SIEMENS

Product data sheet 3RF2120-3AA22

SEMICOND. RELAY 3RF2,
1-PHASE WIDTH 22.5 MM,
20 A 24-230 V / 110-230 V AC RING TERMINAL

General technical data:		
product brand name		SIRIUS
product designation		solid-state relay
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		3RF2920-0GA33
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
Operating current		
• at AC-1 / at 400 V / rated value	A	20
• at AC-51 / rated value	A	20
Operating current / minimum	mA	100
Operating voltage		
• at 50 Hz / at AC / rated value	V	24 … 230
• at 60 Hz / at AC / rated value	V	24 … 230
Working area related to the operating voltage		
• at 50 Hz / for AC	V	20 … 253
• at 60 Hz / for AC	V	20 … 253
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	500
Block voltage / at the thyristor / for main contacts / maximum permissible	V	800
Reverse current / of the thyristor	mA	10
Derating temperature	°C	40
Active power loss / total / typical	W	28.6
Apparent loss power / maximum	V·A	28.6
Resistance against the impulse current / rated value	A	200
I2t-level / maximum	$A^2 \cdot s$	200

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
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)

• for auxiliary and control contacts		
• solid		1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.0 mm²)
• finely stranded		
• with conductor end processing		1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.0 mm²)
• without conductor final cutting		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		
• with conductor end processing /	mm²	0.5 … 2.5
• without conductor final cutting	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	EMC	Declaration of Conformity	Test Certificates
CSA GOST UR	C-TICK	EG-Konf.	Type Test Certificates/Test Report

other

Environmental Confirmations

Further information:

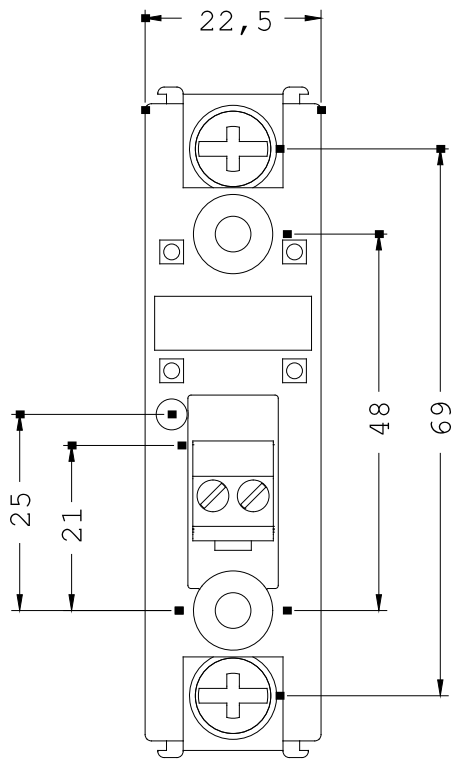
Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/industrial-controls/catalogs

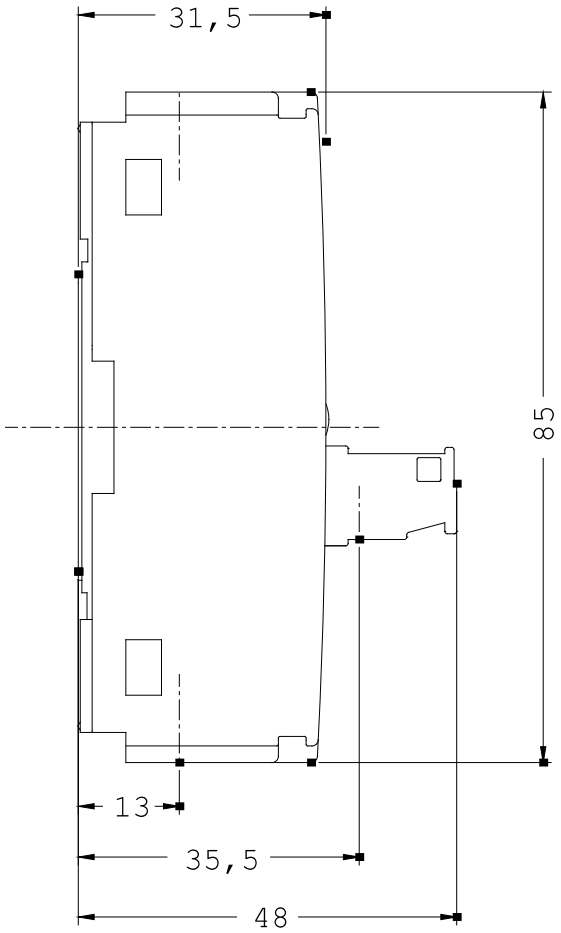
Industry Mall (Online ordering system)
http://www.siemens.com/industrial-controls/mall

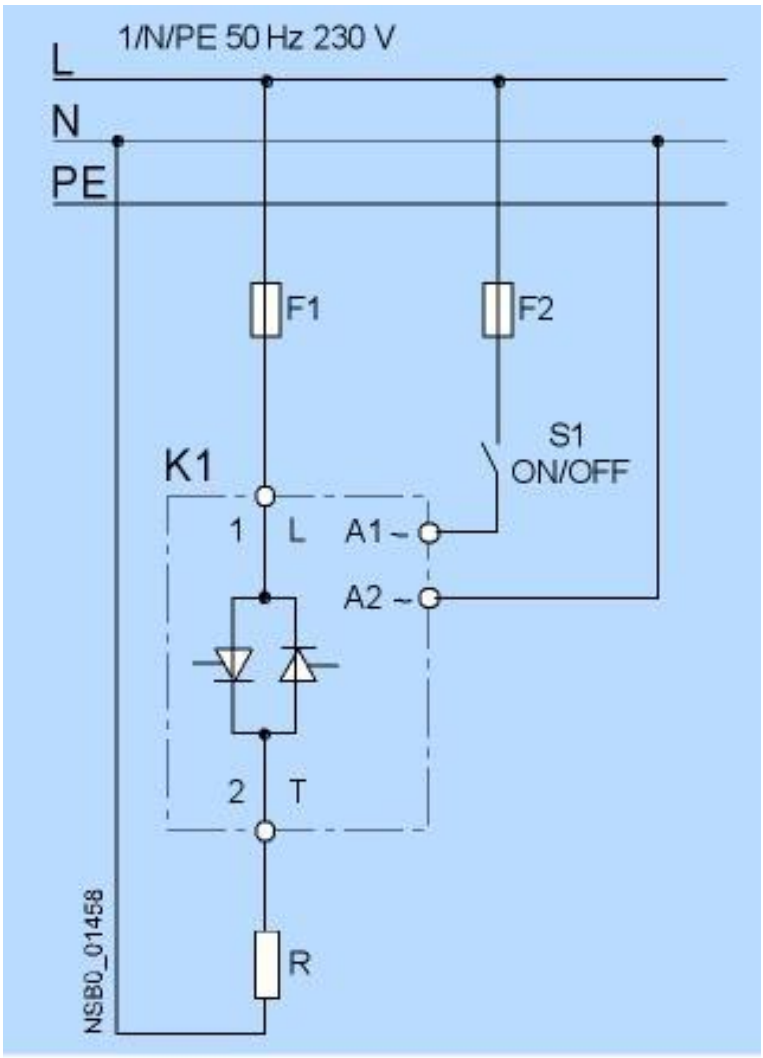
CAx-Online-Generator
http://www.siemens.com/cax

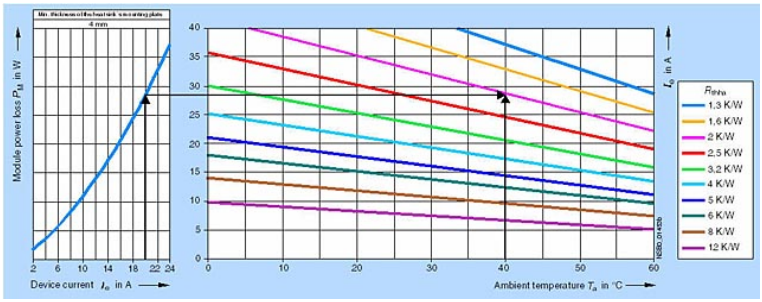
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
http://support.automation.siemens.com/WW/view/en/3RF2120-3AA22/all

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RF2120-3AA22









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