



Solid-state contactor 1-phase 3RF2 AC 51 / 30 A / 40 °C 48-460 V / 4-30 V
DC short circuit-proof up to 25 A with B miniature circuit breaker Reusable packaging

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 _5 of the accessories that can be ordered 	3RF2900-3PA88 3RF2900-0EA18 3RF2950-0GA16 3RF2920-0FA08
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 _5 of the accessories that can be ordered 	terminal cover converter load monitoring load monitoring, basis
General technical data	
product function	short-circuit resistant with B-automatic device
power loss [W] for rated value of the current at AC in hot operating state	33 W
<ul style="list-style-type: none"> per pole 	33 W
power loss [W] for rated value of the current without load current share typical	0.6 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 acc. to IEC 60068-2-27	15g / 11 ms
vibration resistance acc. to IEC 60068-2-6	2g
reference code acc. to IEC 81346-2	Q
Substance Prohibitance (Date)	28.05.2009 00:00:00
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
operational current	40 ... 506 V
<ul style="list-style-type: none"> • at AC-51 rated value • at AC-51 acc. to IEC 60947-4-3 • acc. to UL 508 rated value 	30 A
operational current minimum	18.5 A
operational current of the MCB at AC rated value	26 A
rate of voltage rise at the thyristor for main contacts maximum permissible	500 mA
blocking voltage at the thyristor for main contacts maximum permissible	25 A
reverse current of the thyristor	1 000 V/μs
derating temperature	1 200 V
surge current resistance rated value	10 mA
I²t value maximum	40 °C
Control circuit/ Control	1 150 A
type of voltage of the control supply voltage	6 600 A ² ·s
control supply voltage 1	DC
<ul style="list-style-type: none"> • at DC rated value • at DC 	30 V
control supply voltage at AC	4 ... 30 V
<ul style="list-style-type: none"> • at 60 Hz full-scale value for signal<0> recognition 	40 V
control supply voltage	
<ul style="list-style-type: none"> • at DC initial value for signal <1> detection • at DC full-scale value for signal<0> recognition 	4 V
control current at minimum control supply voltage	1 V
<ul style="list-style-type: none"> • at DC 	18 mA
control current at DC rated value	20 mA
ON-delay time	1 ms; additionally max. one half-wave
OFF-delay time	1 ms; additionally max. one half-wave
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 and snap-on mounting onto 35 mm standard mounting rail
<ul style="list-style-type: none"> • side-by-side mounting 	Yes
height	95 mm
width	22.5 mm
depth	120 mm
Connections/ Terminals	
type of electrical connection	
<ul style="list-style-type: none"> • for main current circuit • for auxiliary and control circuit 	screw-type terminals
type of connectable conductor cross-sections	screw-type terminals
<ul style="list-style-type: none"> • for main contacts <ul style="list-style-type: none"> — solid — finely stranded with core end processing • at AWG cables for main contacts 	2x (1.5 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²)
connectable conductor cross-section for main contacts	2x (1 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²), 1x 10 mm ²
<ul style="list-style-type: none"> • solid or stranded • finely stranded with core end processing 	2x (14 ... 10)
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • for auxiliary and control contacts <ul style="list-style-type: none"> — solid — finely stranded with core end processing 	1.5 ... 6 mm ²
	1 ... 10 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)

— 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)
AWG number as coded connectable conductor cross section for main contacts	14 ... 10
tightening torque	
• for main contacts with screw-type terminals	2 ... 2.5 N·m
• for auxiliary and control contacts with screw-type terminals	0.5 ... 0.6 N·m
tightening torque [lbf·in]	
• for main contacts with screw-type terminals	18 ... 22 lbf·in
• for auxiliary and control contacts with screw-type terminals	4.5 ... 5.3 lbf·in
design of the thread of the connection screw	
• for main contacts	M4
• of the auxiliary and control contacts	M3
stripped length of the cable	
• for main contacts	7 mm
• for auxiliary and control contacts	7 mm
Safety related data	
protection class IP on the front acc. to IEC 60529	IP20
touch protection on the front acc. to IEC 60529	finger-safe, for vertical contact from the front
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 acc. to IEC 61000-4-4	2 kV / 5 kHz behavior criterion 2
• due to conductor-earth surge acc. to IEC 61000-4-5	2 kV behavior criterion 2
• due to conductor-conductor surge acc. to IEC 61000-4-5	1 kV behavior criterion 2
• due to high-frequency radiation acc. to IEC 61000-4-6	140 dBuV in the frequency range 0.15 ... 80 MHz, behavior criterion 1
field-based interference acc. to IEC 61000-4-3	80 MHz ... 1 GHz 10 V/m, behavior criterion 1
electrostatic discharge acc. to IEC 61000-4-2	4 kV contact discharging / 8 kV air discharging, behavior criterion 2
conducted HF interference emissions acc. to CISPR11	Class A for industrial environment
field-bound HF interference emission acc. 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

- of NEOZED fuse usable

[semiconductor relays](#)

[5SE2320: These fuses have a smaller rated current than the semiconductor relays](#)

Certificates/ approvals

General Product Approval

EMC

Declaration of Conformity



[Miscellaneous](#)

Test Certificates

other

Railway

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

[Confirmation](#)

[Vibration and Shock](#)

Further information

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=3RF2330-1DA44-1KM0>

Cax online generator

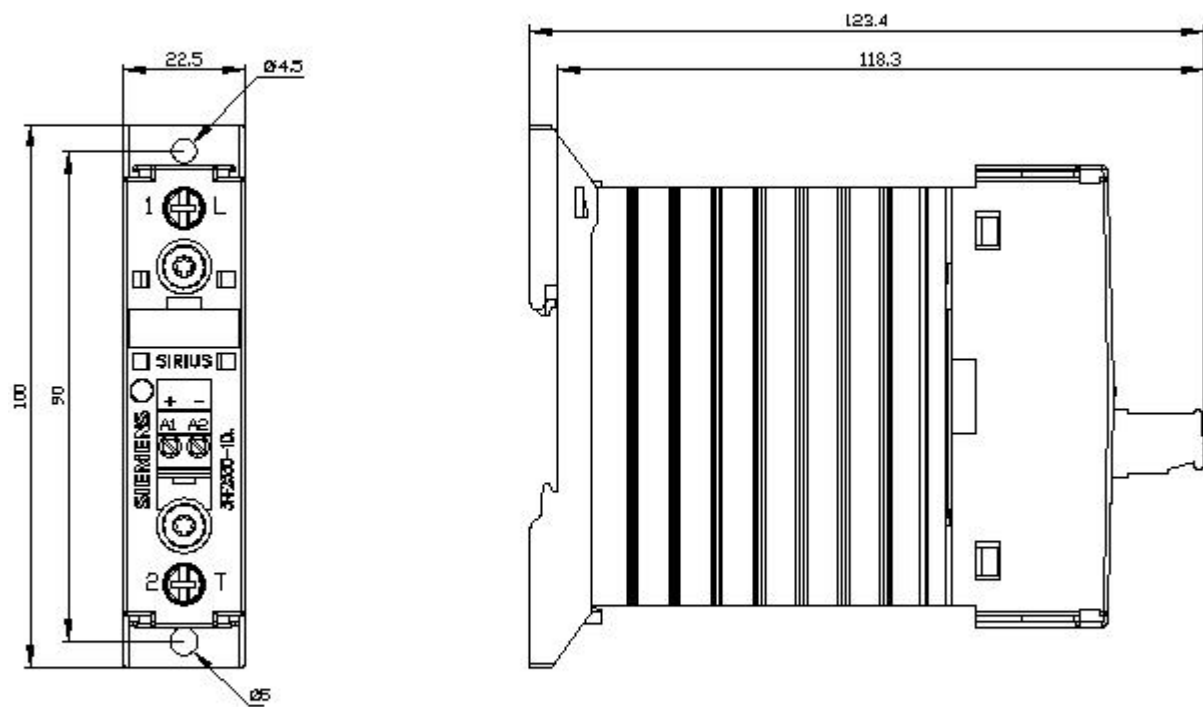
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RF2330-1DA44-1KM0>

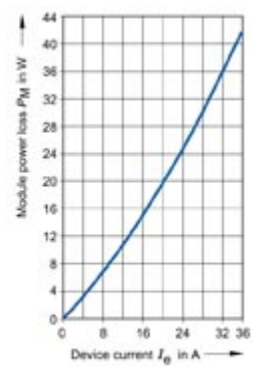
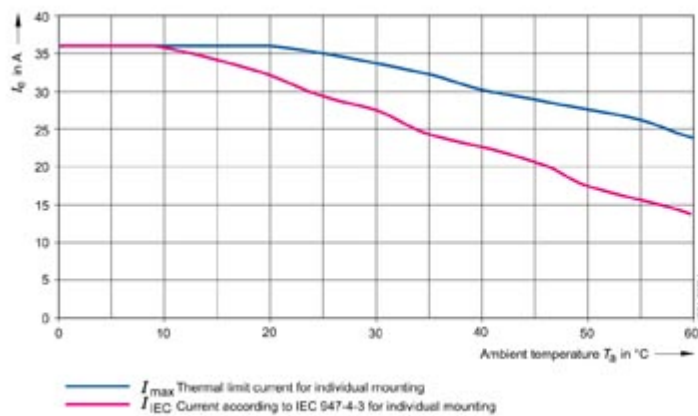
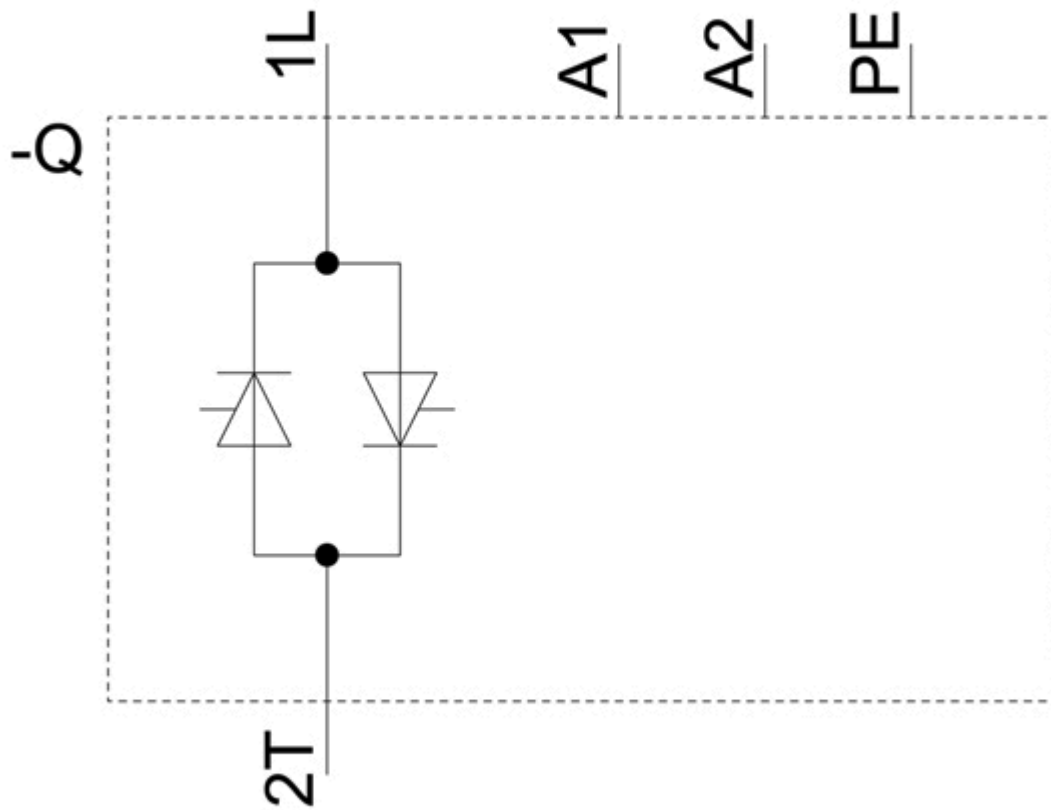
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RF2330-1DA44-1KM0>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RF2330-1DA44-1KM0&lang=en





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