SIEMENS

Product data sheet

3RF2190-1AA24



SEMICONDUCTOR RELAY 3RF2, 1-PH. WIDTH 22.5MM, 90 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		<u>3RF2900-3PA88</u>
Product designation / _4 / of the accessories that can be ordered		load monitoring
Manufacturer article number / _4 / of the accessories that can be ordered		<u>3RF2990-0GA36</u>
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 		К
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
Operating current		
at AC-1 / at 400 V / rated value	А	90
• at AC-51 / rated value	А	88
Operating current / minimum	mA	500
Operating voltage		
• at 50 Hz / at AC / rated value	V	48 460
• at 60 Hz / at AC / rated value	V	48 460
Working area related to the operating voltage		
• at 50 Hz / for AC	V	40 506
• at 60 Hz / for AC	V	40 506
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	1,200
Reverse current / of the thyristor	mA	10
Derating temperature	°C	40
Active power loss / total / typical	W	118
Resistance against the impulse current / rated value	А	1,150
I2t-level / maximum	A²·s	6,600
Control circuit:		
Control supply voltage frequency		
• 1 / rated value	Hz	50
• 2 / rated value	Hz	60
Type of voltage / of the controlled supply voltage		AC
Control supply voltage / 1		
• at 50 Hz / for AC		

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
Control supply voltage	-	
• 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
Tolerance of the line frequency	Hz	5
Relative symmetrical tolerance / of the supply voltage frequency	%	10
Control current		
 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
Fuse assignments		https://www.automation.siemens.com/cd- static/material/info/3RF21_eng.pdf

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	22.5
Height	mm	85
Depth	mm	48

Connections:		
Design of the electrical connection / for main current circuit		screw-type terminals
Design of the thread / of the connection screw / for main contacts		M4
Tightening torque / for main contacts		
with screw-type terminals	N∙m	2 2.5
Tightening torque (Ibf·in) / for main contacts		
with screw-type terminals	lbf∙in	7 10.3
Type of the connectable conductor cross-section		
for main contacts		
• solid		2x (1.5 2.5 mm2), 2x (2.5 6 mm2)
finely stranded		

 with conductor end processing 		2x (1 2.5 mm2), 2x (2.5 6 mm2), 1x 10 mm2
for AWG conductors		
• for main contacts		2x (14 10)
 for auxiliary and control contacts 		1x (AWG 20 12)
 for auxiliary and control contacts 		
• solid		1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)
• finely stranded		
 with conductor end processi ng 		1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)
 without conductor final cut ting 		1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)
Conductor cross section that can be connected		
for main contacts		
• solid	mm²	1.5 6
stranded wire		
 with conductor end processing 	mm²	1 10
 for auxiliary and control contacts 		
• solid	mm²	0.5 2.5
stranded wire		
 with conductor end processing / minimum 	mm²	0.5 2.5
without conductor final cutting	mm²	0.5 2.5
AWG number / as coded connectable conductor cross-section / for main contacts		14 10
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		М3
AWG number / as coded connectable conductor cross-section	_	
 for auxiliary and control contacts 		20 12
Skinning length / of the cable / for main contacts	mm	7
Skinning length / of the cable / for auxiliary and control contacts	mm	7
Tightening torque / for auxiliary and control contacts		
with screw-type terminals	N∙m	0.5 0.6
Tightening torque (Ibf-in) / for auxiliary and control contacts		
• with screw-type terminals	lbf∙in	4.5 5.3
Certificates/approvals:		
General Product Approval	Test Certificates other	





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

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

Industry Mall (Online ordering system)

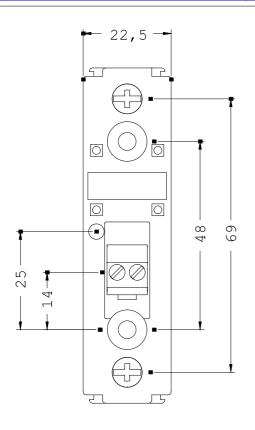
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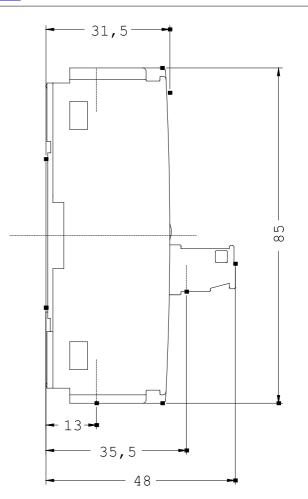
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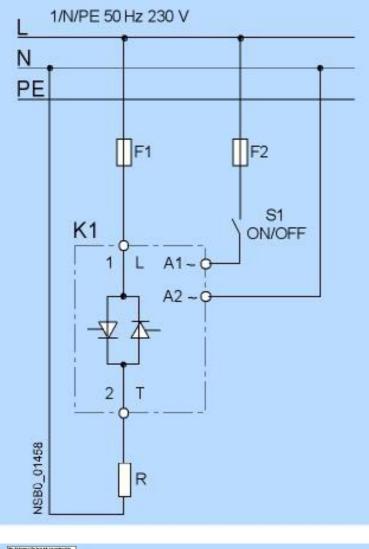
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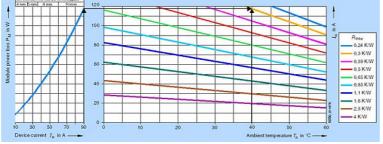
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3RF2190-1AA24/all

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RF2190-1AA24









last change:

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