The NC hardware unit
IS	Interfaces	Interface signal
WO	Zero offset	
NX	Numerical Extension	Axis expansion board
OB	Organization block in the PLC	
OEM	Original Equipment Manufacturer	
OP	Operation Panel	Operator panel
OPI	Operation Panel Interface	Interface for connection to the operator panel
OSI	Open Systems Interconnection	Standard for computer communications
OPT	Options	Options
PIQ	Process Image Output	
PII	Process Image Input	
P bus	Peripheral Bus	
PC	Personal Computer	
PCMCIA	Personal Computer Memory Card International Association	Standard for plug-in memory cards
PCU	Programmable Control Unit	
PI	Programm Instanz	
PG	Programming device	
PLC	Programmable Logic Control	Programmable Logic Controller
PN	PROFINET	
PO	POWER ON	
POU	Program Organization Unit	Unit in the PLC user program
PPU	Panel Processing Unit	Panel-based control
PTP	Point to Point	Point-to-Point
PZD	Process data for drives	
QEC	Quadrant Error Compensation	Quadrant error compensation
QEC	Quadrant error compensation	
RAM	Random Access Memory	Program memory that can be read and written to

Abbreviation	Source of abbreviation	Meaning
REF POINT		Function "Reference point approach" in JOG mode
REPOS		Function "Repositioning" in JOG mode
RPA	R-Parameter Active	Memory area on the NC for R parameter numbers
RPY	Roll Pitch Yaw	Rotation type of a coordinate system
RTC	Real Time Clock	Real-time clock
RTS	Request To Send	RTS, control signal of serial data interfaces
SBL	Single Block	Single block
SBR	Subroutine	Subroutine (PLC)
SBT	Safe Brake Test	Safe brake test
SCC	Safety Control Channel	
SD	Setting-Datum	
SDB	System Data Block	
SDI	Safe Direction	Safe motion direction
SBT	Safe Brake Test	Safe brake activation
SEA	Setting Data Active	Identifier (file type) for setting data
SERUPRO	Search-Run by Program Test	Search run by program test
SFC	System Function Call	
SGE	Safety-related input	
SGA	Safety-related output	
SH	Safe standstill	
SIC	Safety Info Channel	
SK	Softkey	
SKP	Skip	Skip block
SLM	Smart Line Module	
SLP	Safe Limited Position	Safely limited position
SLS	Safely Limited Speed	Safely limited speed
SM	Stepper Motor	
SOS	Safe Operating Stop	Safe operating stop
SS1	Safe Stop 1	Safe Stop 1 (time-monitored, ramp-monitored)
SS2	Safe Stop 2	Safe Stop 2
SPF	Subprogram file	Subprogram (NC)
SPL	Safe programmable logic	
PLC	Programmable Logic Controller	
SRAM	Static Random Access Memory	Static memory block
TNRC	Tool Nose Radius Compensation	
LEC	Leadscrew error compensation	
SSI	Serial Synchronous Interface	Synchronous serial interface
STO	Safe Torque Off	Safe torque off
STW	Control word	
GWPS	Grinding Wheel Peripheral Speed	
SW	Software	
SYF	System Files	System files
SYNACT	SYNACT Synchronized Action	Synchronized Action

Abbreviation	Source of abbreviation	Meaning
TB	Terminal Board (SINAMICS)	
TEA	Testing Data Aktive	Identifier for machine data
TCP	Tool Center Point	Tool tip
TCU	Thin Client Unit	
TEA	Testing Data Active	Identifier for machine data
TM	Terminal Module (SINAMICS)	
TO	Tool Offset	Tool offset
TOA	Tool Offset Active	Identifier (file type) for tool offsets
TRANSMIT	Transform Milling into Turning	Coordinate conversion on turning machine for milling operations
TTL	Transistor–Transistor–Logik	Interface type
UFR	User Frame	Work offset
SR	Subroutine	
USB	Universal Serial Bus	
UPS	Uninterruptible Power Supply	
VDI		Internal communication interface between NC and PLC
FDD	Feed Drive	
VPM	Voltage Protection Module	
VSM	Voltage Sensing Module	
WAB		Function "Smooth Approach and Retraction"
Work	Workpiece coordinate system	
T	Tool coordinate system:	
TLC	Tool length compensation	
WPD	Work Piece Directory	Workpiece directory
T	Tool	
TM	Tool management	
TC	Tool change	
ZWS		Buffer location
ZOA	Zero Offset Active	Identifier (file type) for zero offset data
SW	Status word (of drive)	

A.2 Documentation overview



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