SINAMICS S120 Cabinet Modules

L34 - parameterizing an output circuit breaker

Operating Instructions · 03/2013

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S120 Cabinet Modules Option L34 parameterizing the circuit breaker on the output side

Operating Instructions

03/2013
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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.

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Safety notes

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1.1 Safety information

⚠ DANGER

Qualified personnel

SINAMICS S120 Cabinet Modules must only be commissioned by suitably qualified personnel.

The personnel must take into account the information provided in the technical customer documentation for the product, and be familiar with and observe the specified danger and warning notices.

Operational electrical equipment and motors have parts and components which are at hazardous voltage levels.

Dangerous motion of the driven machine components is possible when the system is operational.

All work on the electrical system must be carried out when the system has been disconnected from the power supply and is in a de-energized condition.

Note

Machinery directive (2006/42/EC)

When the European common market was launched, a decision was made that the domestic Standards and regulations of all of the EU Member States relating to the technical implementation of machines would be harmonized. This meant that, as an internal market Directive, the content of the Machinery Directive had to be implemented by the individual member states as national legislation. For the Machinery Directive, this was realized with the aim of achieving standard protective goals and, in turn, removing technical trade barriers. In accordance with the definition of a machine ("an assembly of linked parts or components, at least one of which moves"), this Directive is extremely extensive. The revised version from 2006, which shall be binding as of Dec. 29, 2009 without transitional period, has expanded its area of application and now includes "Logic units to ensure safety functions".

The machinery directive involves the implementation of machines. It has 28 Articles and 12 Annexes. The basic safety and health requirements specified in Annex I of the Directive must be fulfilled for the safety of machines.

The protective goals must be implemented responsibly to ensure compliance with the Directive.

Manufacturers of a machine must verify that their machine complies with the basic requirements. This verification is facilitated by means of harmonized standards.

⚠ DANGER

Five safety rules

When carrying out any kind of work on electrical devices, the following "five safety rules" must always be observed in accordance with EN 50110-1 and EN 50110-2:

- Disconnect from power supply.
- Protect against reconnection.
- Make sure that the equipment is de-energized.
- Ground and short-circuit.
- Cover or enclose adjacent components that are still live.

⚠ WARNING

Correct and safe operation

Safe, problem-free operation of SINAMICS S120 Cabinet Modules requires proper transportation, storage, setup, and installation, as well as careful operation and maintenance.

The details in the catalogs and proposals also apply to the design of special equipment versions.

In addition to the danger and warning information provided in the technical customer documentation, the applicable national, local, and plant-specific regulations and requirements must be taken into account.

Only protective extra-low voltages (PELV) that comply with EN 60204-1 may be connected to any connections and terminals that are intended for the voltage range between 0 V and 48 V.

NOTICE

Disconnecting the connections before a voltage test

As part of routine tests, SINAMICS S120 Cabinet Modules undergo a voltage test in accordance with EN 61800-5-1. Prior to performing the voltage test for electrical equipment of industrial machines in accordance with EN 60204-1, Section 18.4, all connections of the Cabinet Modules must be disconnected/removed to prevent the units from being damaged.

Motors must be connected according to the circuit diagrams provided.

Note

When operated in dry operating areas, SINAMICS S120 Cabinet Modules with three-phase induction motors conform to Low Voltage Directive 2006/95/EC.

SINAMICS S120 Cabinet Modules with three-phase induction motors conform to EMC Directive 2004/108/EC in the configurations specified in the associated EC Declaration of Conformity, provided that the configuration guidelines and actions are consistently applied.

NOTICE
Malfunctions caused by mobile telephones Operating the equipment in the immediate vicinity (< 1.5 m) of mobile telephones with a transmitter power of > 1 W may lead to incorrect operation.

Description

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The option L34 (output-side circuit breaker) can be used to disconnect the motor terminals from the converter.

This option is pre-wired and installed in a separate cabinet.

The option is described in the S120 Cabinet Modules Manual.

A script can be used for the automatic parameterization, which automatically makes the parameter settings in STARTER.

For the automatic parameter setting of option L34, output-side circuit breaker, you will find the script "output_side_circuit_breaker.xml" on the customer DVD supplied with the device.

To run the script, the following steps must be completely carried out in the completed project.

Free function blocks used

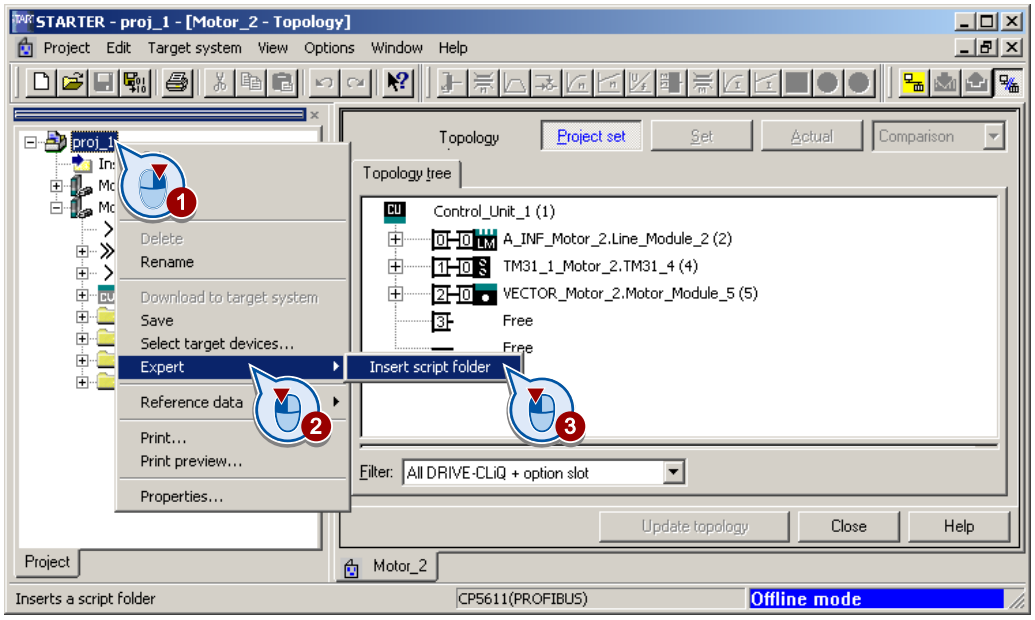
The following "free function blocks" are used in the script, and may not already be used in the project:

- MFP 0
- AND 0
- NOT 0
- OR 0
- PDF 0

Operation (software) 3

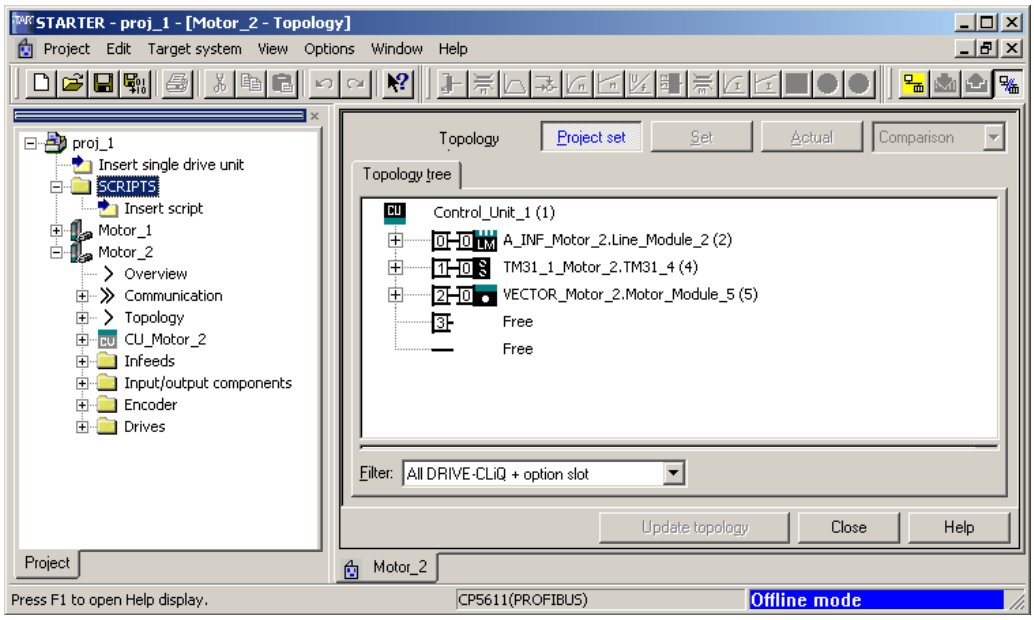
3.1 Handling instruction for execution of scripts

Inserting a script folder into the project

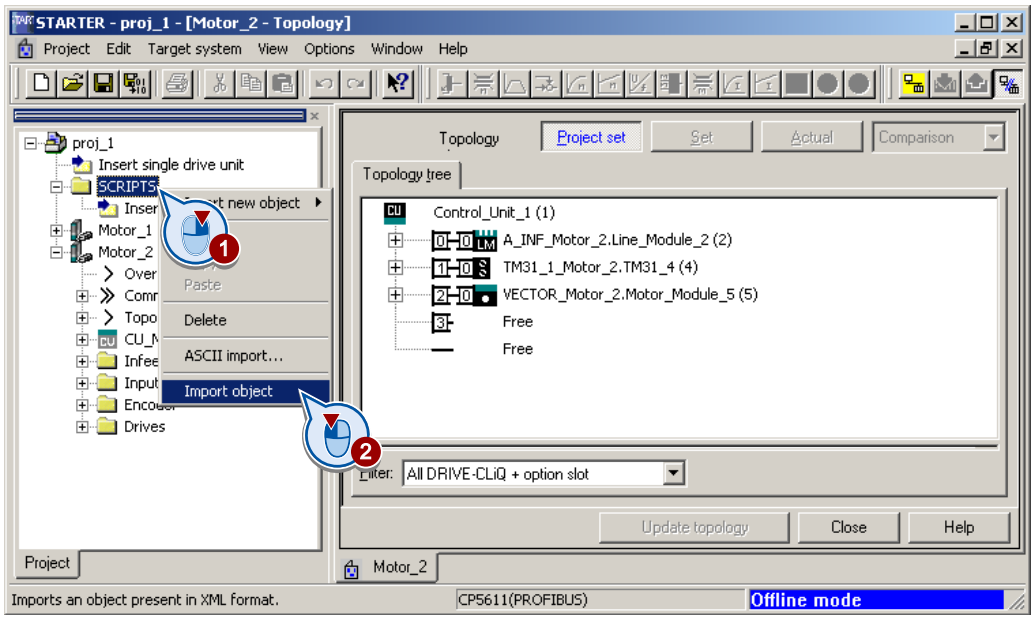


1. Right-click the project in offline mode in the project navigator to open the project's context menu.
2. Select > "**Expert**" in the context menu.
3. Left-click > "**Insert script folder**" to insert a new script folder into the project.

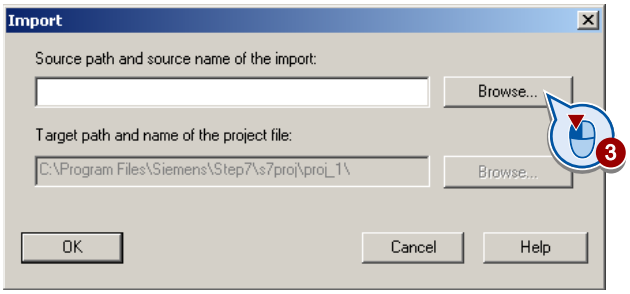
Your inserted script folder should look like this:



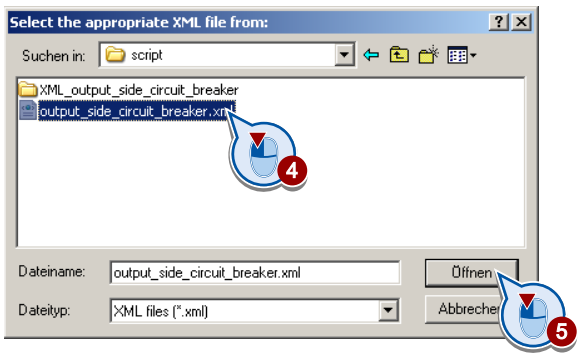
Importing the script



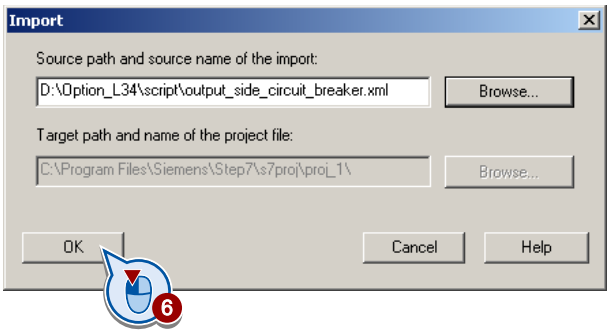
1. Right-click the > "**SCRIPTS**" folder in the project navigator to open the context menu of the script folder.
2. Left-click > "**Import object**" in the context menu of the script folder to open the Import window.



3. Left-click the > "**Browse**" button in the Import window. The Explorer window for the script import will open.

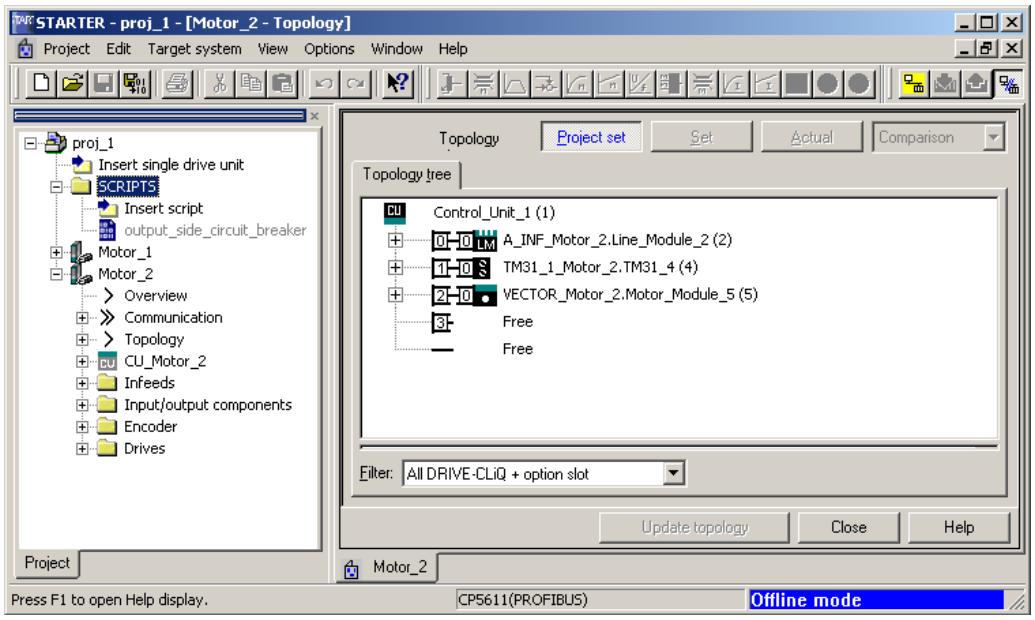


4. Now select the path to the XML script from the customer DVD (e.g. D:\99 SOFTWARE\SCRIPT_OptionL34) or to any memory location on your hard disk. Left-click the XML script > "**output_side_circuit_breaker.xml**".
5. Left-click the > "**Open**" button in the Explorer window to accept the path to the script.



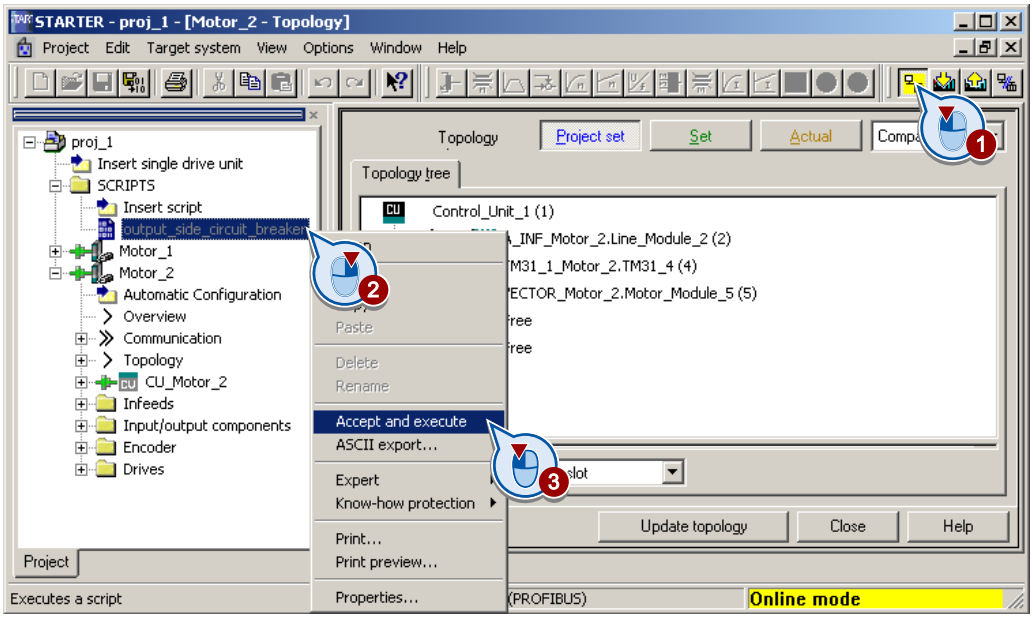
6. Left-click the > "**OK**" button in the Import window to import the script into the project.

Your inserted script should look like this:

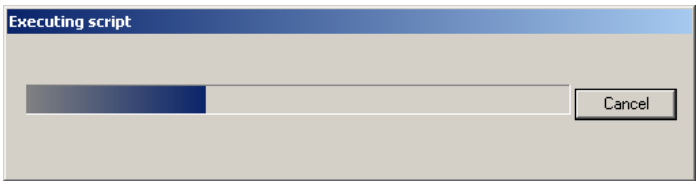


Accepting and executing the script

For the following steps, you must have the project in online mode.



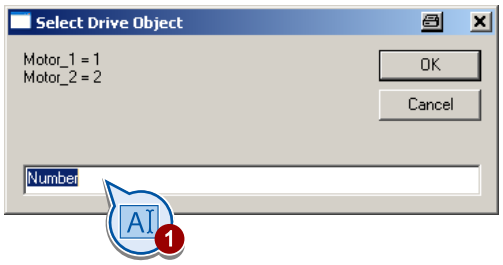
1. Left-click > "**Connect to target system**" in the toolbar.
2. Right-click the script > "**output_side_circuit_breaker**" in the project navigator to open the context menu of the script.
3. Then left-click > "**Accept and execute**" in the context menu. The script is saved and executed.



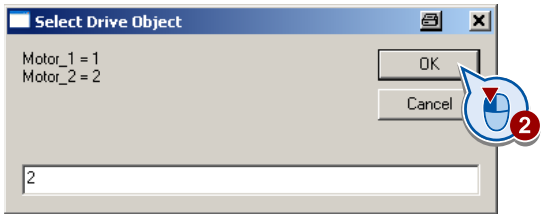
A progress display will be displayed while the script is executing. The user interface of the application is blocked while the script is executing.

Selecting the drive objects (DO)

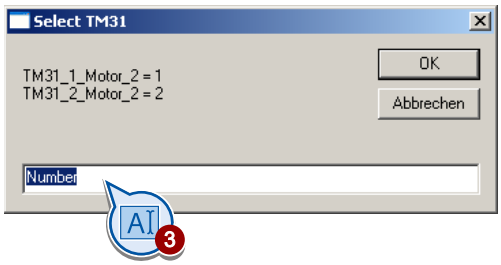
If several drive objects (DO) and/or several input/output components are available in the project (e.g. Terminal Module TM31), you will be requested to select the desired object and/or component.



1. Select the desired drive object (DO) by entering the corresponding number.

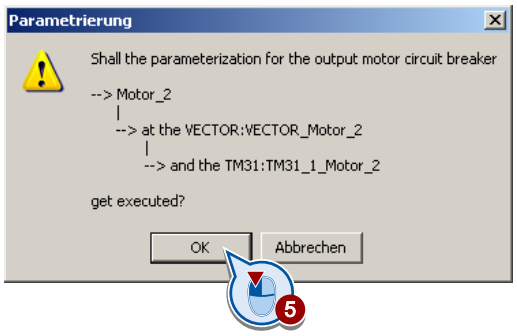


2. Confirm your selection with "**OK**".

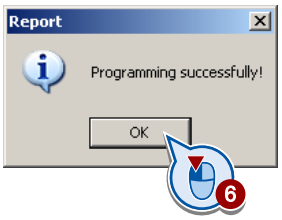


3. Select the desired input/output component (TM31) by entering the corresponding number.

4. Confirm your selection with "**OK**".



5. Confirm your selection with "**OK**", when you have selected the correct drive object (DO) and/or input/output component (TM31).



6. If the report window appears showing "Programming successful", parameter assignment has been completed successfully. Confirm with "**OK**".

Note

If the script has not been executed after approx. 3 min, cancel and restart the process again.

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