

SEMI-COND. CONTACTOR 3RF2,1-PH. AC 51 90A / AC15
30A 40 DEG. C 24-230 V / 110-230 V AC
INSTANTANEOUS SWITCHING

General technical data:		
product brand name		SIRIUS
product designation		solid-state contactor
Product function		instantaneous 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 / _2 / of the accessories that can be ordered		power regulator
Manufacturer article number / _2 / of the accessories that can be ordered		3RF2950-0HA33
Product designation / _4 / of the accessories that can be ordered		load monitoring
Manufacturer article number / _4 / of the accessories that can be ordered		3RF2950-0GA33
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	88
• at AC-51 / rated value	A	50
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/ μ s	1,000
Block voltage / at the thyristor / for main contacts / maximum permissible	V	800
Reverse current / of the thyristor	mA	10
Derating temperature	$^{\circ}$ C	40
Active power loss / total / typical	W	117
Resistance against the impulse current / rated value	A	1,150
I²t-level / maximum	A ² ·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
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	180
Height	mm	100
Depth	mm	162.5

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 (lbf-in) / for main contacts • with screw-type terminals	lbf-in	18 ... 22
Type of the connectable conductor cross-section • for main contacts • solid • finely stranded • with conductor end processing • for AWG conductors • for main contacts • for auxiliary and control contacts • for auxiliary and control contacts • solid • finely stranded • with conductor end processing • without conductor final cutting		2x (1.5 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²) 2x (1 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²), 1x 10 mm ² 2x (14 ... 10) 1x (AWG 20 ... 12) 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²) 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²) 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²)
Conductor cross section that can be connected • for main contacts • solid • stranded wire • with conductor end processing • for auxiliary and control contacts	mm ² mm ²	1.5 ... 6 1 ... 10

<ul style="list-style-type: none"> • solid 	mm ²	0.5 ... 2.5
<ul style="list-style-type: none"> • stranded wire <ul style="list-style-type: none"> • with conductor end processing / • without conductor final cutting 	mm ²	0.5 ... 2.5
AWG number / as coded connectable conductor cross-section / for main contacts		10 ... 14
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		M3
AWG number / as coded connectable conductor cross-section <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • with screw-type terminals 	N-m	0.5 ... 0.6
Tightening torque (lbf-in) / for auxiliary and control contacts <ul style="list-style-type: none"> • with screw-type terminals 	lbf-in	4.5 ... 5.3

Certificates/approvals:

General Product Approval		EMC	Declaration of Conformity
 CSA	 GOST	 UL	 C-TICK
 EG-Konf.			
Test Certificates	other		
Special Test Certificate	Type Test Certificates/Test Report	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

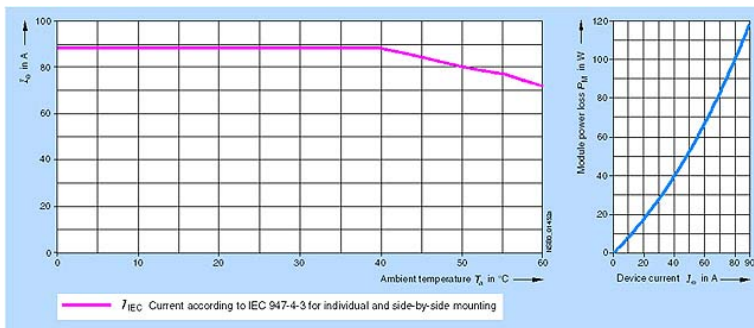
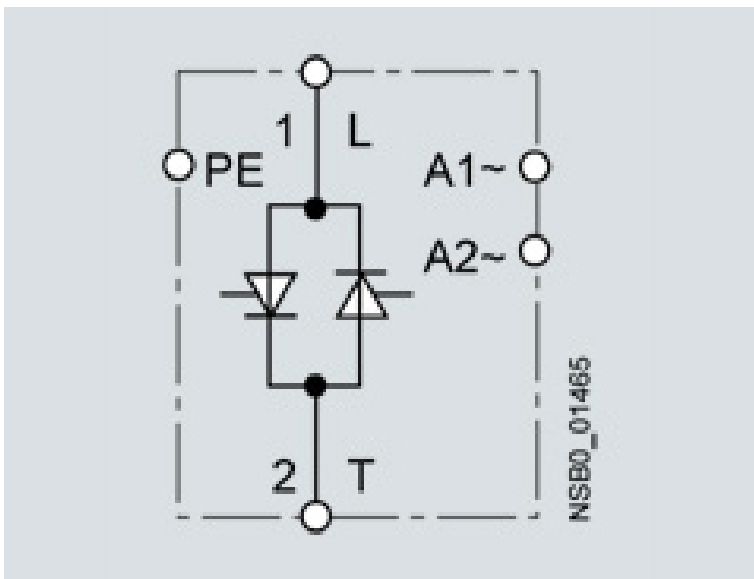
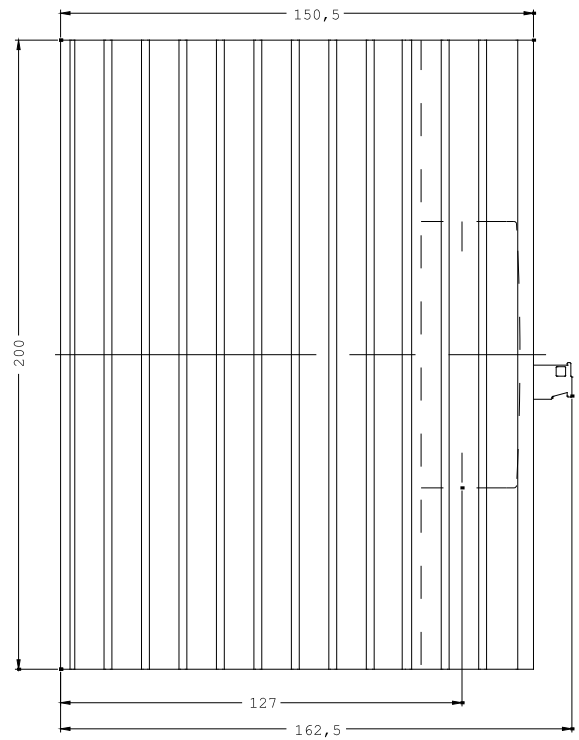
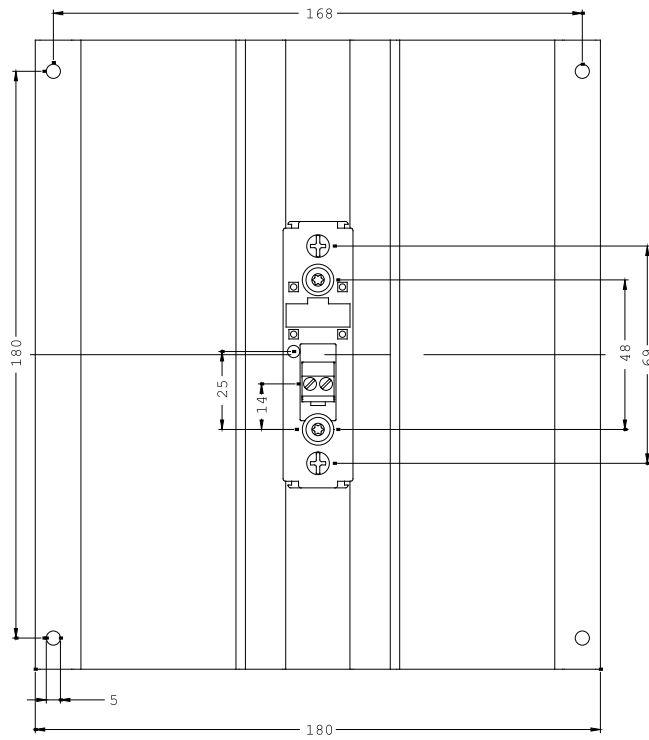
<http://www.siemens.com/cax>

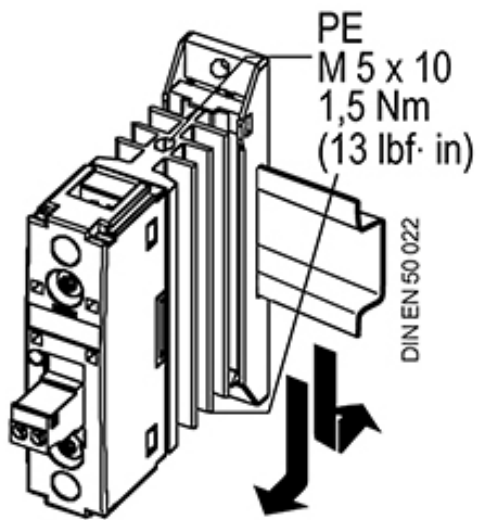
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3RF2390-1BA22/all>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RF2390-1BA22





last change:

Feb 4, 2013