



SEMI-COND. CONTACTOR 3RF2,1-PH. AC 51 90 A 40 DEGREES C 24-230 V / 110-230 V AC RING TERMINAL

**General technical data:**

<b>product brand name</b>		SIRIUS
<b>product designation</b>		solid-state contactor
<b>Product function</b>		zero-point switching
<b>Number of poles / for main current circuit</b>		1
<b>Protection class IP</b>		IP20
<b>Product designation / _1 / of the accessories that can be ordered</b>		terminal cover
<b>Manufacturer article number / _1 / of the accessories that can be ordered</b>		<a href="#">3RF2900-3PA88</a>
<b>Product designation / _4 / of the accessories that can be ordered</b>		load monitoring
<b>Manufacturer article number / _4 / of the accessories that can be ordered</b>		<a href="#">3RF2990-0GA33</a>
<b>Ambient temperature</b>		
• during operating	°C	-25 ... +60
• during storage	°C	-55 ... +80
<b>Installation altitude / at a height over sea level / maximum</b>	m	1,000
<b>Resistance against vibration / according to IEC 60068-2-6</b>		2g
<b>Resistance against shock / according to IEC 60068-2-27</b>		15g / 11 ms
<b>Item designation</b>		

<ul style="list-style-type: none"> <li>• according to DIN 40719 extendable after IEC 204-2 / according to IEC 750</li> </ul>	K
<ul style="list-style-type: none"> <li>• according to DIN EN 61346-2</li> </ul>	Q
<b>Number of NC contacts / for auxiliary contacts</b>	0
<b>Number of NO contacts / for auxiliary contacts</b>	0
<b>Number of change-over switches / for auxiliary contacts</b>	0

#### Main circuit:

<b>Number of NO contacts / for main contacts</b>		1
<b>Number of NC contacts / for main contacts</b>		0
<b>Operating current</b>		
<ul style="list-style-type: none"> <li>• at AC-1 / at 400 V / rated value</li> </ul>	A	88
<ul style="list-style-type: none"> <li>• at AC-51 / rated value</li> </ul>	A	88
<b>Operating current / minimum</b>	mA	500
<b>Operating voltage</b>		
<ul style="list-style-type: none"> <li>• at 50 Hz / at AC / rated value</li> </ul>	V	24 ... 230
<ul style="list-style-type: none"> <li>• at 60 Hz / at AC / rated value</li> </ul>	V	24 ... 230
<b>Working area related to the operating voltage</b>		
<ul style="list-style-type: none"> <li>• at 50 Hz / for AC</li> </ul>	V	20 ... 253
<ul style="list-style-type: none"> <li>• at 60 Hz / for AC</li> </ul>	V	20 ... 253
<b>Operating frequency</b>		
<ul style="list-style-type: none"> <li>• rated value</li> </ul>	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/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	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:

<b>Control supply voltage frequency</b>		
<ul style="list-style-type: none"> <li>• 1 / rated value</li> </ul>	Hz	50
<ul style="list-style-type: none"> <li>• 2 / rated value</li> </ul>	Hz	60
<b>Type of voltage / of the controlled supply voltage</b>		AC
<b>Control supply voltage / 1</b>		
<ul style="list-style-type: none"> <li>• at 50 Hz / for AC</li> </ul>		
<ul style="list-style-type: none"> <li>• initial rated value</li> </ul>	V	110

<ul style="list-style-type: none"> <li>• final rated value</li> </ul>	V	230
<ul style="list-style-type: none"> <li>• at 60 Hz / for AC</li> </ul>		
<ul style="list-style-type: none"> <li>• initial rated value</li> </ul>	V	110
<ul style="list-style-type: none"> <li>• final rated value</li> </ul>	V	230
<b>Control supply voltage</b>		
<ul style="list-style-type: none"> <li>• at 50 Hz / for AC / final value for signal&lt;0&gt;-recognition</li> </ul>	V	40
<ul style="list-style-type: none"> <li>• at 60 Hz / for AC / final value for signal&lt;0&gt;-recognition</li> </ul>	V	40
<b>Tolerance of the line frequency</b>	Hz	5
<b>Control current</b>		
<ul style="list-style-type: none"> <li>• at minimum control supply voltage / for AC</li> </ul>	mA	2
<ul style="list-style-type: none"> <li>• for AC / rated value</li> </ul>	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>		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> </ul>		JIS C 2805 R 2-5, 5,5-5, 8-5, 14-5
<ul style="list-style-type: none"> <li>• for DIN cable lug / for main contacts</li> </ul>		DIN 46234 -5-2,5, -5-6, -5-10, -5-16, -5-25
<ul style="list-style-type: none"> <li>• for AWG conductors</li> </ul>		
<ul style="list-style-type: none"> <li>• for auxiliary and control contacts</li> </ul>		1x (AWG 20 ... 12)
<ul style="list-style-type: none"> <li>• for auxiliary and control contacts</li> </ul>		
<ul style="list-style-type: none"> <li>• solid</li> </ul>		1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>• finely stranded</li> </ul>		
<ul style="list-style-type: none"> <li>• with conductor end processing</li> </ul>		1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>• without conductor final cutting</li> </ul>		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 /</li> <li>• without conductor final cutting</li> </ul> </li> </ul> </li> </ul>	mm <sup>2</sup>	0.5 ... 2.5
	mm <sup>2</sup>	0.5 ... 2.5
	mm <sup>2</sup>	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
<b>Tightening torque (lbf-in) / for auxiliary and control contacts</b> <ul style="list-style-type: none"> <li>• with screw-type terminals</li> </ul>	lbf-in	4.5 ... 5.3

#### Certificates/approvals:

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

#### other

[Environmental Confirmations](#)

#### 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

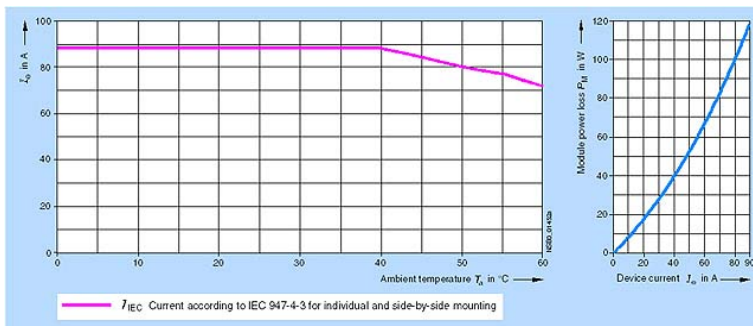
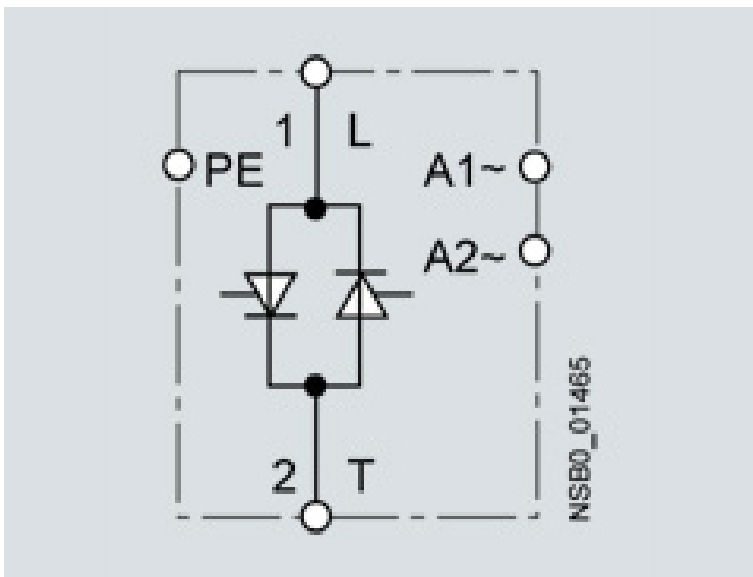
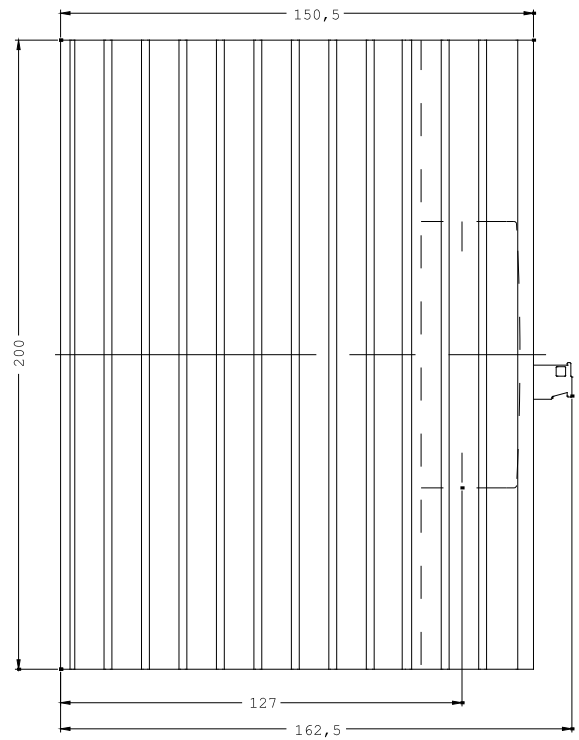
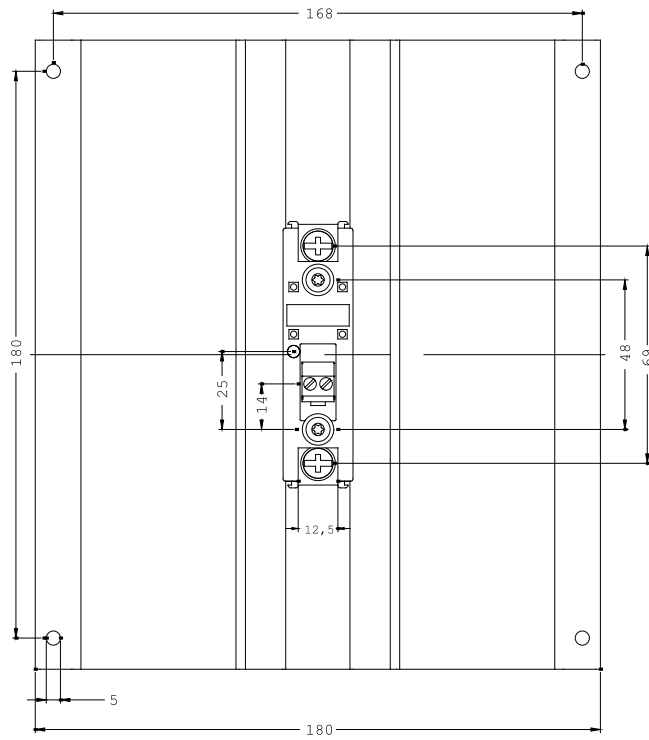
<http://www.siemens.com/cax>

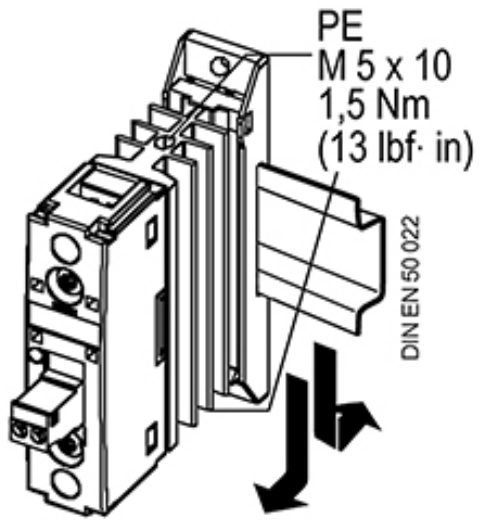
##### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3RF2390-3AA22/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RF2390-3AA22](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RF2390-3AA22)





last change:

Feb 4, 2013