

# Solid-State Switching Devices for Resistive Loads

## 3RF29 Function Modules

### General data

#### Overview

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

A great variety of applications demand an expanded range of functionality. With our function modules, these requirements can be met really easily. The modules are mounted simply by clicking them into place; straight away the necessary connections are made with the solid-state relay or contactor. The plug-in connection to control the solid-state switching devices can simply remain in use.

The following function modules are available:

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

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

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

Order No.	Accessories					
	Converters	Load monitoring Basic	Extended	Heating current monitoring	Power controllers <sup>1)</sup>	Power regulators <sup>1)</sup>
<b>Type current = 20 A</b>						
3RF21 20-1A.02	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA13	--	3RF29 20-0KA13	3RF29 20-0HA13
3RF21 20-1A.04	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
3RF21 20-1A.22	--	--	3RF29 20-0GA33	--	--	--
3RF21 20-1A.24	--	--	3RF29 20-0GA36	--	--	--
3RF21 20-1A.42	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA13	--	3RF29 20-0KA13	3RF29 20-0HA13
3RF21 20-1A.45	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
3RF21 20-1B.04	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
3RF21 20-2A.02	3RF29 00-0EA18	--	--	--	--	--
3RF21 20-2A.04	3RF29 00-0EA18	--	--	--	--	--
3RF21 20-2A.22	--	--	--	--	--	--
3RF21 20-2A.24	--	--	--	--	--	--
3RF21 20-2A.42	3RF29 00-0EA18	--	--	--	--	--
3RF21 20-2A.45	3RF29 00-0EA18	--	--	--	--	--
3RF21 20-3A.02	3RF29 00-0EA18	--	3RF29 20-0GA13	--	--	3RF29 20-0HA13
3RF21 20-3A.04	3RF29 00-0EA18	--	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
3RF21 20-3A.22	--	--	3RF29 20-0GA33	--	3RF29 20-0KA13	3RF29 20-0HA13
3RF21 20-3A.24	--	--	3RF29 20-0GA36	--	3RF29 20-0KA16	3RF29 20-0HA16
<b>Type current = 30 A</b>						
3RF21 30-1A.02	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA13	--	--	3RF29 50-0HA13
3RF21 30-1A.04	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
3RF21 30-1A.06	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
3RF21 30-1A.22	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33
3RF21 30-1A.24	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
3RF21 30-1A.26	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
3RF21 30-1A.42	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA13	--	--	3RF29 50-0HA13
3RF21 30-1A.45	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
3RF21 30-1B.04	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
<b>Type current = 50 A</b>						
3RF21 50-1A.02	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA13	--	--	3RF29 50-0HA13
3RF21 50-1A.04	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
3RF21 50-1A.06	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
3RF21 50-1A.22	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33
3RF21 50-1A.24	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
3RF21 50-1A.26	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
3RF21 50-1A.45	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
3RF21 50-1B.04	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
3RF21 50-1B.06	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
3RF21 50-1B.22	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33
3RF21 50-2A.02	3RF29 00-0EA18	--	--	--	--	--
3RF21 50-2A.04	3RF29 00-0EA18	--	--	--	--	--
3RF21 50-2A.06	3RF29 00-0EA18	--	--	--	--	--
3RF21 50-2A.14	3RF29 00-0EA18	--	--	--	--	--
3RF21 50-2A.22	--	--	--	--	--	--
3RF21 50-2A.24	--	--	--	--	--	--
3RF21 50-2A.26	--	--	--	--	--	--
3RF21 50-3A.02	3RF29 00-0EA18	--	3RF29 50-0GA13	--	--	3RF29 50-0HA13
3RF21 50-3A.04	3RF29 00-0EA18	--	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
3RF21 50-3A.06	3RF29 00-0EA18	--	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
3RF21 50-3A.22	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33
3RF21 50-3A.24	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
3RF21 50-3A.26	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36

1) The use of power controllers/regulators is also possible on zero-point switching versions for full-wave control mode. The generalized phase control mode is recommended only for the combination with instantaneous switching versions.

# Solid-State Switching Devices for Resistive Loads

## 3RF29 Function Modules

### General data

Order No.	Accessories					
	Converters	Load monitoring		Heating current monitoring	Power controllers <sup>1)</sup>	Power regulators <sup>1)</sup>
		Basic	Extended			
<b>Type current = 70 A</b>						
<b>3RF21 70-1A.02</b>	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA13	--	--	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 50-0HA13
<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 90-0HA13
<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

1) The use of power controllers/regulators is also possible on zero-point switching versions for full-wave control mode. The generalized phase control mode is recommended only for the combination with instantaneous switching versions.

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

Order No.	Accessories					
	Converters	Load monitoring		Heating current monitoring	Power controllers	Power regulators
		Basic	Extended			
<b>Type current up to 55 A</b>						
<b>3RF22 ...-1A...</b>	3RF29 00-0EA18	--	--	--	--	--
<b>3RF22 ...-2A...</b>	3RF29 00-0EA18	--	--	--	--	--
<b>3RF22 ...-3A...</b>	3RF29 00-0EA18	--	--	--	--	--

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

Order No.	Accessories					
	Converters	Load monitoring		Heating current monitoring	Power controllers <sup>1)</sup>	Power regulators <sup>1)</sup>
		Basic	Extended			
<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

# Solid-State Switching Devices for Resistive Loads

## 3RF29 Function Modules

### General data

Order No.	Accessories					
	Converters	Load monitoring		Heating current monitoring	Power controllers <sup>1)</sup>	Power regulators <sup>1)</sup>
		Basic	Extended			
<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

1) The use of power controllers/regulators is also possible on zero-point switching versions for full-wave control mode. The generalized phase control mode is recommended only for the combination with instantaneous switching versions.

# Solid-State Switching Devices for Resistive Loads

## 3RF29 Function Modules

### General data

Order No.	Accessories					
	Converters	Load monitoring		Heating current monitoring	Power controllers <sup>1)</sup>	Power regulators <sup>1)</sup>
		Basic	Extended			
<b>Type current <math>I_e = 20\text{ A}</math></b>						
3RF23 20-3D.02	3RF29 00-0EA18	--	3RF29 20-0GA13	--	3RF29 20-0KA13	3RF29 20-0HA13
3RF23 20-3D.04	3RF29 00-0EA18	--	3RF29 20-0GA16	3RF29 32-0JA16	3RF29 20-0KA16	3RF29 20-0HA16
3RF23 20-3D.22	--	--	3RF29 20-0GA33	--	--	3RF29 20-0HA33
3RF23 20-3D.24	--	--	3RF29 20-0GA36	--	--	3RF29 20-0HA36
<b>Type current <math>I_e = 30\text{ A}</math></b>						
3RF23 30-1A.02	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA13	--	--	3RF29 50-0HA13
3RF23 30-1A.04	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
3RF23 30-1A.06	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
3RF23 30-1A.14	3RF29 00-0EA18	--	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
3RF23 30-1A.22	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33
3RF23 30-1A.24	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
3RF23 30-1A.25	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
3RF23 30-1A.26	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
3RF23 30-1A.44	3RF29 00-0EA18	--	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
3RF23 30-1A.45	3RF29 00-0EA18	--	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
3RF23 30-1B.02	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA13	--	--	3RF29 50-0HA13
3RF23 30-1B.04	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
3RF23 30-1B.06	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
3RF23 30-1B.22	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33
3RF23 30-1B.24	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
3RF23 30-1B.26	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
3RF23 30-1B.44	3RF29 00-0EA18	--	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
3RF23 30-1C.02	3RF29 00-0EA18	3RF29 20-0FA08	3RF29 50-0GA13	--	--	3RF29 50-0HA13
3RF23 30-1D.44	3RF29 00-0EA18	--	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
3RF23 30-3A.02	3RF29 00-0EA18	--	3RF29 50-0GA13	--	--	3RF29 50-0HA13
3RF23 30-3A.04	3RF29 00-0EA18	--	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
3RF23 30-3A.066	3RF29 00-0EA18	--	3RF29 50-0GA16	3RF29 32-0JA16	3RF29 50-0KA16	3RF29 50-0HA16
3RF23 30-3A.22	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33
3RF23 30-3A.24	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
3RF23 30-3A.26	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
3RF23 30-3A.44	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>						
3RF23 40-1A.02	3RF29 00-0EA18	--	3RF29 50-0GA13	--	--	3RF29 50-0HA13
3RF23 40-1A.04	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16
3RF23 40-1A.06	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16
3RF23 40-1A.14	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16
3RF23 40-1A.22	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33
3RF23 40-1A.24	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
3RF23 40-1A.26	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
3RF23 40-1A.45	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16
3RF23 40-1B.02	3RF29 00-0EA18	--	3RF29 50-0GA13	--	--	3RF29 50-0HA13
3RF23 40-1B.04	3RF29 00-0EA18	--	3RF29 50-0GA13	--	3RF29 50-0KA16	3RF29 50-0HA16
3RF23 40-1B.06	3RF29 00-0EA18	--	3RF29 50-0GA13	--	3RF29 50-0KA16	3RF29 50-0HA16
3RF23 40-1B.22	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33
3RF23 40-1B.24	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
3RF23 40-1B.26	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
3RF23 40-3A.02	3RF29 00-0EA18	--	3RF29 50-0GA13	--	--	3RF29 50-0HA13
3RF23 40-3A.04	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16
3RF23 40-3A.06	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16
3RF23 40-3A.22	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33
3RF23 40-3A.24	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
3RF23 40-3A.26	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
3RF23 40-3A.45	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16
<b>Type current <math>I_e = 50\text{ A}</math></b>						
3RF23 50-1A.02	3RF29 00-0EA18	--	3RF29 50-0GA13	--	--	3RF29 50-0HA13
3RF23 50-1A.04	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16
3RF23 50-1A.06	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16
3RF23 50-1A.14	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16
3RF23 50-1A.22	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33
3RF23 50-1A.24	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
3RF23 50-1A.26	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36
3RF23 50-1A.45	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16

1) The use of power controllers/regulators is also possible on zero-point switching versions for full-wave control mode. The generalized phase control mode is recommended only for the combination with instantaneous switching versions.

# Solid-State Switching Devices for Resistive Loads

## 3RF29 Function Modules

### General data

Order No.	Accessories		Heating current monitoring	Power controllers <sup>1)</sup>		Power regulators <sup>1)</sup>	
	Converters	Load monitoring Basic      Extended					
<b>Type current <math>I_e = 50</math> A</b>							
3RF23 50-1B.02	3RF29 00-0EA18	--	3RF29 50-0GA13	--	--	3RF29 50-0HA13	
3RF23 50-1B.04	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16	
3RF23 50-1B.06	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16	
3RF23 50-1B.22	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33	
3RF23 50-1B.24	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36	
3RF23 50-1B.26	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36	
3RF23 50-1B.44	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16	
3RF23 50-3A.02	3RF29 00-0EA18	--	3RF29 50-0GA13	--	--	3RF29 50-0HA13	
3RF23 50-3A.04	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16	
3RF23 50-3A.06	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16	
3RF23 50-3A.22	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33	
3RF23 50-3A.24	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36	
3RF23 50-3A.26	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36	
3RF23 50-3A.44	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16	
<b>Type current <math>I_e = 70</math> A</b>							
3RF23 70-1B.02	3RF29 00-0EA18	--	3RF29 50-0GA13	--	--	3RF29 50-0HA13	
3RF23 70-1B.04	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16	
3RF23 70-1B.06	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16	
3RF23 70-1B.22	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33	
3RF23 70-1B.24	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36	
3RF23 70-1B.26	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36	
3RF23 70-3A.02	3RF29 00-0EA18	--	3RF29 90-0GA13	--	--	3RF29 90-0HA13	
3RF23 70-3A.04	3RF29 00-0EA18	--	3RF29 90-0GA16	--	3RF29 90-0KA16	3RF29 90-0HA16	
3RF23 70-3A.06	3RF29 00-0EA18	--	3RF29 90-0GA16	--	3RF29 90-0KA16	3RF29 90-0HA16	
3RF23 70-3A.22	--	--	3RF29 90-0GA33	--	--	3RF29 90-0HA33	
3RF23 70-3A.24	--	--	3RF29 90-0GA36	--	--	3RF29 90-0HA36	
3RF23 70-3A.26	--	--	3RF29 90-0GA36	--	--	3RF29 90-0HA36	
3RF23 70-3A.45	3RF29 00-0EA18	--	3RF29 90-0GA16	--	3RF29 90-0KA16	3RF29 90-0HA16	
3RF23 70-3B.02	3RF29 00-0EA18	--	3RF29 90-0GA13	--	--	3RF29 90-0HA13	
3RF23 70-3B.04	3RF29 00-0EA18	--	3RF29 90-0GA16	--	3RF29 90-0KA16	3RF29 90-0HA16	
3RF23 70-3B.06	3RF29 00-0EA18	--	3RF29 90-0GA16	--	3RF29 90-0KA16	3RF29 90-0HA16	
3RF23 70-3B.22	--	--	3RF29 90-0GA33	--	--	3RF29 90-0HA33	
3RF23 70-3B.24	--	--	3RF29 90-0GA36	--	--	3RF29 90-0HA36	
3RF23 70-3B.26	--	--	3RF29 90-0GA36	--	--	3RF29 90-0HA36	
<b>Type current <math>I_e = 90</math> A</b>							
3RF23 90-1B.02	3RF29 00-0EA18	--	3RF29 50-0GA13	--	--	3RF29 50-0HA13	
3RF23 90-1B.04	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16	
3RF23 90-1B.06	3RF29 00-0EA18	--	3RF29 50-0GA16	--	3RF29 50-0KA16	3RF29 50-0HA16	
3RF23 90-1B.22	--	--	3RF29 50-0GA33	--	--	3RF29 50-0HA33	
3RF23 90-1B.24	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36	
3RF23 90-1B.26	--	--	3RF29 50-0GA36	--	--	3RF29 50-0HA36	
3RF23 90-3A.02	3RF29 00-0EA18	--	3RF29 90-0GA13	--	--	3RF29 90-0HA13	
3RF23 90-3A.04	3RF29 00-0EA18	--	3RF29 90-0GA16	--	3RF29 90-0KA16	3RF29 90-0HA16	
3RF23 90-3A.06	3RF29 00-0EA18	--	3RF29 90-0GA16	--	3RF29 90-0KA16	3RF29 90-0HA16	
3RF23 90-3A.22	--	--	3RF29 90-0GA33	--	--	3RF29 90-0HA33	
3RF23 90-3A.24	--	--	3RF29 90-0GA36	--	--	3RF29 90-0HA36	
3RF23 90-3A.26	--	--	3RF29 90-0GA36	--	--	3RF29 90-0HA36	
3RF23 90-3A.45	3RF29 00-0EA18	--	3RF29 90-0GA16	--	3RF29 90-0KA16	3RF29 90-0HA16	
3RF23 90-3B.02	3RF29 00-0EA18	--	3RF29 90-0GA13	--	--	3RF29 90-0HA13	
3RF23 90-3B.04	3RF29 00-0EA18	--	3RF29 90-0GA16	--	3RF29 90-0KA16	3RF29 90-0HA16	
3RF23 90-3B.06	3RF29 00-0EA18	--	3RF29 90-0GA16	--	3RF29 90-0KA16	3RF29 90-0HA16	
3RF23 90-3B.22	--	--	3RF29 90-0GA33	--	--	3RF29 90-0HA33	
3RF23 90-3B.24	--	--	3RF29 90-0GA36	--	--	3RF29 90-0HA36	
3RF23 90-3B.26	--	--	3RF29 90-0GA36	--	--	3RF29 90-0HA36	

1) The use of power controllers/regulators is also possible on zero-point switching versions for full-wave control mode. The generalized phase control mode is recommended only for the combination with instantaneous switching versions.

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

Order No.	Accessories		Heating current monitoring	Power controllers		Power regulators	
	Converters	Load monitoring Basic      Extended					
<b>Type current up to 50 A</b>							
3RF24 ...1..4.	3RF29 00-0EA18	--	--	--	--	--	--
3RF24 ...2..4.	--	--	--	--	--	--	--
3RF24 ...3..4.	3RF29 00-0EA18	--	--	--	--	--	--
3RF24 ...4..5.	--	--	--	--	--	--	--