## **SIEMENS**

Product data sheet 3RF2190-3AA26



SEMICONDUCTOR RELAY 3RF2, 1-PH. WIDTH 22.5MM, 90 A 48-600 V / 110-230 V AC RING 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		3RF2900-3PA88
Product designation / _4 / of the accessories that can be ordered		load monitoring
Manufacturer article number / _4 / of the accessories that can be ordered		3RF2990-0GA36
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> <li>according to DIN 40719 extendable after IEC 204-2 / according to IEC 750</li> </ul>	Κ
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	Α	90
at AC-51 / rated value	Α	88
Operating current / minimum	mA	500
Operating voltage		
• at 50 Hz / at AC / rated value	V	48 600
at 60 Hz / at AC / rated value	V	48 600
Working area related to the operating voltage		
• at 50 Hz / for AC	V	40 660
• at 60 Hz / for AC	V	40 660
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	1,600
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	Α	1,150
I2t-level / maximum	A <sup>2</sup> ·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		ring cable connection
Design of the thread / of the connection screw / for main contacts		M5
Tightening torque / for main contacts		
with screw-type terminals	N⋅m	2 2.5
Tightening torque (lbf-in) / for main contacts		
with screw-type terminals	lbf-in	7 10.3
Type of the connectable conductor cross-section		
• for main contacts / for JIS cable lug		JIS C 2805 R 2-5, 5,5-5, 8-5, 14-5
• for DIN cable lug / for main contacts		DIN 46234 -5-2,5, -5-6, -5-10, -5-16, -5-25
• for AWG conductors		

for auxiliary and control contacts		1x (AWG 20 12)
<ul> <li>for auxiliary and control contacts</li> </ul>		
• solid		1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)
finely stranded		
<ul> <li>with conductor end processing</li> </ul>		1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)
<ul> <li>without conductor final cutting</li> </ul>		1x (0.5 2.5 mm2), 2x (0.5 1.0 mm2)
Conductor cross section that can be connected		
for auxiliary and control contacts		
• solid	mm²	0.5 2.5
stranded wire		
<ul> <li>with conductor end processing / minimum</li> </ul>	mm²	0.5 2.5
<ul> <li>without conductor final cutting</li> </ul>	mm²	0.5 2.5
Design of the electrical connection / for auxiliary and control current circuit		ring cable connection
Design of the thread / of the connection screw / of the auxiliary and control pins		M3
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 (lbf-in) / for auxiliary and control contacts		
with screw-type terminals	lbf∙in	4.5 5.3

## Certificates/approvals:

**General Product Approval** 

Test Certificates

other



ROSTEST



Manufacturer 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** 

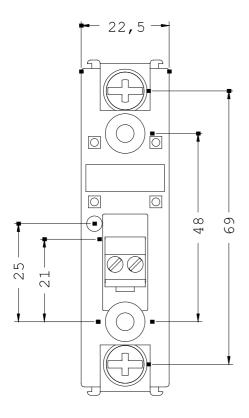
http://www.siemens.com/cax

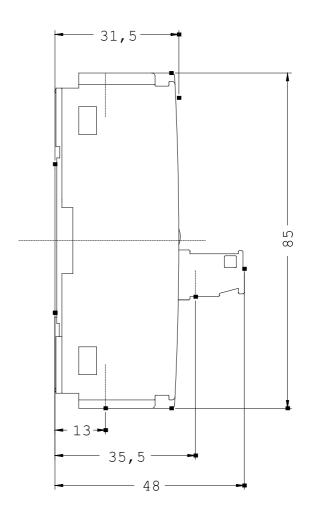
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

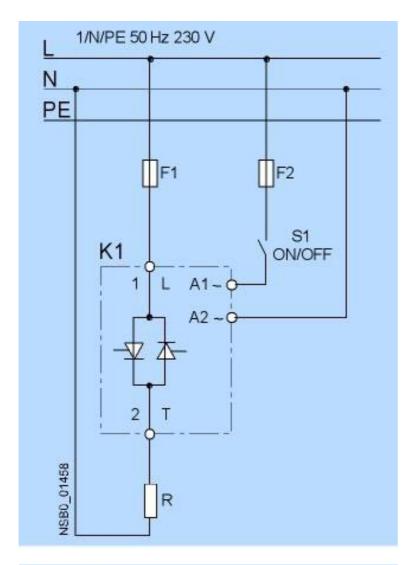
http://support.automation.siemens.com/WW/view/en/3RF2190-3AA26/all

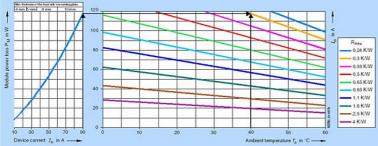
 $Image\ database\ (product\ images,\ 2D\ dimension\ drawings,\ 3D\ models,\ device\ circuit\ diagrams,\ ...)$ 

http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3RF2190-3AA26









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