

SEMI-COND. CONTACTOR 3RF2,1-PH. AC 51 20 A 40  
DEGREES C 24-230 V / 24 V DC RING TERMINAL

General technical data:		
Product brand name		SIRIUS
product designation		solid-state contactor
Product function		zero-point switching
Number of poles / for main current circuit		1
Protection class IP		IP20
Product designation / _1 / of the accessories that can be ordered		terminal cover
Manufacturer article number / _1 / of the accessories that can be ordered		<a href="#">3RF2900-3PA88</a>
Product designation / _3 / of the accessories that can be ordered		converter
Manufacturer article number / _3 / of the accessories that can be ordered		<a href="#">3RF2900-0EA18</a>
Product designation / _4 / of the accessories that can be ordered		load monitoring
Manufacturer article number / _4 / of the accessories that can be ordered		<a href="#">3RF2920-0GA13</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		1
Number of NC contacts / for main contacts		0

<b>Operating current</b>		
• at AC-1 / at 400 V / rated value	A	20
• at AC-51 / rated value	A	20
<b>Operating current / minimum</b>	mA	500
<b>Operating voltage</b>		
• at 50 Hz / at AC / rated value	V	24 ... 230
• at 60 Hz / at AC / rated value	V	24 ... 230
<b>Working area related to the operating voltage</b>		
• at 50 Hz / for AC	V	20 ... 253
• at 60 Hz / for AC	V	20 ... 253
<b>Operating frequency</b>		
• rated value	Hz	50 ... 60
<b>Relative symmetrical tolerance / of the operation frequency</b>	%	10
<b>Insulation voltage / rated value</b>	V	600
<b>Voltage slew rate / at the thyristor / for main contacts / maximum permissible</b>	V/μs	1,000
<b>Block voltage / at the thyristor / for main contacts / maximum permissible</b>	V	800
<b>Reverse current / of the thyristor</b>	mA	10
<b>Derating temperature</b>	°C	40
<b>Active power loss / total / typical</b>	W	20
<b>Resistance against the impulse current / rated value</b>	A	600
<b>I<sup>2</sup>t-level / maximum</b>	A <sup>2</sup> ·s	1,800

#### Control circuit:

<b>Type of voltage / of the controlled supply voltage</b>		DC
<b>Control supply voltage / 1</b>		
• for DC		
• initial rated value	V	15
• final rated value	V	24
<b>Control supply voltage</b>		
• for DC / final value for signal<0>-recognition	V	5
<b>Control current</b>		
• at minimum control supply voltage / for DC	mA	2
• for DC / rated value	mA	15
<b>Fuse assignments</b>		<a href="https://www.automation.siemens.com/cd-static/material/info/3RF21_eng.pdf">https://www.automation.siemens.com/cd-static/material/info/3RF21_eng.pdf</a>

#### Installation/mounting/dimensions:

<b>Type of mounting</b>		screw and snap-on mounting onto 35 mm standard mounting rail
<b>Type of fixing/fixation / series installation</b>		Yes

<b>Design of the thread / of the screw for fastening of the operating resource</b>		M4
<b>Tightening torque / of the screw for fastening of the operating resource</b>	N·m	1.5
<b>Width</b>	mm	22.5
<b>Height</b>	mm	100
<b>Depth</b>	mm	140.5

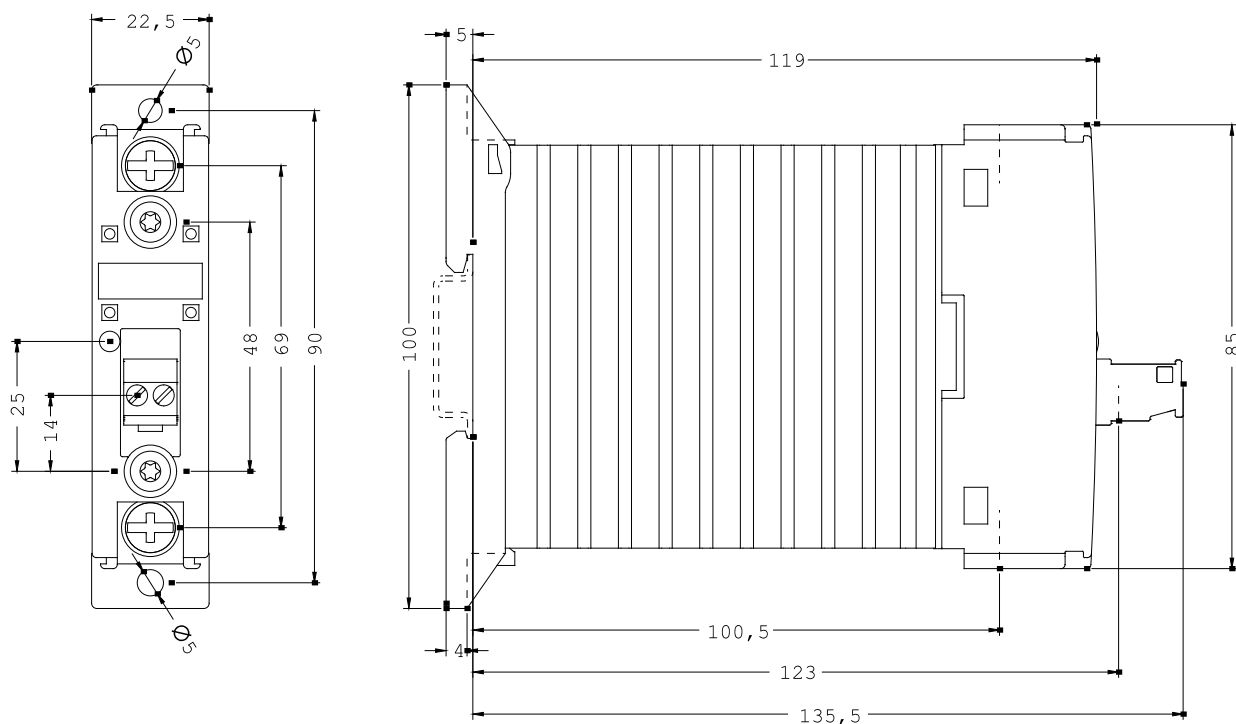
<b>Connections:</b>		
<b>Design of the electrical connection / for main current circuit</b>		ring cable connection
<b>Design of the thread / of the connection screw / for main contacts</b>		M5
<b>Tightening torque / for main contacts</b> <ul style="list-style-type: none"> <li>• with screw-type terminals</li> </ul>	N·m	2 ... 2.5
<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
<b>Design of the electrical connection / for auxiliary and control current circuit</b>		ring cable connection
<b>Design of the thread / of the connection screw / of the auxiliary and control pins</b>		M3
<b>AWG number / as coded connectable conductor cross-section</b> <ul style="list-style-type: none"> <li>• for auxiliary and control contacts</li> </ul>		20 ... 12
<b>Skinning length / of the cable / for main contacts</b>	mm	10
<b>Skinning length / of the cable / for auxiliary and control contacts</b>	mm	10
<b>Tightening torque / for auxiliary and control contacts</b> <ul style="list-style-type: none"> <li>• with screw-type terminals</li> </ul>	N·m	0.5 ... 0.6

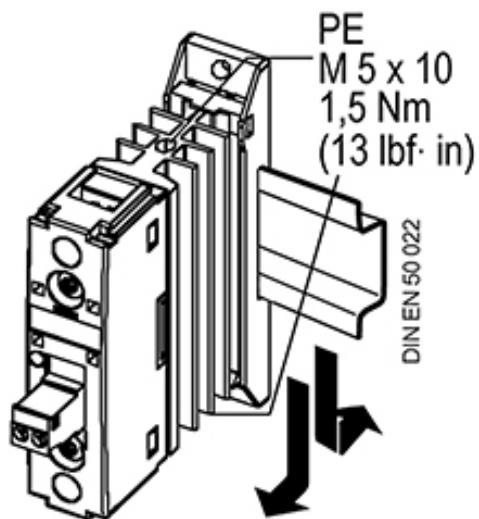
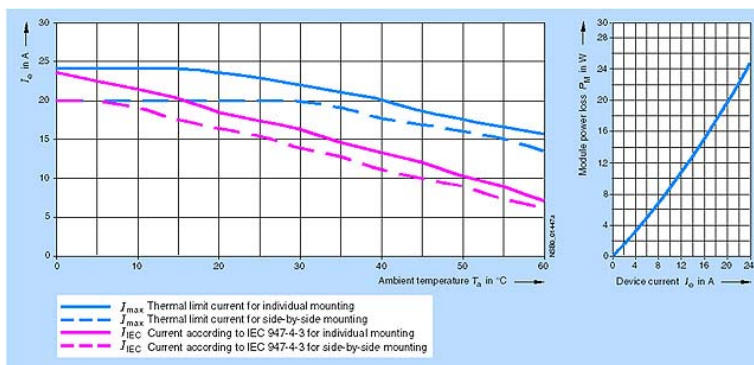
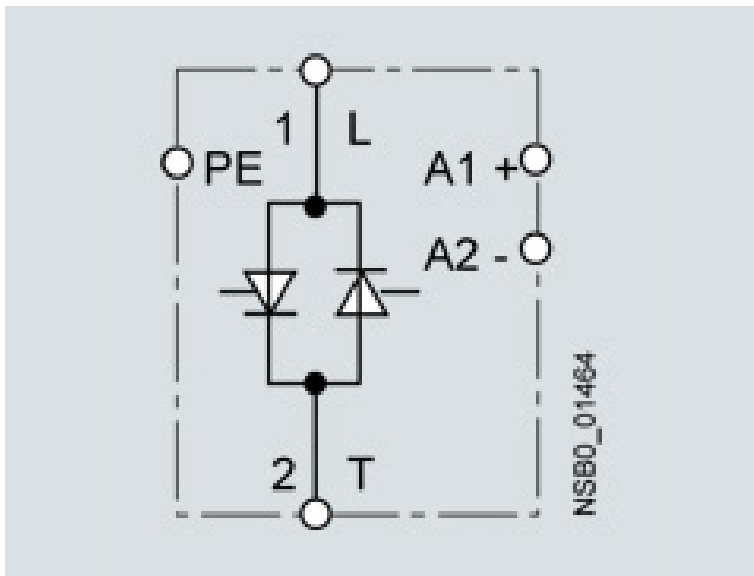
**Tightening torque (lbf-in) / for auxiliary and control contacts**

- with screw-type terminals

lbf-in

4.5 ... 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/3RF2320-3AA02/all>**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)**[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RF2320-3AA02](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RF2320-3AA02)



last change:

Aug 22, 2011