









Solid-state contactor 1-phase 3RF2 AC 51 / 30 A / 40 °C 48-460 V / 24 V
DC Ring cable connection

product brand name	SIRIUS
product designation	solid-state contactor
design of the product	single-phase
product type designation	3RF23
manufacturer's article number	
<ul style="list-style-type: none">• _1 of the accessories that can be ordered• _3 of the accessories that can be ordered• _4 of the accessories that can be ordered	3RF2900-3PA88 3RF2900-0EA18 3RF2950-0GA16
product designation	
<ul style="list-style-type: none">• _1 of the accessories that can be ordered• _3 of the accessories that can be ordered• _4 of the accessories that can be ordered	terminal cover converter load monitoring
General technical data	
product function	zero-point switching
power loss [W] for rated value of the current	
<ul style="list-style-type: none">• at AC in hot operating state• at AC in hot operating state per pole• without load current share typical	33 W 33 W 0.4 W
insulation voltage rated value	600 V
degree of pollution	3
type of voltage of the control supply voltage	DC
surge voltage resistance of main circuit rated value	6 kV
shock resistance according to IEC 60068-2-27	15g / 11 ms
vibration resistance according to IEC 60068-2-6	2g
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	07/01/2006
Main circuit	
number of poles for main current circuit	1
number of NO contacts for main contacts	1
number of NC contacts for main contacts	0
operating voltage at AC	
<ul style="list-style-type: none">• at 50 Hz rated value• at 60 Hz rated value	48 ... 460 V 48 ... 460 V
operating frequency rated value	50 ... 60 Hz
operating range relative to the operating voltage at AC	
<ul style="list-style-type: none">• at 50 Hz• at 60 Hz	40 ... 506 V 40 ... 506 V
operational current	
<ul style="list-style-type: none">• at AC-51 rated value• at AC-51 according to IEC 60947-4-3• according to UL 508 rated value	30 A 22 A 27 A

operational current minimum	500 mA
rate of voltage rise at the thyristor for main contacts maximum permissible	1 000 V/μs
blocking voltage at the thyristor for main contacts maximum permissible	1 200 V
reverse current of the thyristor	10 mA
derating temperature	40 °C
surge current resistance rated value	600 A
I ² t value maximum	1 800 A ² ·s
Control circuit/ Control	
type of voltage of the control supply voltage	DC
control supply voltage 1	30 V
• at DC rated value	15 ... 24 V
• at DC	
control supply voltage	15 V
• at DC initial value for signal <1> detection	5 V
• at DC full-scale value for signal<0> recognition	
control current at minimum control supply voltage	13 mA
• at DC	15 mA
control current at DC rated value	1 ms; additionally max. one half-wave
ON-delay time	1 ms; additionally max. one half-wave
OFF-delay time	
Auxiliary circuit	
number of NC contacts for auxiliary contacts	0
number of NO contacts for auxiliary contacts	0
number of CO contacts for auxiliary contacts	0
Installation/ mounting/ dimensions	
fastening method	screw fixing and snap-on mounting on standard mounting rail 35 mm according to IEC 60715
• side-by-side mounting	Yes
design of the thread of the screw for securing the equipment	M4
height	95 mm
width	45 mm
depth	135.5 mm
Connections/ Terminals	
type of electrical connection	Ring cable lug connection ring terminal lug connection
• for main current circuit	
• for auxiliary and control circuit	
type of connectable conductor cross-sections	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
• for main contacts for JIS cable lug	
• for DIN cable lug for main contacts	
type of connectable conductor cross-sections	
• for auxiliary and control contacts	
— solid	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²)
— finely stranded with core end processing	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²)
— finely stranded without core end processing	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²)
• at AWG cables for auxiliary and control contacts	1x (AWG 20 ... 12)
tightening torque	2 ... 2.5 N·m
• for main contacts with screw-type terminals	0.5 ... 0.6 N·m
• for auxiliary and control contacts with screw-type terminals	
tightening torque [lbf·in]	4.5 ... 5.3 lbf·in
• for auxiliary and control contacts with screw-type terminals	
design of the thread of the connection screw	M5
• for main contacts	M3
• of the auxiliary and control contacts	
stripped length of the cable	10 mm
• for main contacts	10 mm
• for auxiliary and control contacts	
Safety related data	
protection class IP on the front according to IEC 60529	IP00; IP20 with cover

touch protection on the front according to IEC 60529		finger-safe, for vertical contact from the front with cover			
Ambient conditions					
installation altitude at height above sea level maximum		1 000 m			
ambient temperature					
• during operation		-25 ... +60 °C			
• during storage		-55 ... +80 °C			
Electromagnetic compatibility					
conducted interference					
• due to burst according to IEC 61000-4-4		2 kV / 5 kHz behavior criterion 2			
• due to conductor-earth surge according to IEC 61000-4-5		2 kV behavior criterion 2			
• due to conductor-conductor surge according to IEC 61000-4-5		1 kV behavior criterion 2			
• due to high-frequency radiation according to IEC 61000-4-6		140 dBuV in the frequency range 0.15 ... 80 MHz, behavior criterion 1			
field-based interference according to IEC 61000-4-3		80 MHz ... 1 GHz 10 V/m, behavior criterion 1			
electrostatic discharge according to IEC 61000-4-2		4 kV contact discharging / 8 kV air discharging, behavior criterion 2			
conducted HF interference emissions according to CISPR11		Class A for industrial environment			
field-bound HF interference emission according to CISPR11		Class B for the domestic, business and commercial environments			
Short-circuit protection, design of the fuse link					
manufacturer's article number					
• of gS fuse for semiconductor protection at NH design usable		3NE1803-0			
• of full range R fuse link for semiconductor protection at cylindrical design usable		5SE1335			
• of back-up R fuse link for semiconductor protection at NH design usable		3NE8003-1			
• of back-up R fuse link for semiconductor protection at cylindrical design 10 x 38 mm usable		3NC1032			
• of back-up R fuse link for semiconductor protection at cylindrical design 14 x 51 mm usable		3NC1450			
• of back-up R fuse link for semiconductor protection at cylindrical design 22 x 58 mm usable		3NC2263			
manufacturer's article number of the gG fuse					
• at NH design usable		3NA6807 ; These fuses have a smaller rated current than the semiconductor relays			
• at cylindrical design 14 x 51 mm usable		3NW6105-1 ; These fuses have a smaller rated current than the semiconductor relays			
• at cylindrical design 22 x 58 mm usable		3NW6205-1 ; These fuses have a smaller rated current than the semiconductor relays			
manufacturer's article number					
• of DIAZED fuse usable		5SB2711 ; These fuses have a smaller rated current than the semiconductor relays			
• of NEOZED fuse usable		5SE2320 ; These fuses have a smaller rated current than the semiconductor relays			
Certificates/ approvals					
General Product Approval		EMC	Declaration of Conformity		
	Confirmation				
Declaration of Conformity		Test Certificates	other		
		Type Test Certificates/Test Report	Confirmation		
					

Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

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

<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RF2330-3AA04>

Cax online generator

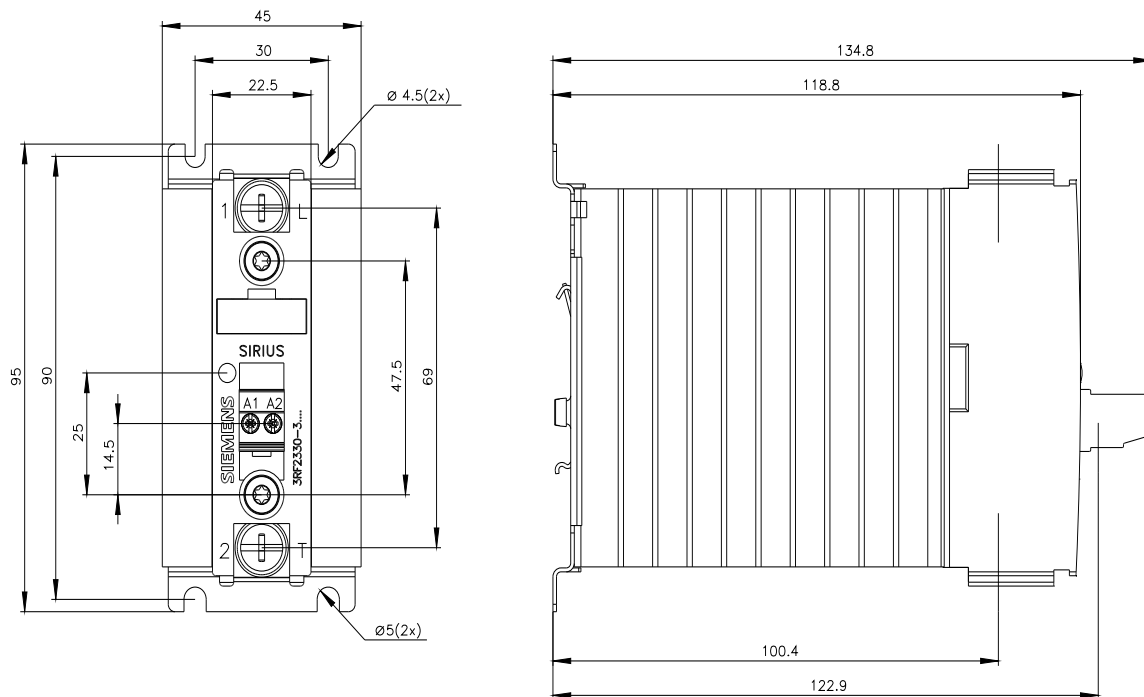
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RF2330-3AA04>

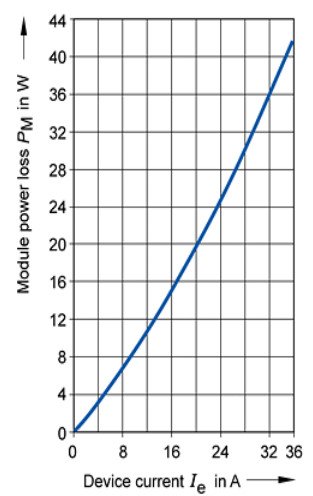
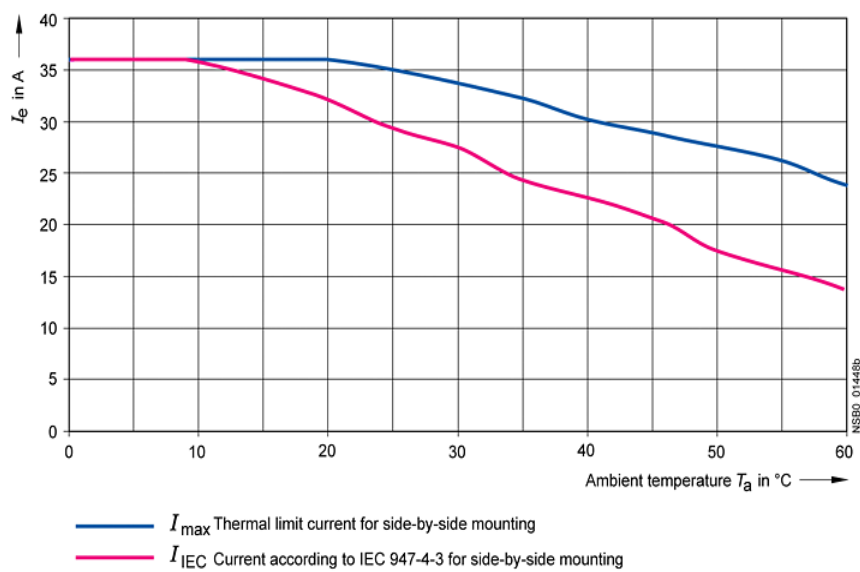
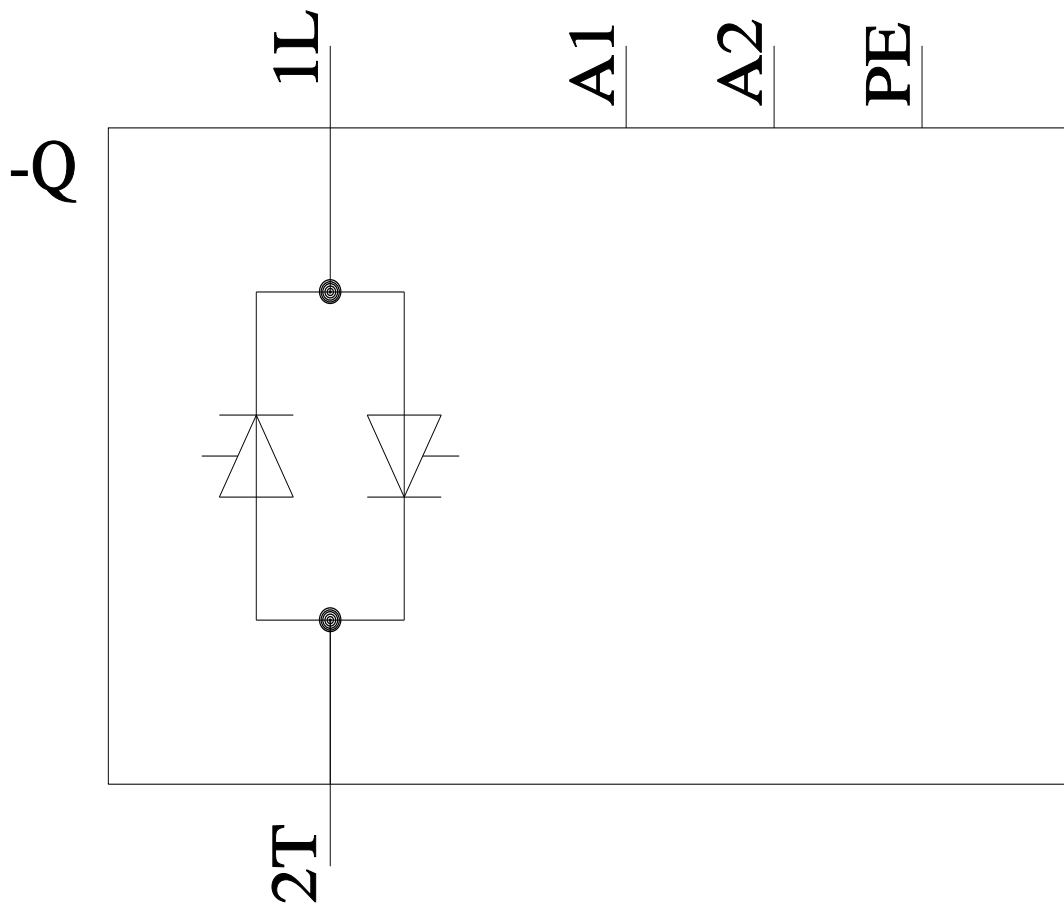
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RF2330-3AA04>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RF2330-3AA04&lang=en





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