

SEMI-CONDUCTOR CONTAC.3-PH.3RF2 AC51 50A 40  
DEG. C 48-600V / 4-30V DC 2-PHASE CONTROLLED  
RING TERMINAL BLOCKING VOLTAGE 1200V



### 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 article number / _2 / of the accessories that can be ordered		<a href="#">3RF2900-0EA18</a>
Ambient temperature		
• during operating	°C	-25 ... 60
• during storage	°C	-55 ... 80
Installation altitude / at a height over sea level / maximum	m	1,000
Resistance against vibration / according to IEC 60068-2-6		2g
Resistance against shock / according to IEC 60068-2-27		15g / 11 ms
Item designation		
• according to DIN 40719 extendable after IEC 204-2 / according to IEC 750		K
• according to DIN EN 61346-2		Q
Number of NC contacts / for auxiliary contacts		0

Number of NO contacts / for auxiliary contacts		0
Number of change-over switches / for auxiliary contacts		0

#### Main circuit:

Number of NO contacts / for main contacts		2
Number of NC contacts / for main contacts		0
Operating current / at AC-1 / at 400 V / rated value	A	50
Operating current / at AC-51 / rated value	A	50
Reverse current / of the thyristor	mA	10
Derating temperature	°C	40
Operating current / minimum	mA	500
Resistance against the impulse current / rated value	A	1,150
I <sup>2</sup> t-level / maximum	A <sup>2</sup> ·s	6,600
Operating voltage		
• at 50 Hz / at AC / rated value	V	48 ... 600
• at 60 Hz / at AC / rated value	V	48 ... 600
Working area related to the operating voltage		
• at 50 Hz / for AC	V	40 ... 660
• at 60 Hz / for AC	V	40 ... 660
Operating frequency		
• rated value	Hz	50 ... 60
Relative symmetrical tolerance / of the operation frequency	%	10
Insulation voltage / rated value	V	600
Voltage slew rate / at the thyristor / for main contacts / maximum permissible	V/μs	1,000
Block voltage / at the thyristor / for main contacts / maximum permissible	V	1,600
Fuse assignments	<a href="https://www.automation.siemens.com/cd-static/material/info/3RF24_eng.pdf">https://www.automation.siemens.com/cd-static/material/info/3RF24_eng.pdf</a>	

#### Control circuit:

Type of voltage / of the controlled supply voltage		DC
Control supply voltage / 1		
• for DC	V	4 ... 30
Control supply voltage / for DC / final value for signal<0>-recognition	V	1
Tolerance of the line frequency	Hz	5
Control current		
• at minimum control supply voltage / for AC	mA	2
• at minimum control supply voltage / for DC	mA	2
• for DC / rated value	mA	15

Installation/mounting/dimensions:		
Type of mounting		screw fixing
Type of fixing/fixation / series installation		Yes
Design of the thread / of the screw for fastening of the operating resource		M4
Tightening torque / of the screw for fastening of the operating resource	N·m	1.5
Width	mm	157.5
Height	mm	100
Depth	mm	121
Connections:		
Design of the electrical connection / for main current circuit		ring cable connection
Design of the thread / of the connection screw / for main contacts		M5
Tightening torque / for main contacts <ul style="list-style-type: none"> <li>• with screw-type terminals</li> </ul>	N·m	2 ... 2.5
Tightening torque (lbf·in) / for main contacts <ul style="list-style-type: none"> <li>• with screw-type terminals</li> </ul>	lbf·in	18 ... 22
<b>Type of the connectable conductor cross-section</b> <ul style="list-style-type: none"> <li>• for main contacts / for JIS cable lug</li> <li>• for DIN cable lug / for main contacts</li> <li>• for AWG conductors               <ul style="list-style-type: none"> <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 conductor end processing</li> <li>• without conductor final cutting</li> </ul> </li> </ul> </li> </ul>		JIS C 2805 R 2-5, 5,5-5, 8-5, 14-5 DIN 46234 -5-2,5, -5-6, -5-10, -5-16, -5-25  1x (AWG 20 ... 12)  1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> )  1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> )  1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> )
<b>Conductor cross section that can be connected</b> <ul style="list-style-type: none"> <li>• for auxiliary and control contacts               <ul style="list-style-type: none"> <li>• solid</li> <li>• stranded wire                   <ul style="list-style-type: none"> <li>• with conductor end processing / minimum</li> <li>• without conductor final cutting</li> </ul> </li> </ul> </li> </ul>	mm <sup>2</sup>   mm <sup>2</sup>  mm <sup>2</sup>	0.5 ... 2.5   0.5 ... 2.5  0.5 ... 2.5
Design of the electrical connection / for auxiliary and control current circuit		screw-type terminals
Design of the thread / of the connection screw / of the auxiliary and control pins		M3
AWG number / as coded connectable conductor cross-section		

• for auxiliary and control contacts		20 ... 12
<b>Skinning length / of the cable / for main contacts</b>	mm	7
<b>Skinning length / of the cable / for auxiliary and control contacts</b>	mm	7
<b>Tightening torque / for auxiliary and control contacts</b>		
• with screw-type terminals	N·m	0.5 ... 0.6
<b>Tightening torque (lbf-in) / for auxiliary and control contacts</b>		
• with screw-type terminals	lbf-in	7.5 ... 5.3

#### Certificates/approvals:

##### General Product Approval



[ROSTEST](#)



##### Test Certificates

[Manufacturer](#)

##### other

[Manufacturer](#)

#### Further information:

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

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

##### Industry Mall (Online ordering system)

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

##### Cax online generator:

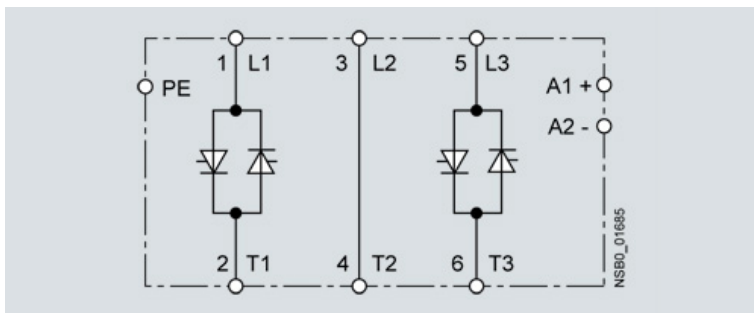
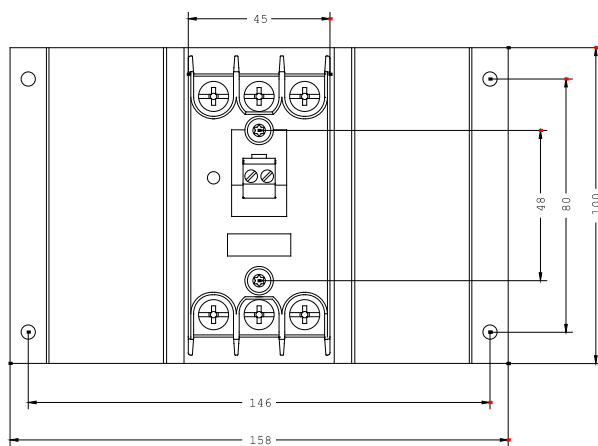
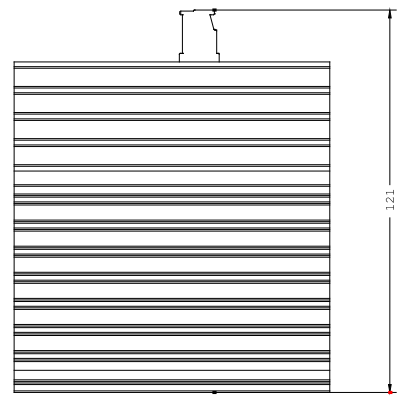
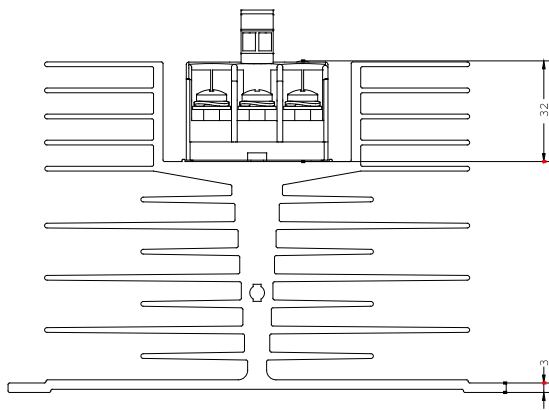
<http://www.siemens.com/cax>

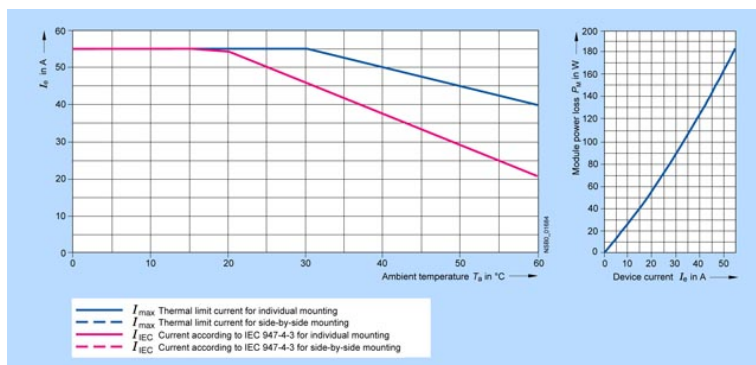
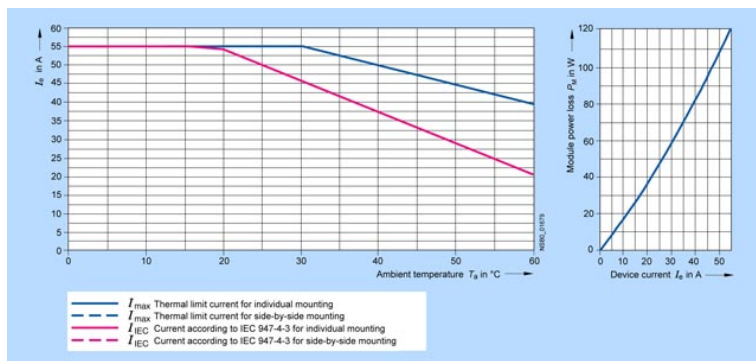
##### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3RF2450-3AB45/all>

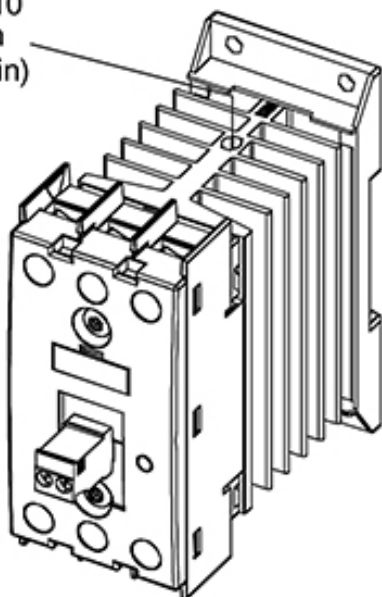
##### Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RF2450-3AB45](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RF2450-3AB45)





PE  
M 5 x 10  
1,5 Nm  
(13 lb·in)



last change:

Aug 22, 2011