

# Solid-state Switching Devices for Resistive Loads

## 3RF29 Function Modules

General data

### Overview

#### Function modules for SIRIUS 3RF2 solid-state switching devices

A wide variety of applications requires an expanded functionality. These requirements are easily met by using our function modules. For assembly, they are simply clicked into place on the solid-state relay or contactor to establish the required connections.

The plug-in connection for controlling the solid-state switching devices can continue to be used without a problem. The external connections have screw terminals.

The following function modules are offered:

- Converters
- Load monitoring
- Heating current monitoring
- Power controllers
- Power regulators

With the exception of the converters, the function modules can only be used with single-phase solid-state switching devices.

#### Recommended assignment of the function modules to the 3RF21 single-phase solid-state relays

Type	Accessories					
	Converters	Load monitoring Basic	Extended <sup>1)</sup>	Heating current monitoring <sup>1)</sup>	Power controllers <sup>1)</sup>	Power regulators <sup>1)</sup>
<b>Type current = 20 A</b>						
<b>3RF21 20-1A.02</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA13	--	3RF29 20-0KA13	3RF29 20-0HA13
<b>3RF21 20-1A.04</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
<b>3RF21 20-1A.22</b>	--	--	3RF29 20-0GA33	--	--	--
<b>3RF21 20-1A.24</b>	--	--	3RF29 20-0GA36	--	--	--
<b>3RF21 20-1A.42</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA13	--	3RF29 20-0KA13	3RF29 20-0HA13
<b>3RF21 20-1A.45</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
<b>3RF21 20-1B.04</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
<b>3RF21 20-2A.02</b>	3RF29 00-0EA18	--	--	--	--	--
<b>3RF21 20-2A.04</b>	3RF29 00-0EA18	--	--	--	--	--
<b>3RF21 20-2A.22</b>	--	--	--	--	--	--
<b>3RF21 20-2A.24</b>	--	--	--	--	--	--
<b>3RF21 20-2A.42</b>	3RF29 00-0EA18	--	--	--	--	--
<b>3RF21 20-2A.45</b>	3RF29 00-0EA18	--	--	--	--	--
<b>3RF21 20-3A.02</b>	3RF29 00-0EA18	--	3RF29 20-0GA13	--	3RF29 20-0KA13	3RF29 20-0HA13
<b>3RF21 20-3A.04</b>	3RF29 00-0EA18	--	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
<b>3RF21 20-3A.22</b>	--	--	3RF29 20-0GA33	--	3RF29 20-0KA13	3RF29 20-0HA13
<b>3RF21 20-3A.24</b>	--	--	3RF29 20-0GA36	--	3RF29 20-0KA16	3RF29 20-0HA16
<b>Type current = 30 A</b>						
<b>3RF21 30-1A.02</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA13	--	3RF29 50-0KA13	3RF29 50-0HA13
<b>3RF21 30-1A.04</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF21 30-1A.06</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF21 30-1A.22</b>	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33
<b>3RF21 30-1A.24</b>	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
<b>3RF21 30-1A.26</b>	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
<b>3RF21 30-1A.42</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA13	--	3RF29 50-0KA13	3RF29 50-0HA13
<b>3RF21 30-1A.45</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF21 30-1B.04</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>Type current = 50 A</b>						
<b>3RF21 50-1A.02</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA13	--	3RF29 50-0KA13	3RF29 50-0HA13
<b>3RF21 50-1A.04</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF21 50-1A.06</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF21 50-1A.22</b>	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33
<b>3RF21 50-1A.24</b>	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
<b>3RF21 50-1A.26</b>	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
<b>3RF21 50-1A.45</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF21 50-1B.04</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF21 50-1B.06</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF21 50-1B.22</b>	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33
<b>3RF21 50-2A.02</b>	3RF29 00-0EA18	--	--	--	--	--
<b>3RF21 50-2A.04</b>	3RF29 00-0EA18	--	--	--	--	--
<b>3RF21 50-2A.06</b>	3RF29 00-0EA18	--	--	--	--	--
<b>3RF21 50-2A.14</b>	3RF29 00-0EA18	--	--	--	--	--
<b>3RF21 50-2A.22</b>	--	--	--	--	--	--
<b>3RF21 50-2A.24</b>	--	--	--	--	--	--
<b>3RF21 50-2A.26</b>	--	--	--	--	--	--
<b>3RF21 50-3A.02</b>	3RF29 00-0EA18	--	3RF29 50-0GA13	--	3RF29 50-0KA13	3RF29 50-0HA13
<b>3RF21 50-3A.04</b>	3RF29 00-0EA18	--	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF21 50-3A.06</b>	3RF29 00-0EA18	--	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF21 50-3A.22</b>	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33
<b>3RF21 50-3A.24</b>	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
<b>3RF21 50-3A.26</b>	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36

<sup>1)</sup> For line voltages in the range from 110 to 230 V, the versions of the 3RF29 ...0.A13 function modules can also be combined with more voltage-resistant versions of the solid-state relays (3RF21 ...-...4, ...5 or ...6).

# Solid-state Switching Devices for Resistive Loads

## 3RF29 Function Modules

### General data

Type	Accessories					
	Converters	Load monitoring		Heating current monitoring <sup>1)</sup>	Power controllers <sup>1)</sup>	Power regulators <sup>1)</sup>
		Basic	Extended <sup>1)</sup>			
<b>Type current = 70 A</b>						
<b>3RF21 70-1A.02</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA13	--	3RF29 50-0KA13	3RF29 50-0HA13
<b>3RF21 70-1A.04</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF21 70-1A.05</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF21 70-1A.06</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF21 70-1A.22</b>	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33
<b>3RF21 70-1A.24</b>	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
<b>3RF21 70-1A.26</b>	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
<b>3RF21 70-1A.45</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF21 70-1B.04</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF21 70-1C.04</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>Type current = 90 A</b>						
<b>3RF21 90-1A.02</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA13	--	3RF29 50-0KA13	3RF29 50-0HA13
<b>3RF21 90-1A.04</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF21 90-1A.06</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF21 90-1A.22</b>	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33
<b>3RF21 90-1A.24</b>	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
<b>3RF21 90-1A.26</b>	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
<b>3RF21 90-1A.45</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF21 90-1B.04</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF21 90-2A.02</b>	3RF29 00-0EA18	--	--	--	--	--
<b>3RF21 90-2A.04</b>	3RF29 00-0EA18	--	--	--	--	--
<b>3RF21 90-2A.06</b>	3RF29 00-0EA18	--	--	--	--	--
<b>3RF21 90-2A.22</b>	--	--	--	--	--	--
<b>3RF21 90-2A.24</b>	--	--	--	--	--	--
<b>3RF21 90-2A.26</b>	--	--	--	--	--	--
<b>3RF21 90-3A.02</b>	3RF29 00-0EA18	--	3RF29 90-0GA13	--	3RF29 90-0KA13	3RF29 90-0HA13
<b>3RF21 90-3A.04</b>	3RF29 00-0EA18	--	3RF29 90-0GA16	3RF29 32-0JA16	3RF29 90-0KA16	3RF29 90-0HA16
<b>3RF21 90-3A.06</b>	3RF29 00-0EA18	--	3RF29 90-0GA16	3RF29 32-0JA16	3RF29 90-0KA16	3RF29 90-0HA16
<b>3RF21 90-3A.22</b>	--	--	3RF29 90-0GA33	--	--	3RF29 90-0HA33
<b>3RF21 90-3A.24</b>	--	--	3RF29 90-0GA36	--	--	3RF29 90-0HA36
<b>3RF21 90-3A.26</b>	--	--	3RF29 90-0GA36	--	--	3RF29 90-0HA36
<b>3RF21 90-3A.44</b>	3RF29 00-0EA18	--	3RF29 90-0GA16	3RF29 32-0JA16	3RF29 90-0KA16	3RF29 90-0HA16

<sup>1)</sup> For line voltages in the range from 110 to 230 V, the versions of the 3RF29 ...0.A13 function modules can also be combined with more voltage-resistant versions of the solid-state relays (3RF21 ...4 , ...5 or ...6).

### Recommended assignment of the function modules to the 3RF22 three-phase solid-state relays

Type	Accessories					
	Converters	Load monitoring		Heating current monitoring	Power controllers	Power regulators
		Basic	Extended			
<b>Type current up to 55 A</b>						
<b>3RF22 ...1AA..</b>	3RF29 00-0EA18	--	--	--	--	--
<b>3RF22 ...2AA..</b>	3RF29 00-0EA18	--	--	--	--	--
<b>3RF22 ...3AA..</b>	3RF29 00-0EA18	--	--	--	--	--

### Recommended assignment of the function modules to the 3RF23 single-phase solid-state contactors

Type	Accessories					
	Converters	Load monitoring		Heating current monitoring <sup>1)</sup>	Power controllers <sup>1)</sup>	Power regulators <sup>1)</sup>
		Basic	Extended <sup>1)</sup>			
<b>Type current <math>I_e = 10.5 A</math></b>						
<b>3RF23 10-1A.02</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA13	3RF29 16-0JA13	3RF29 20-0KA13	3RF29 20-0HA13
<b>3RF23 10-1A.04</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
<b>3RF23 10-1A.06</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
<b>3RF23 10-1A.12</b>	3RF29 00-0EA18	--	3RF29 20-0GA13	3RF29 16-0JA13	3RF29 20-0KA13	3RF29 20-0HA13
<b>3RF23 10-1A.14</b>	3RF29 00-0EA18	--	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
<b>3RF23 10-1A.22</b>	--	--	3RF29 20-0GA33	--	--	3RF29 20-0HA33
<b>3RF23 10-1A.24</b>	--	--	3RF29 20-0GA36	--	--	3RF29 20-0HA36
<b>3RF23 10-1A.26</b>	--	--	3RF29 20-0GA36	--	--	3RF29 20-0HA36
<b>3RF23 10-1A.44</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
<b>3RF23 10-1A.45</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16

<sup>1)</sup> For line voltages in the range from 110 to 230 V, the versions of the 3RF29 ...0.A13 function modules can also be combined with more voltage-resistant versions of the solid-state contactors (3RF23 ...4 , ...5 or ...6).

# Solid-state Switching Devices for Resistive Loads

## 3RF29 Function Modules

### General data

Type	Accessories					
	Converters	Load monitoring		Heating current monitoring <sup>1)</sup>	Power controllers <sup>1)</sup>	Power regulators <sup>1)</sup>
		Basic	Extended <sup>1)</sup>			
<b>Type current <math>I_e = 10.5 \text{ A}</math></b>						
<b>3RF23 10-1B.02</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA13	3RF29 16-0JA13	3RF29 20-0KA13	3RF29 20-0HA13
<b>3RF23 10-1B.04</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
<b>3RF23 10-1B.06</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
<b>3RF23 10-1B.22</b>	--	--	3RF29 20-0GA33	--	--	3RF29 20-0HA33
<b>3RF23 10-1B.24</b>	--	--	3RF29 20-0GA36	--	--	3RF29 20-0HA36
<b>3RF23 10-1B.26</b>	--	--	3RF29 20-0GA36	--	--	3RF29 20-0HA36
<b>3RF23 10-2A.02</b>	3RF29 00-0EA18	--	--	--	--	--
<b>3RF23 10-2A.04</b>	3RF29 00-0EA18	--	--	--	--	--
<b>3RF23 10-2A.06</b>	3RF29 00-0EA18	--	--	--	--	--
<b>3RF23 10-2A.22</b>	--	--	--	--	--	--
<b>3RF23 10-2A.24</b>	--	--	--	--	--	--
<b>3RF23 10-2A.26</b>	--	--	--	--	--	--
<b>3RF23 10-3A.02</b>	3RF29 00-0EA18	--	3RF29 20-0GA13	3RF29 16-0JA13	3RF29 20-0KA13	3RF29 20-0HA13
<b>3RF23 10-3A.04</b>	3RF29 00-0EA18	--	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
<b>3RF23 10-3A.06</b>	3RF29 00-0EA18	--	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
<b>3RF23 10-3A.22</b>	--	--	3RF29 20-0GA33	--	--	3RF29 20-0HA33
<b>3RF23 10-3A.24</b>	--	--	3RF29 20-0GA36	--	--	3RF29 20-0HA36
<b>3RF23 10-3A.26</b>	--	--	3RF29 20-0GA36	--	--	3RF29 20-0HA36
<b>Type current <math>I_e = 20 \text{ A}</math></b>						
<b>3RF23 20-1A.02</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA13	--	3RF29 20-0KA13	3RF29 20-0HA13
<b>3RF23 20-1A.04</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
<b>3RF23 20-1A.06</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
<b>3RF23 20-1A.14</b>	3RF29 00-0EA18	--	3RF29 20-0GA16	--	3RF29 20-0KA16	3RF29 20-0HA16
<b>3RF23 20-1A.22</b>	--	--	3RF29 20-0GA33	--	--	3RF29 20-0HA33
<b>3RF23 20-1A.24</b>	--	--	3RF29 20-0GA36	--	--	3RF29 20-0HA36
<b>3RF23 20-1A.26</b>	--	--	3RF29 20-0GA36	--	--	3RF29 20-0HA36
<b>3RF23 20-1A.44</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
<b>3RF23 20-1A.45</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
<b>3RF23 20-1B.02</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA13	--	3RF29 20-0KA13	3RF29 20-0HA13
<b>3RF23 20-1B.04</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
<b>3RF23 20-1B.06</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
<b>3RF23 20-1B.22</b>	--	--	3RF29 20-0GA33	--	--	3RF29 20-0HA33
<b>3RF23 20-1B.24</b>	--	--	3RF29 20-0GA36	--	--	3RF29 20-0HA36
<b>3RF23 20-1B.26</b>	--	--	3RF29 20-0GA36	--	--	3RF29 20-0HA36
<b>3RF23 20-1B.44</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
<b>3RF23 20-1C.02</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA13	--	3RF29 20-0KA13	3RF29 20-0HA13
<b>3RF23 20-1C.04</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
<b>3RF23 20-1C.22</b>	--	--	3RF29 20-0GA33	--	--	3RF29 20-0HA33
<b>3RF23 20-1C.24</b>	--	--	3RF29 20-0GA36	--	--	3RF29 20-0HA36
<b>3RF23 20-1C.44</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
<b>3RF23 20-1D.02</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA13	--	3RF29 20-0KA13	3RF29 20-0HA13
<b>3RF23 20-1D.04</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
<b>3RF23 20-1D.22</b>	--	--	3RF29 20-0GA33	--	--	3RF29 20-0HA33
<b>3RF23 20-1D.24</b>	--	--	3RF29 20-0GA36	--	--	3RF29 20-0HA36
<b>3RF23 20-1D.44</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
<b>3RF23 20-2A.02</b>	3RF29 00-0EA18	--	--	--	--	--
<b>3RF23 20-2A.04</b>	3RF29 00-0EA18	--	--	--	--	--
<b>3RF23 20-2A.06</b>	3RF29 00-0EA18	--	--	--	--	--
<b>3RF23 20-2A.22</b>	--	--	--	--	--	--
<b>3RF23 20-2A.24</b>	--	--	--	--	--	--
<b>3RF23 20-2A.26</b>	--	--	--	--	--	--
<b>3RF23 20-2C.02</b>	3RF29 00-0EA18	--	--	--	--	--
<b>3RF23 20-2C.04</b>	3RF29 00-0EA18	--	--	--	--	--
<b>3RF23 20-2C.22</b>	--	--	--	--	--	--
<b>3RF23 20-2C.24</b>	--	--	--	--	--	--
<b>3RF23 20-2D.22</b>	--	--	--	--	--	--
<b>3RF23 20-2D.24</b>	--	--	--	--	--	--
<b>3RF23 20-3A.02</b>	3RF29 00-0EA18	--	3RF29 20-0GA13	--	3RF29 20-0KA13	3RF29 20-0HA13
<b>3RF23 20-3A.04</b>	3RF29 00-0EA18	--	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
<b>3RF23 20-3A.06</b>	3RF29 00-0EA18	--	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
<b>3RF23 20-3A.22</b>	--	--	3RF29 20-0GA33	--	--	3RF29 20-0HA33
<b>3RF23 20-3A.24</b>	--	--	3RF29 20-0GA36	--	--	3RF29 20-0HA36
<b>3RF23 20-3A.26</b>	--	--	3RF29 20-0GA36	--	--	3RF29 20-0HA36
<b>3RF23 20-3A.44</b>	3RF29 00-0EA18	--	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16

<sup>1)</sup> For line voltages in the range from 110 to 230 V, the versions of the 3RF29 ...0.A13 function modules can also be combined with more voltage-resistant versions of the solid-state contactors (3RF23 ...4 , ...5 or ...6).

# Solid-state Switching Devices for Resistive Loads

## 3RF29 Function Modules

### General data

Type	Accessories					Power controllers <sup>2)</sup>	Power regulators <sup>2)</sup>
	Converters	Load monitoring Basic <sup>1)</sup>		Extended <sup>2)</sup>	Heating current monitoring <sup>2)</sup>		
<b>Type current <math>I_e = 20\text{ A}</math></b>							
<b>3RF23 20-3D.02</b>	3RF29 00-0EA18	--	--	3RF29 20-0GA13	--	3RF29 20-0KA13	3RF29 20-0HA13
<b>3RF23 20-3D.04</b>	3RF29 00-0EA18	--	--	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
<b>3RF23 20-3D.22</b>	--	--	--	3RF29 20-0GA33	--	--	3RF29 20-0HA33
<b>3RF23 20-3D.24</b>	--	--	--	3RF29 20-0GA36	--	--	3RF29 20-0HA36
<b>Type current <math>I_e = 30\text{ A}</math></b>							
<b>3RF23 30-1A.02</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA13	--	3RF29 50-0KA13	3RF29 50-0HA13
<b>3RF23 30-1A.04</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF23 30-1A.06</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF23 30-1A.14</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF23 30-1A.22</b>	--	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33
<b>3RF23 30-1A.24</b>	--	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
<b>3RF23 30-1A.25</b>	--	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
<b>3RF23 30-1A.26</b>	--	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
<b>3RF23 30-1A.44</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF23 30-1A.45</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF23 30-1B.02</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA13	--	3RF29 50-0KA13	3RF29 50-0HA13
<b>3RF23 30-1B.04</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF23 30-1B.06</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF23 30-1B.22</b>	--	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33
<b>3RF23 30-1B.24</b>	--	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
<b>3RF23 30-1B.26</b>	--	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
<b>3RF23 30-1B.44</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF23 30-1C.02</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA13	--	--	3RF29 50-0HA13
<b>3RF23 30-1D.44</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF23 30-3A.02</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA13	--	3RF29 50-0KA13	3RF29 50-0HA13
<b>3RF23 30-3A.04</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF23 30-3A.06</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF23 30-3A.22</b>	--	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33
<b>3RF23 30-3A.24</b>	--	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
<b>3RF23 30-3A.26</b>	--	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
<b>3RF23 30-3A.44</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>Type current <math>I_e = 40\text{ A}</math></b>							
<b>3RF23 40-1A.02</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA13	--	3RF29 50-0KA13	3RF29 50-0HA13
<b>3RF23 40-1A.04</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF23 40-1A.06</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF23 40-1A.14</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF23 40-1A.22</b>	--	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33
<b>3RF23 40-1A.24</b>	--	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
<b>3RF23 40-1A.26</b>	--	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
<b>3RF23 40-1A.45</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF23 40-1B.02</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA13	--	3RF29 50-0KA13	3RF29 50-0HA13
<b>3RF23 40-1B.04</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA13	--	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF23 40-1B.06</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA13	--	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF23 40-1B.22</b>	--	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33
<b>3RF23 40-1B.24</b>	--	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
<b>3RF23 40-1B.26</b>	--	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
<b>3RF23 40-3A.02</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA13	--	3RF29 50-0KA13	3RF29 50-0HA13
<b>3RF23 40-3A.04</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF23 40-3A.06</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF23 40-3A.22</b>	--	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33
<b>3RF23 40-3A.24</b>	--	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
<b>3RF23 40-3A.26</b>	--	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
<b>3RF23 40-3A.45</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16
<b>Type current <math>I_e = 50\text{ A}</math></b>							
<b>3RF23 50-1A.02</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA13	--	3RF29 50-0KA13	3RF29 50-0HA13
<b>3RF23 50-1A.04</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF23 50-1A.06</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF23 50-1A.14</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16
<b>3RF23 50-1A.22</b>	--	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33
<b>3RF23 50-1A.24</b>	--	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
<b>3RF23 50-1A.26</b>	--	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
<b>3RF23 50-1A.45</b>	3RF29 00-0EA18	--	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16

<sup>1)</sup> The technical data must be considered when selecting the function modules. Further combinations may be possible if the solid-state relays and solid-state contactors are not fully utilized; e.g. load monitoring for 20 A can also be implemented using a solid-state contactor for 30 A if the load current during operation does not exceed 20 A.

<sup>2)</sup> For line voltages in the range from 110 to 230 V, the versions of the 3RF29 ...-0.A13 function modules can also be combined with more voltage-resistant versions of the solid-state contactors (3RF23 ...-...4 , -...5 or -...6).

# Solid-state Switching Devices for Resistive Loads

## 3RF29 Function Modules

### General data

Type	Accessories					Power controllers <sup>1)</sup>	Power regulators <sup>1)</sup>
	Converters	Load monitoring		Heating current monitoring <sup>1)</sup>			
		Basic	Extended <sup>1)</sup>				
<b>Type current <math>I_e = 50\text{ A}</math></b>							
<b>3RF23 50-1B.02</b>	3RF29 00-0EA18	--	3RF29 50-0GA13	--	3RF29 50-0KA13	3RF29 50-0HA13	
<b>3RF23 50-1B.04</b>	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16	
<b>3RF23 50-1B.06</b>	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16	
<b>3RF23 50-1B.22</b>	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33	
<b>3RF23 50-1B.24</b>	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36	
<b>3RF23 50-1B.26</b>	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36	
<b>3RF23 50-1B.44</b>	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16	
<b>3RF23 50-3A.02</b>	3RF29 00-0EA18	--	3RF29 50-0GA13	--	3RF29 50-0KA13	3RF29 50-0HA13	
<b>3RF23 50-3A.04</b>	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16	
<b>3RF23 50-3A.06</b>	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16	
<b>3RF23 50-3A.22</b>	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33	
<b>3RF23 50-3A.24</b>	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36	
<b>3RF23 50-3A.26</b>	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36	
<b>3RF23 50-3A.44</b>	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16	
<b>Type current <math>I_e = 70\text{ A}</math></b>							
<b>3RF23 70-1B.02</b>	3RF29 00-0EA18	--	3RF29 50-0GA13	--	3RF29 50-0KA13	3RF29 50-0HA13	
<b>3RF23 70-1B.04</b>	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16	
<b>3RF23 70-1B.06</b>	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16	
<b>3RF23 70-1B.22</b>	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33	
<b>3RF23 70-1B.24</b>	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36	
<b>3RF23 70-1B.26</b>	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36	
<b>3RF23 70-3A.02</b>	3RF29 00-0EA18	--	3RF29 90-0GA13	--	3RF29 90-0KA13	3RF29 90-0HA13	
<b>3RF23 70-3A.04</b>	3RF29 00-0EA18	--	3RF29 90-0GA16	--	3RF29 90-0KA16	3RF29 90-0HA16	
<b>3RF23 70-3A.06</b>	3RF29 00-0EA18	--	3RF29 90-0GA16	--	3RF29 90-0KA16	3RF29 90-0HA16	
<b>3RF23 70-3A.22</b>	--	--	3RF29 90-0GA33	--	--	3RF29 90-0HA33	
<b>3RF23 70-3A.24</b>	--	--	3RF29 90-0GA36	--	--	3RF29 90-0HA36	
<b>3RF23 70-3A.26</b>	--	--	3RF29 90-0GA36	--	--	3RF29 90-0HA36	
<b>3RF23 70-3A.45</b>	3RF29 00-0EA18	--	3RF29 90-0GA16	--	3RF29 90-0KA16	3RF29 90-0HA16	
<b>3RF23 70-3B.02</b>	3RF29 00-0EA18	--	3RF29 90-0GA13	--	3RF29 90-0KA13	3RF29 90-0HA13	
<b>3RF23 70-3B.04</b>	3RF29 00-0EA18	--	3RF29 90-0GA16	--	3RF29 90-0KA16	3RF29 90-0HA16	
<b>3RF23 70-3B.06</b>	3RF29 00-0EA18	--	3RF29 90-0GA16	--	3RF29 90-0KA16	3RF29 90-0HA16	
<b>3RF23 70-3B.22</b>	--	--	3RF29 90-0GA33	--	--	3RF29 90-0HA33	
<b>3RF23 70-3B.24</b>	--	--	3RF29 90-0GA36	--	--	3RF29 90-0HA36	
<b>3RF23 70-3B.26</b>	--	--	3RF29 90-0GA36	--	--	3RF29 90-0HA36	
<b>Type current <math>I_e = 90\text{ A}</math></b>							
<b>3RF23 90-1B.02</b>	3RF29 00-0EA18	--	3RF29 50-0GA13	--	3RF29 50-0KA13	3RF29 50-0HA13	
<b>3RF23 90-1B.04</b>	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16	
<b>3RF23 90-1B.06</b>	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16	
<b>3RF23 90-1B.22</b>	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33	
<b>3RF23 90-1B.24</b>	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36	
<b>3RF23 90-1B.26</b>	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36	
<b>3RF23 90-3A.02</b>	3RF29 00-0EA18	--	3RF29 90-0GA13	--	3RF29 90-0KA13	3RF29 90-0HA13	
<b>3RF23 90-3A.04</b>	3RF29 00-0EA18	--	3RF29 90-0GA16	--	3RF29 90-0KA16	3RF29 90-0HA16	
<b>3RF23 90-3A.06</b>	3RF29 00-0EA18	--	3RF29 90-0GA16	--	3RF29 90-0KA16	3RF29 90-0HA16	
<b>3RF23 90-3A.22</b>	--	--	3RF29 90-0GA33	--	--	3RF29 90-0HA33	
<b>3RF23 90-3A.24</b>	--	--	3RF29 90-0GA36	--	--	3RF29 90-0HA36	
<b>3RF23 90-3A.26</b>	--	--	3RF29 90-0GA36	--	--	3RF29 90-0HA36	
<b>3RF23 90-3A.45</b>	3RF29 00-0EA18	--	3RF29 90-0GA16	--	3RF29 90-0KA16	3RF29 90-0HA16	
<b>3RF23 90-3B.02</b>	3RF29 00-0EA18	--	3RF29 90-0GA13	--	3RF29 90-0KA13	3RF29 90-0HA13	
<b>3RF23 90-3B.04</b>	3RF29 00-0EA18	--	3RF29 90-0GA16	--	3RF29 90-0KA16	3RF29 90-0HA16	
<b>3RF23 90-3B.06</b>	3RF29 00-0EA18	--	3RF29 90-0GA16	--	3RF29 90-0KA16	3RF29 90-0HA16	
<b>3RF23 90-3B.22</b>	--	--	3RF29 90-0GA33	--	--	3RF29 90-0HA33	
<b>3RF23 90-3B.24</b>	--	--	3RF29 90-0GA36	--	--	3RF29 90-0HA36	
<b>3RF23 90-3B.26</b>	--	--	3RF29 90-0GA36	--	--	3RF29 90-0HA36	

<sup>1)</sup> For line voltages in the range from 110 to 230 V, the versions of the 3RF29 ...0.A13 function modules can also be combined with more voltage-resistant versions of the solid-state contactors (3RF23 ...4 , ...5 or ...6).

### Recommended assignment of the function modules to the 3RF24 three-phase solid-state contactors

Type	Accessories					Power controllers	Power regulators
	Converters	Load monitoring		Heating current monitoring			
		Basic	Extended				
<b>Type current up to 50 A</b>							
<b>3RF24 ...-1..4.</b>	3RF29 00-0EA18	--	--	--	--	--	
<b>3RF24 ...-2..4.</b>	--	--	--	--	--	--	
<b>3RF24 ...-3..4.</b>	3RF29 00-0EA18	--	--	--	--	--	
<b>3RF24 ...-...5.</b>	--	--	--	--	--	--	