



SEMICONDUCTOR RELAY 3RF2,  
1-PH. WIDTH 22.5MM,  
70 A 48-460 V / 110-230 V AC SCREW TERMINAL

### General technical data:

Product brand name		SIRIUS
product designation		solid-state relays
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 / _4 / of the accessories that can be ordered		load monitoring
Manufacturer article number / _4 / of the accessories that can be ordered		<a href="#">3RF2990-0GA36</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		

<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> <li>• at AC-51 / rated value</li> </ul>	A A	70 70
<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> <li>• at 60 Hz / at AC / rated value</li> </ul>	V V	48 ... 460 48 ... 460
<b>Working area related to the operating voltage</b> <ul style="list-style-type: none"> <li>• at 50 Hz / for AC</li> <li>• at 60 Hz / for AC</li> </ul>	V V	40 ... 506 40 ... 506
<b>Operating frequency</b> <ul style="list-style-type: none"> <li>• rated value</li> </ul>	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	1,200
<b>Reverse current / of the thyristor</b>	mA	10
<b>Derating temperature</b>	°C	40
<b>Active power loss / total / typical</b>	W	94
<b>Resistance against the impulse current / rated value</b>	A	1,200
<b>I<sup>2</sup>t-level / maximum</b>	A <sup>2</sup> ·s	7,200

Control circuit:		
<b>Control supply voltage frequency</b> <ul style="list-style-type: none"> <li>• 1 / rated value</li> <li>• 2 / rated value</li> </ul>	Hz Hz	50 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>		

• initial rated value	V	110
• final rated value	V	230
• at 60 Hz / for AC		
• initial rated value	V	110
• final rated value	V	230
<b>Control supply voltage</b>		
• at 50 Hz / for AC / final value for signal<0>-recognition	V	40
• at 60 Hz / for AC / final value for signal<0>-recognition	V	40
<b>Tolerance of the line frequency</b>	Hz	5
<b>Relative symmetrical tolerance / of the supply voltage frequency</b>	%	10
<b>Control current</b>		
• at minimum control supply voltage / for AC	mA	2
• for AC / rated value	mA	15
• at minimum control supply voltage / for DC	mA	2
• for DC / rated value	mA	6
<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	22.5
<b>Height</b>	mm	85
<b>Depth</b>	mm	48

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	7 ... 10.3
<b>Type of the connectable conductor cross-section</b>		
• for main contacts		
• solid		2x (1.5 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6 mm <sup>2</sup> )
• finely stranded		

Certificates/approvals:

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

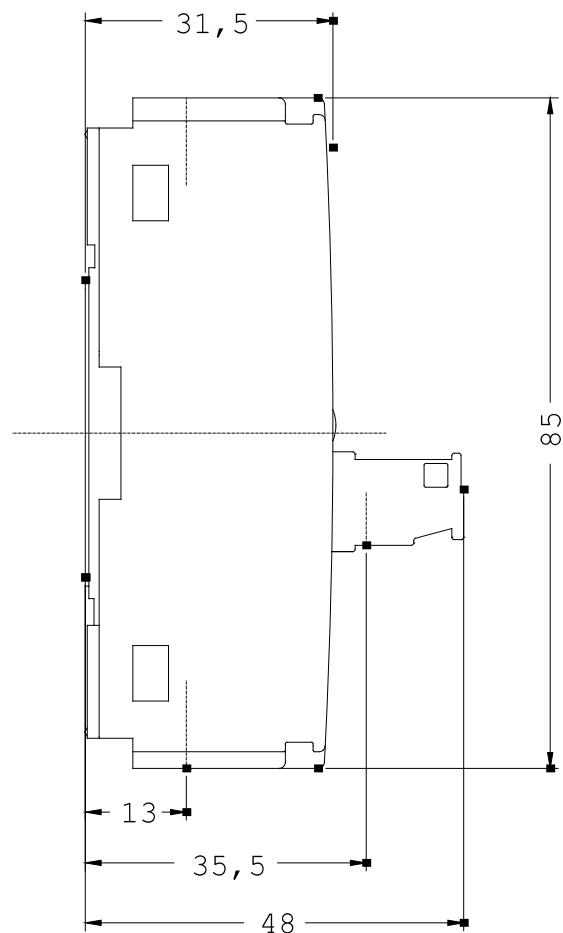
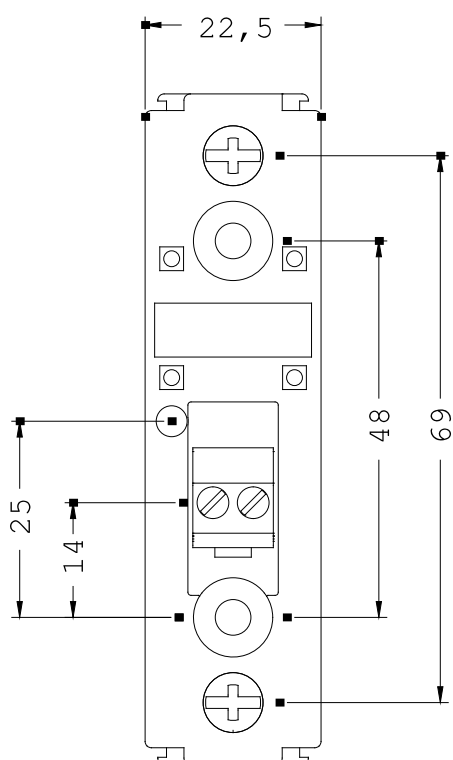
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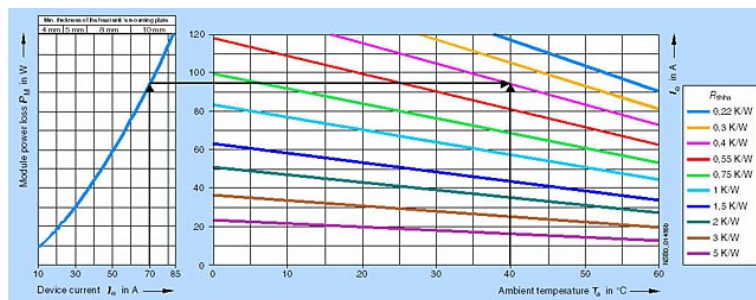
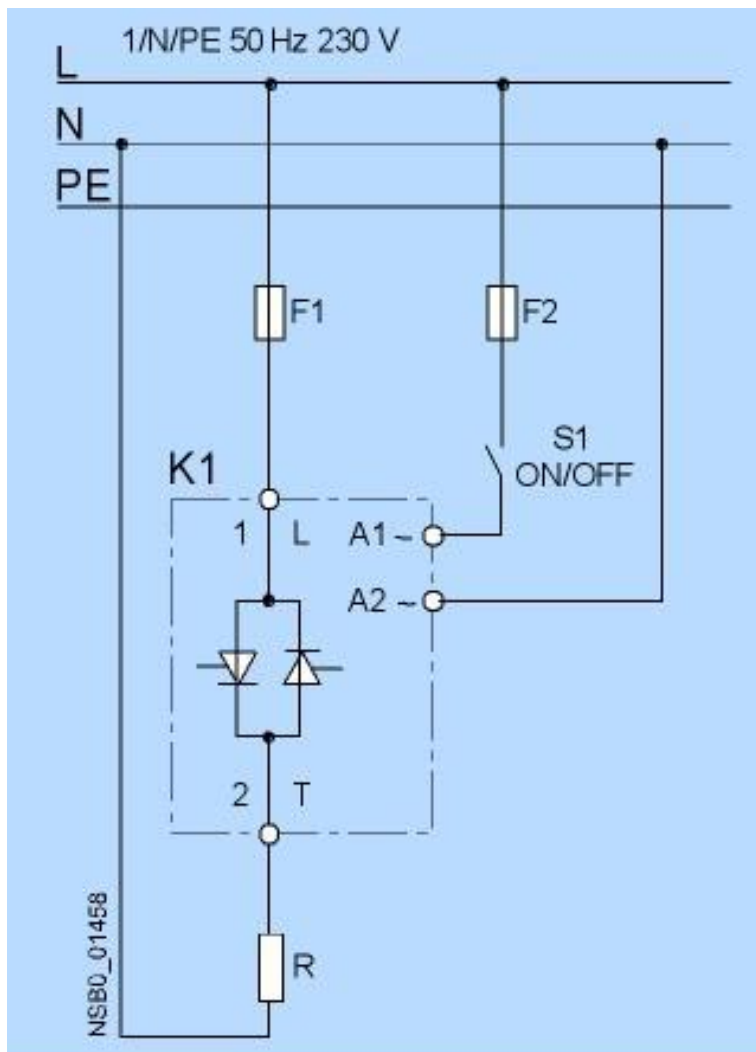
##### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3RF2170-1AA24/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RF2170-1AA24](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RF2170-1AA24)





last change:

Aug 22, 2011