

SEMI-COND. CONTACTOR 3RF2,1-PH. AC 51 90A / AC15  
30A 40 DEG. C 48-460 V / 24 V DC INSTANTANEOUS  
SWITCHING

General technical data:		
product brand name		SIRIUS
product designation		solid-state contactor
Product function		instantaneous 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 / _2 / of the accessories that can be ordered		power regulator
Manufacturer article number / _2 / of the accessories that can be ordered		<a href="#">3RF2950-0HA16</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="#">3RF2950-0GA16</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	88
• at AC-51 / rated value	A	50
<b>Operating current / minimum</b>	mA	500
<b>Operating voltage</b>		
• at 50 Hz / at AC / rated value	V	48 ... 460
• at 60 Hz / at AC / rated value	V	48 ... 460
<b>Working area related to the operating voltage</b>		
• at 50 Hz / for AC	V	40 ... 506
• at 60 Hz / for AC	V	40 ... 506
<b>Operating frequency</b>		
• rated value	Hz	50 ... 60
<b>Insulation voltage / rated value</b>	V	600
<b>Voltage slew rate / at the thyristor / for main contacts / maximum permissible</b>	V/ $\mu$ s	1,000
<b>Block voltage / at the thyristor / for main contacts / maximum permissible</b>	V	1,200
<b>Reverse current / of the thyristor</b>	mA	10
<b>Derating temperature</b>	$^{\circ}$ C	40
<b>Active power loss / total / typical</b>	W	117
<b>Resistance against the impulse current / rated value</b>	A	1,150
<b>I<sup>2</sup>t-level / maximum</b>	A <sup>2</sup> ·s	6,600

Control circuit:		
Type of voltage / of the controlled supply voltage		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 fixing
<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	180
<b>Height</b>	mm	100
<b>Depth</b>	mm	162.5

#### Connections:

<b>Design of the electrical connection / for main current circuit</b>		screw-type terminals
<b>Design of the thread / of the connection screw / for main contacts</b>		M4
<b>Tightening torque / for main contacts</b> • with screw-type terminals	N·m	2 ... 2.5
<b>Tightening torque (lbf-in) / for main contacts</b> • with screw-type terminals	lbf-in	18 ... 22
<b>Type of the connectable conductor cross-section</b> • for main contacts • solid • finely stranded • with conductor end processing • for AWG conductors • for main contacts • for auxiliary and control contacts • for auxiliary and control contacts • solid • finely stranded • with conductor end processing • without conductor final cutting		2x (1.5 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6 mm <sup>2</sup> )  2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup>  2x (14 ... 10) 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> • for main contacts • solid • stranded wire • with conductor end processing • for auxiliary and control contacts • solid • stranded wire • with conductor end processing / • without conductor final cutting	mm <sup>2</sup>  mm <sup>2</sup>  mm <sup>2</sup>  mm <sup>2</sup> mm <sup>2</sup> mm <sup>2</sup>	1.5 ... 6  1 ... 10  0.5 ... 2.5  0.5 ... 2.5 0.5 ... 2.5

<b>AWG number / as coded connectable conductor cross-section / for main contacts</b>		10 ... 14
<b>Design of the electrical connection / for auxiliary and control current circuit</b>		screw-type terminals
<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> • 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	4.5 ... 5.3

#### Certificates/approvals:

General Product Approval		EMC	Declaration of Conformity
 CSA	 GOST	 UL	 EG-Konf.
 C-TICK			
Test Certificates	other		
<a href="#">Special Test Certificate</a>	<a href="#">Type Test Certificates/Test Report</a>	<a href="#">Environmental Confirmations</a>	

#### 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

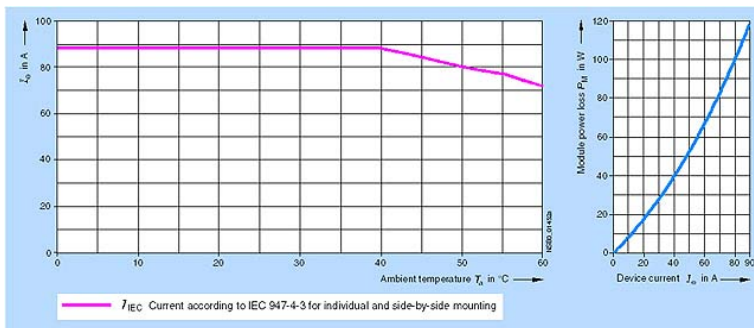
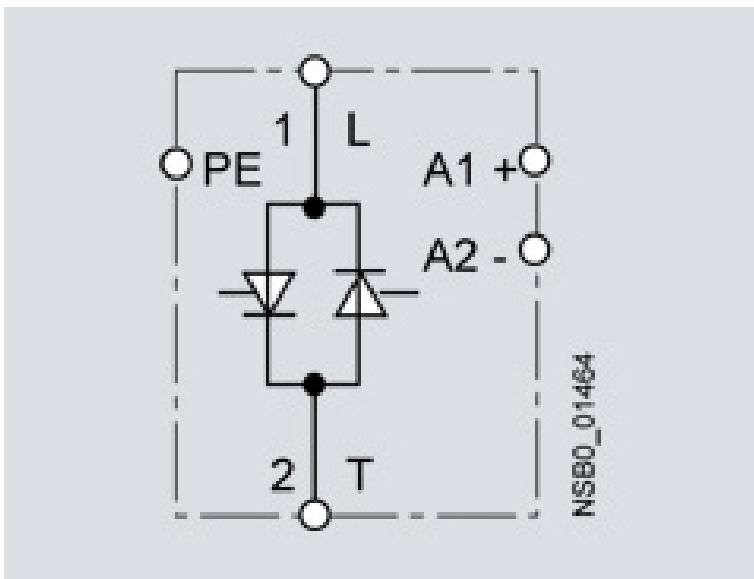
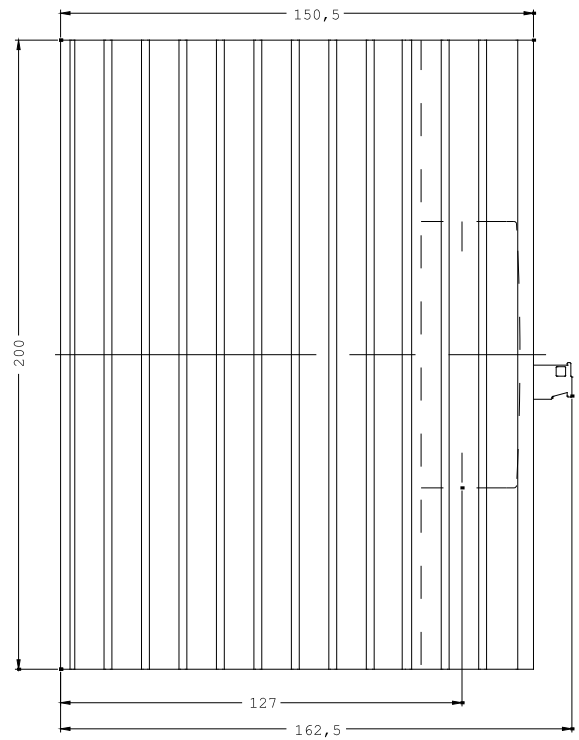
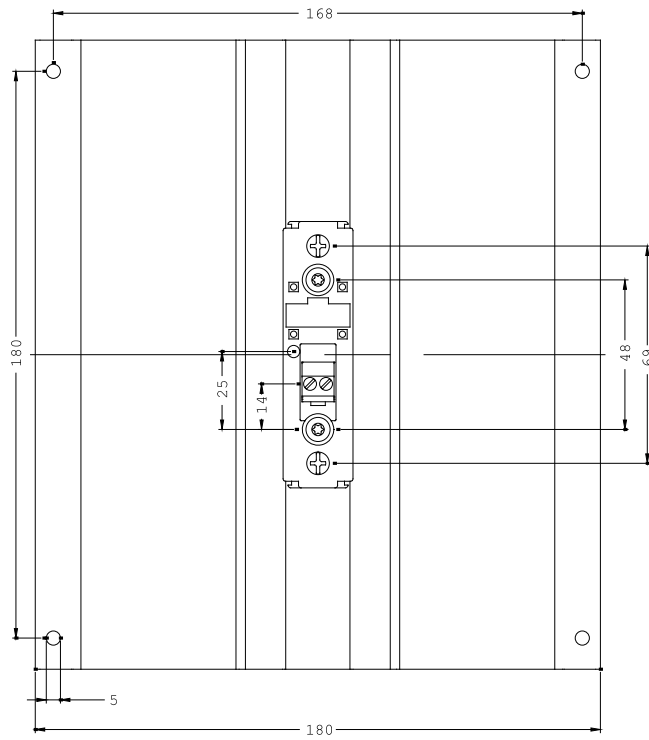
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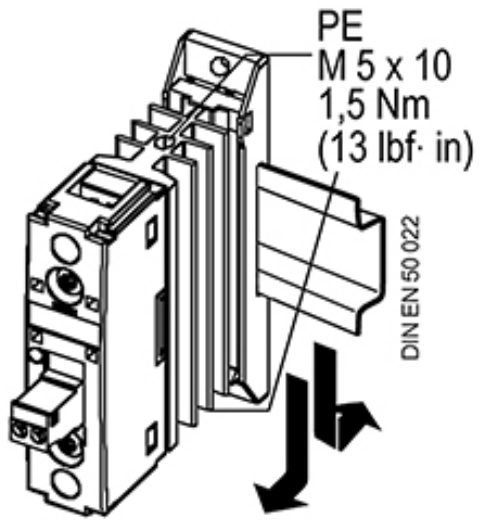
##### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3RF2390-1BA04/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RF2390-1BA04](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RF2390-1BA04)





last change:

Feb 4, 2013