

SEMI-COND. CONTACTOR 3RF2,1-PH. AC 51 20 A 40
DEGREES C 24-230 V / 24 V DC RING TERMINAL

General technical data:		
product brand name		SIRIUS
product designation		solid-state contactor
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 / _3 / of the accessories that can be ordered		converter
Manufacturer article number / _3 / of the accessories that can be ordered		3RF2900-0EA18
Product designation / _4 / of the accessories that can be ordered		load monitoring
Manufacturer article number / _4 / of the accessories that can be ordered		3RF2920-0GA13
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	500
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
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	800
Reverse current / of the thyristor	mA	10
Derating temperature	°C	40
Active power loss / total / typical	W	20
Resistance against the impulse current / rated value	A	600
I²t-level / maximum	A ² ·s	1,800

Control circuit:

Type of voltage / of the controlled supply voltage		DC
Control supply voltage / 1		
• for DC		
• initial rated value	V	15
• final rated value	V	24
Control supply voltage		
• for DC / final value for signal<0>-recognition	V	5
Control current		
• at minimum control supply voltage / for DC	mA	2
• for DC / 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 and snap-on mounting onto 35 mm standard mounting rail
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	100
Depth	mm	140.5

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
Type of the connectable conductor cross-section • for main contacts / for JIS cable lug • for DIN cable lug / for main contacts • for AWG conductors • for auxiliary and control contacts • for auxiliary and control contacts • solid • finely stranded • with conductor end processing • without conductor final cutting		JIS C 2805 R 2-5, 5,5-5, 8-5, 14-5 DIN 46234 -5-2,5, -5-6, -5-10, -5-16, -5-25 1x (AWG 20 ... 12) 1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.0 mm²) 1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.0 mm²) 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 • stranded wire • with conductor end processing / • without conductor final cutting	mm² mm² mm²	0.5 ... 2.5 0.5 ... 2.5 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	10
Skinning length / of the cable / for auxiliary and control contacts	mm	10
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

General Product Approval



CSA



GOST



UL



C-TICK



EG-Konf.

Test Certificates

Type Test
Certificates/Test
Report

Category	Percentage
other	1.0%

[Environmental Confirmations](#)

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

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

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

<http://www.siemens.com/industrial-controls/mall>

CAX-Online-Generator
<http://www.siemens.com/cax>

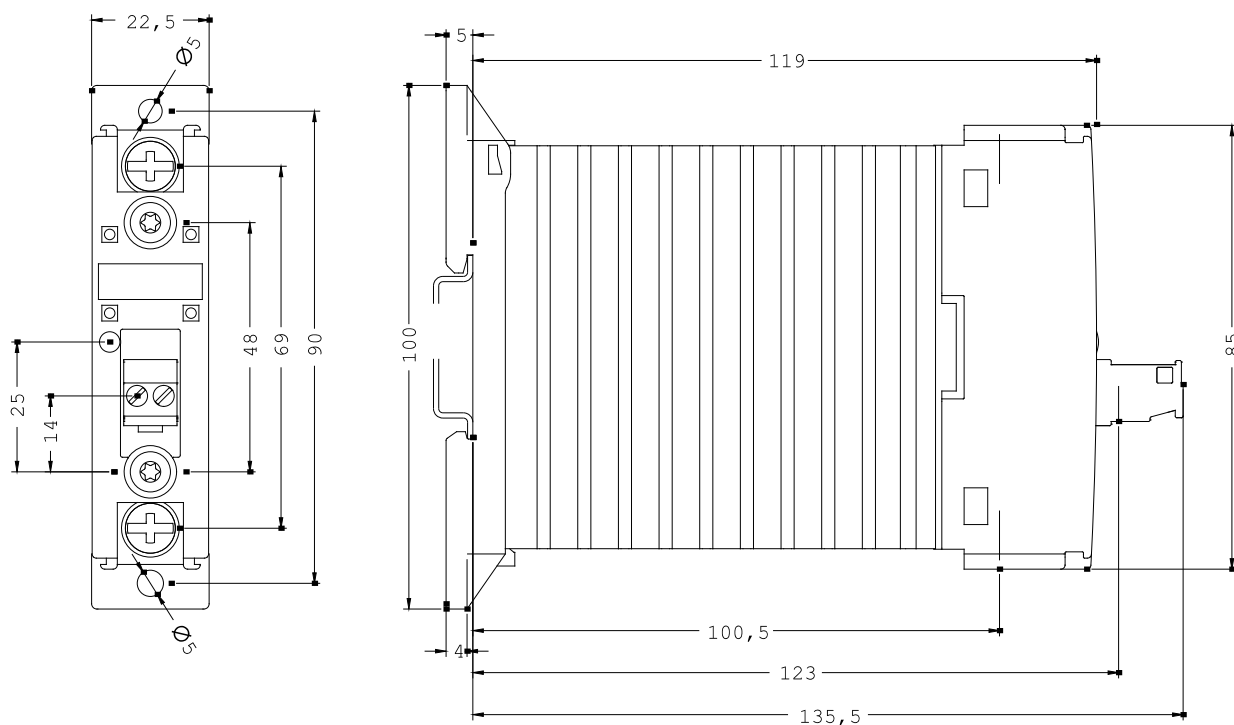
<http://www.siemens.com/cax>

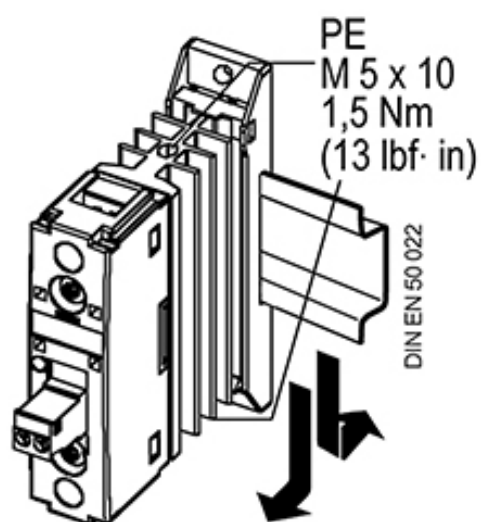
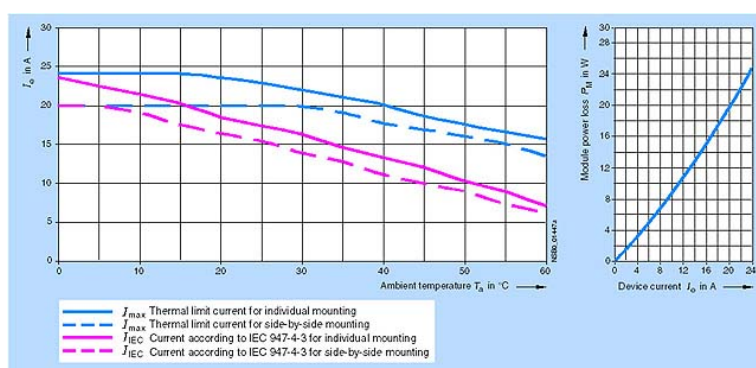
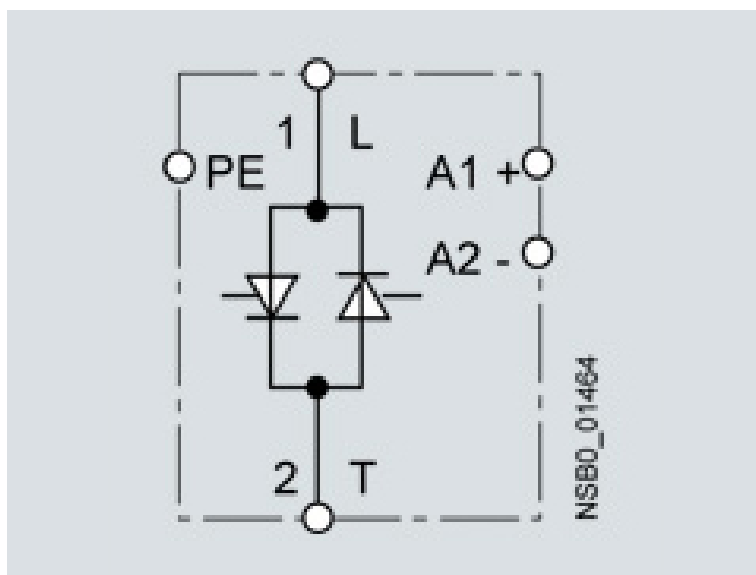
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
<http://support.automation.siemens.com/WW/view/en/3RF2320-3AA02/all>

<http://support.automation.siemens.com/WW/view/en/3RF2320-3AA02/all>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RF2320-3AA02

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last change:

Feb 4, 2013