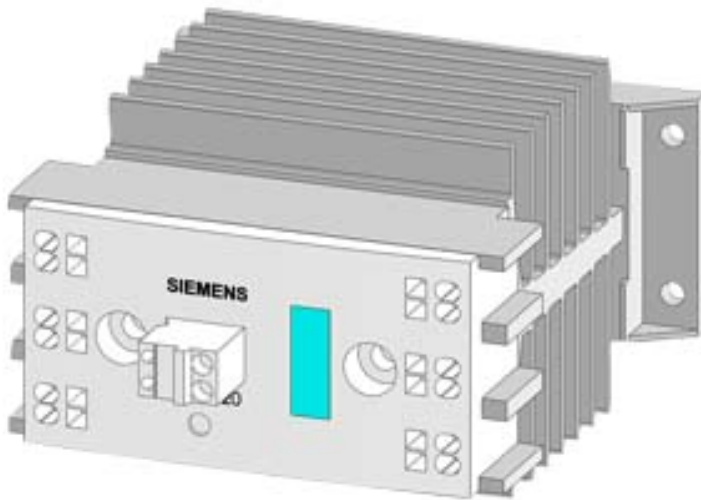


Solid-state contactor 3-phase 3RF2 AC 51 / 20 A / 40 °C  
48-600 V / 4-30 V DC 2-phase controlled Spring-type  
terminal Blocking voltage 1200 V



General technical data		
Product brand name		SIRIUS
Product designation		solid-state contactor
Product function		zero-point switching
Number of poles for main current circuit		3
Protection class IP		IP20
Product designation _2 of the accessories that can be ordered		converter
Manufacturer's article number _2 of the accessories that can be ordered		<a href="#">3RF2900-0EA18</a>
Ambient temperature		
• during operation	°C	-25 ... +60
• during storage	°C	-55 ... +80
Installation altitude at height above sea level maximum	m	1 000
Vibration resistance acc. to IEC 60068-2-6		2g
Shock resistance acc. to IEC 60068-2-27		15g / 11 ms
Reference identifier acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750		K
Reference identifier acc. to DIN EN 61346-2		Q

Number of NC contacts for auxiliary contacts		0
Number of NO contacts for auxiliary contacts		0
Number of CO contacts for auxiliary contacts		0

### Main circuit

Number of NO contacts for main contacts		2
Number of NC contacts for main contacts		0
Operating current		
• minimum	mA	500
• at AC-51 rated value	A	22
• at AC-51 acc. to IEC 60947-4-3	A	15
Derating temperature	°C	40
Power loss [W] total typical	W	44
Reverse current of the thyristor	mA	10
Surge current resistance rated value	A	600
I <sup>2</sup> t value maximum	A <sup>2</sup> ·s	1 800
Operating voltage at AC		
• at 50 Hz rated value	V	48 ... 600
• at 60 Hz rated value	V	48 ... 600
Operating range relative to the operating voltage at AC		
• at 50 Hz	V	40 ... 660
• at 60 Hz	V	40 ... 660
Operating frequency rated value	Hz	50 ... 60
Relative symmetrical tolerance of the operating frequency	%	10
Insulation voltage rated value	V	600
Rate of voltage rise at the thyristor for main contacts maximum permissible	V/μs	1 000
Blocking voltage at the thyristor for main contacts maximum permissible	V	1 200
Short-circuit protection, design of the fuse link		

### Control circuit/ Control

Type of voltage of the control supply voltage		DC
Control supply voltage 1		
• at DC	V	4 ... 30
Control supply voltage		
• at DC initial value for signal <1> detection	V	4
• at DC Full-scale value for signal <0> recognition	V	1
Symmetrical line frequency tolerance	Hz	5
Control current		
• at minimum control supply voltage		
— at DC	mA	22

- at DC rated value

mA	30
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### Installation/ mounting/ dimensions






<b>Mounting type</b>		screw and snap-on mounting onto 35 mm standard mounting rail
<b>Mounting type Side-by-side mounting</b>		Yes
<b>Design of the thread of the screw for securing the equipment</b>		M4
<b>Tightening torque of the screw for securing the equipment</b>	N·m	1.5
<b>Width</b>	mm	67.5
<b>Height</b>	mm	100
<b>Depth</b>	mm	112.5

### Connections/Terminals

<b>Type of electrical connection for main current circuit</b>		spring-loaded terminals
<b>Type of connectable conductor cross-sections</b>		
<ul style="list-style-type: none"> <li>• for main contacts           <ul style="list-style-type: none"> <li>— solid</li> <li>— finely stranded               <ul style="list-style-type: none"> <li>— with core end processing</li> <li>— without core end processing</li> </ul> </li> </ul> </li> <li>• at AWG conductors           <ul style="list-style-type: none"> <li>— for main contacts</li> <li>— for auxiliary and control contacts</li> </ul> </li> <li>• for auxiliary and control contacts           <ul style="list-style-type: none"> <li>— solid</li> <li>— finely stranded               <ul style="list-style-type: none"> <li>— with core end processing</li> <li>— without core end processing</li> </ul> </li> </ul> </li> </ul>		2x (0.5 ... 2.5 mm <sup>2</sup> )  2x (0.5 ... 1.5 mm <sup>2</sup> ) 2x (0.5 ... 2.5 mm <sup>2</sup> )  2x (18 ... 14) 1x (AWG 20 ... 12)  0.5 ... 1.5 mm <sup>2</sup>  0.5 ... 2.5 mm <sup>2</sup> 0.5 ... 2.5 mm <sup>2</sup>
<b>Connectable conductor cross-section</b>		
<ul style="list-style-type: none"> <li>• for main contacts           <ul style="list-style-type: none"> <li>— single or multi-stranded</li> <li>— finely stranded               <ul style="list-style-type: none"> <li>— with core end processing</li> <li>— without core end processing</li> </ul> </li> </ul> </li> <li>• for auxiliary and control contacts           <ul style="list-style-type: none"> <li>— solid</li> <li>— finely stranded               <ul style="list-style-type: none"> <li>— with core end processing</li> <li>— without core end processing</li> </ul> </li> </ul> </li> </ul>	mm <sup>2</sup> mm <sup>2</sup> mm <sup>2</sup> mm <sup>2</sup> mm <sup>2</sup> mm <sup>2</sup> mm <sup>2</sup>	0.5 ... 2.5 0.5 ... 1.5 0.5 ... 2.5 0.5 ... 1.5 0.5 ... 2.5 0.5 ... 2.5
<b>AWG number as coded connectable conductor cross section</b>		
<ul style="list-style-type: none"> <li>• for main contacts</li> </ul>		14 ... 10

• for auxiliary and control contacts		20 ... 12
<b>Type of electrical connection for auxiliary and control current circuit</b>		spring-loaded terminals
<b>Wire stripping length of the cable</b>		
• for main contacts	mm	10
• for auxiliary and control contacts	mm	10

### Certificates/approvals

General Product Approval	EMC	Declaration of Conformity	Test Certificates
 CSA	 UL	 EAC	 C-Tick
		 EG-Konf.	<a href="#">Type Test Certificates/Test Report</a>

### other

[Confirmation](#)

### Further information

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

[https://www.automation.siemens.com/cd-static/material/info/3RF24\\_eng.pdf](https://www.automation.siemens.com/cd-static/material/info/3RF24_eng.pdf)

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

<http://www.siemens.com/industrial-controls/catalogs>

#### Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RF2420-2AB45>

#### Cax online generator

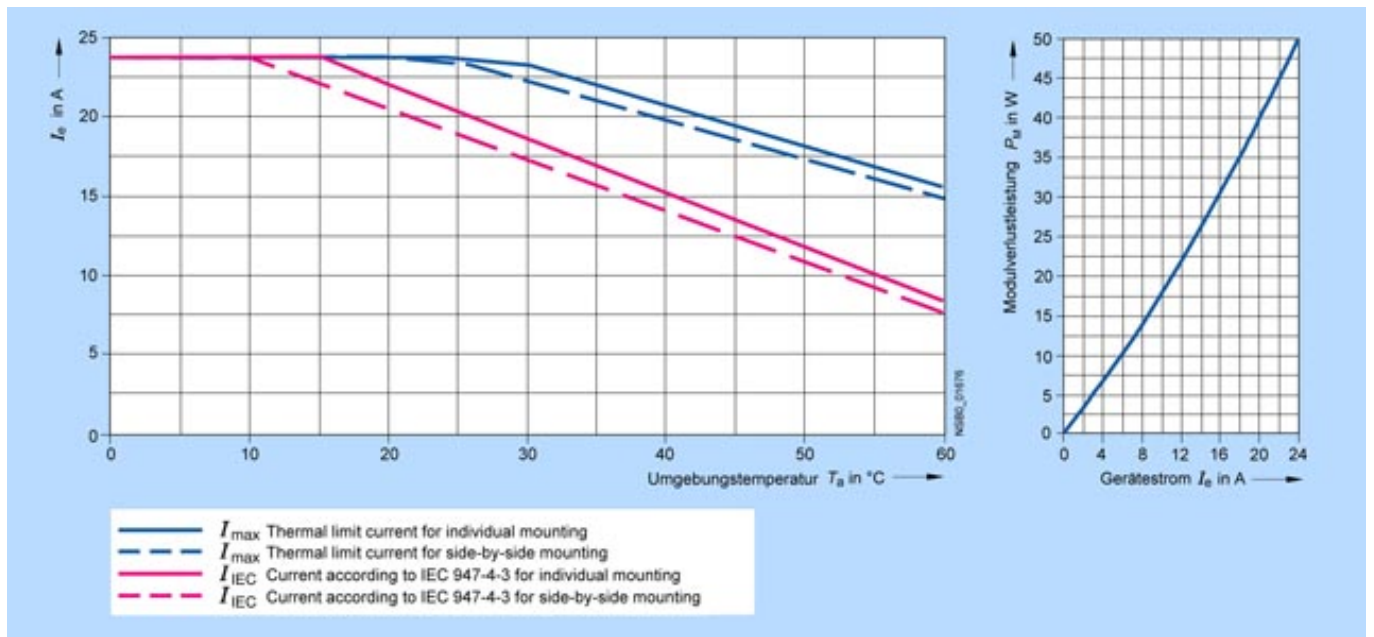
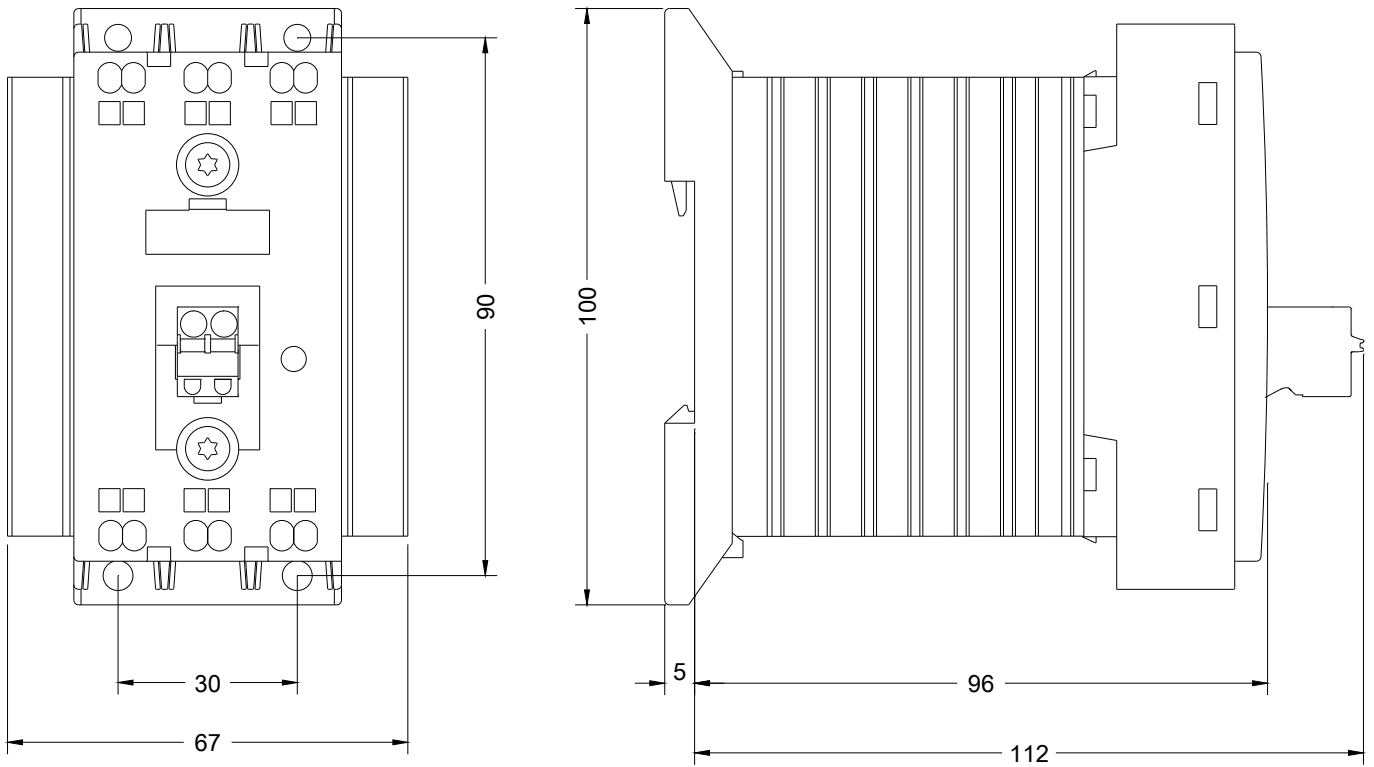
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RF2420-2AB45>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RF2420-2AB45>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RF2420-2AB45&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RF2420-2AB45&lang=en)



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