

Solid-state contactor 1-phase 3RF2 AC 51 / 10 A / 40 °C 48-600 V / 24 V DC Spring-type terminal



<b>Product brand name</b>	SIRIUS
<b>Product designation</b>	solid-state contactor
<b>Product type designation</b>	3RF23
<b>Manufacturer's article number</b>	
<ul style="list-style-type: none"> <li>• _3 / of the accessories that can be ordered</li> </ul>	<a href="#">3RF2900-0EA18</a>
<b>Product designation</b>	
<ul style="list-style-type: none"> <li>• _3 / of the accessories that can be ordered</li> </ul>	converter

General technical data	
<b>Product function</b>	zero-point switching
Power loss [W] / for rated value of the current / at AC / in hot operating state	11 W
<b>Insulation voltage</b>	
<ul style="list-style-type: none"> <li>• rated value</li> </ul>	600 V
<b>Degree of pollution</b>	3
<b>Protection class IP</b>	IP20
Shock resistance / acc. to IEC 60068-2-27	15g / 11 ms
Vibration resistance / acc. to IEC 60068-2-6	2g
<b>Reference code / acc. to DIN EN 81346-2</b>	Q

### Main circuit

<b>Number of poles / for main current circuit</b>	1
<b>Number of NO contacts / for main contacts</b>	1
<b>Number of NC contacts / for main contacts</b>	0
<b>Operating voltage / at AC</b>	
• at 50 Hz / rated value	48 ... 600 V
• at 60 Hz / rated value	48 ... 600 V
<b>Operating frequency / rated value</b>	50 ... 60 Hz
<b>Operating range relative to the operating voltage / at AC</b>	
• at 50 Hz	40 ... 660 V
• at 60 Hz	40 ... 660 V
<b>Operating current</b>	
• at AC-51 / rated value	10.5 A
• acc. to UL 508 / rated value	9.6 A
<b>Operating current / minimum</b>	100 mA
<b>Rate of voltage rise / at the thyristor / for main contacts / maximum permissible</b>	1 000 V/ $\mu$ s
<b>Blocking voltage / at the thyristor / for main contacts / maximum permissible</b>	1 600 V
<b>Reverse current / of the thyristor</b>	10 mA
<b>Derating temperature</b>	40 °C
<b>Surge current resistance / rated value</b>	400 A
<b>I<sup>2</sup>t value / maximum</b>	800 A <sup>2</sup> ·s

#### Control circuit/ Control

<b>Type of voltage / of the control supply voltage</b>	DC
<b>Control supply voltage / 1</b>	
• at DC / rated value	30 V
• at DC	15 ... 24 V
<b>Control supply voltage</b>	
• at DC / initial value for signal <1> detection	15 V
• at DC / Full-scale value for signal <0> recognition	5 V
<b>Control current / at minimum control supply voltage</b>	
• at DC	13 mA
<b>Control current / at DC / rated value</b>	15 mA
<b>Switch-on delay time</b>	1 ms; additionally max. one half-wave
<b>Off-delay time</b>	1 ms; additionally max. one half-wave
<b>Number of NC contacts / for auxiliary contacts</b>	0
<b>Number of NO contacts / for auxiliary contacts</b>	0
<b>Number of CO contacts / for auxiliary contacts</b>	0

#### Installation/ mounting/ dimensions

<b>Mounting type</b>	screw and snap-on mounting onto 35 mm standard mounting rail
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• Side-by-side mounting	Yes
<b>Height</b>	100 mm
<b>Width</b>	22.5 mm
<b>Depth</b>	91 mm; 94.0 mm up to product revision E05
<b>Installation altitude / at height above sea level / maximum</b>	1 000 m

### Connections/ Terminals

<b>Type of connectable conductor cross-sections</b>	
• for main contacts	
— solid	2x (0.5 ... 2.5 mm <sup>2</sup> )
— finely stranded / with core end processing	2x (0.5 ... 1.5 mm <sup>2</sup> )
— finely stranded / without core end processing	2x (0.5 ... 2.5 mm <sup>2</sup> )
• at AWG conductors / for main contacts	2x (18 ... 14)
<b>Type of connectable conductor cross-sections</b>	
• for auxiliary and control contacts	
— solid	0.5 ... 1.5 mm <sup>2</sup>
— finely stranded / with core end processing	0.5 ... 2.5 mm <sup>2</sup>
— finely stranded / without core end processing	0.5 ... 2.5 mm <sup>2</sup>
• at AWG conductors / for auxiliary and control contacts	1x (AWG 20 ... 12)
<b>Wire stripping length / of the cable</b>	
• for main contacts	7 mm
• for auxiliary and control contacts	7 mm

### Ambient conditions

<b>Ambient temperature</b>	
• during operation	-25 ... +60 °C
• during storage	-55 ... +80 °C

### Electromagnetic compatibility

<b>Conducted interference</b>	
• due to burst / acc. to IEC 61000-4-4	2 kV / 5 kHz behavior criterion 2
• due to conductor-earth surge / acc. to IEC 61000-4-5	2 kV behavior criterion 2
• due to conductor-conductor surge / acc. to IEC 61000-4-5	1 kV behavior criterion 2
• due to high-frequency radiation / acc. to IEC 61000-4-6	140 dBuV in the frequency range 0.15 ... 80 MHz, behavior criterion 1
<b>Electrostatic discharge / acc. to IEC 61000-4-2</b>	4 kV contact discharging / 8 kV air discharging, behavior criterion 2
<b>Conducted HF-interference emissions / acc. to CISPR11</b>	Class A for industrial environment

Field-bound HF-interference emission / acc. to CISPR11

Class B for the domestic, business and commercial environments

### Short-circuit protection, design of the fuse link

Manufacturer's article number

- of gS fuse for semiconductor protection / at NH design [3NE1813-0](#)
- of full range R fuse link for semiconductor protection / at cylindrical design [5SE1316](#)
- of back-up R fuse link for semiconductor protection / at NH design [3NE8015-1](#)
- of back-up R fuse link for semiconductor protection / at cylindrical design 10 x 38 mm [3NC1032](#)
- of back-up R fuse link for semiconductor protection / at cylindrical design 14 x 51 mm [3NC1440](#)
- of back-up R fuse link for semiconductor protection / at cylindrical design 22 x 58 mm [3NC2240](#)

Manufacturer's article number / of the gG fuse

- at NH design [3NA6803-6](#)

### Certificates/ approvals

#### General Product Approval



CSA



UL



RCM



EG-Konf.

[Miscellaneous](#)

#### Test Certificates

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

#### other

[Confirmation](#)



VDE

#### Railway

[Vibration and Shock](#)

### Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RF2310-2AA06>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RF2310-2AA06>

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RF2310-2AA06>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RF2310-2AA06&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RF2310-2AA06&lang=en)





