



Solid-state contactor 1-phase 3RF2 AC 15 / 27.5 A / 40 °C 48-460 V / 24 V DC Instantaneous switching Since 21 May 2018, the dimensions and the drill pattern have changed, additional information in the Industry Online Support

product brand name
product designation
design of the product
product type designation
manufacturer's article number

- _1 of the accessories that can be ordered
- _2 of the accessories that can be ordered
- _3 of the accessories that can be ordered
- _4 of the accessories that can be ordered

product designation

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SIRIUS
solid-state contactor
single-phase
3RF23

[3RF2900-3PA88](#)
[3RF2950-0HA16](#)
[3RF2900-0EA18](#)
[3RF2950-0GA16](#)

terminal cover
power regulator
converter
load monitoring

General technical data

product function	instantaneous switching
power loss [W] for rated value of the current	
• at AC in hot operating state	83 W
• at AC in hot operating state per pole	83 W
• without load current share typical	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)	05/28/2009

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	
• at 50 Hz rated value	48 ... 460 V
• at 60 Hz rated value	48 ... 460 V
operating frequency rated value	50 ... 60 Hz
operating range relative to the operating voltage at AC	
• at 50 Hz	40 ... 506 V
• at 60 Hz	40 ... 506 V
operational current	
• at AC-51 rated value	50 A

• at AC-51 according to IEC 60947-4-3 • according to UL 508 rated value	50 A
operational current minimum	27.5 A
rate of voltage rise at the thyristor for main contacts	500 mA
maximum permissible	1 000 V/μs
blocking voltage at the thyristor for main contacts	1 200 V
maximum permissible	
reverse current of the thyristor	10 mA
derating temperature	40 °C
surge current resistance rated value	1 150 A
I²t value maximum	6 600 A ² ·s
Control circuit/ Control	
type of voltage of the control supply voltage	DC
control supply voltage 1	
• at DC rated value • at DC	30 V
control supply voltage	15 ... 24 V
• at DC initial value for signal <1> detection • at DC full-scale value for signal<0> recognition	15 V
control current at minimum control supply voltage	5 V
• at DC	13 mA
control current at DC rated value	15 mA
ON-delay time	1 ms
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 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	100 mm
width	80 mm
depth	164 mm
Connections/ Terminals	
type of electrical connection	
• for main current circuit • for auxiliary and control circuit	screw-type terminals
type of connectable conductor cross-sections	screw-type terminals
• for main contacts — 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
• solid or stranded • finely stranded with core end processing	2x (14 ... 10)
type of connectable conductor cross-sections	
• for auxiliary and control contacts — solid — finely stranded with core end processing — finely stranded without core end processing • at AWG cables for auxiliary and control contacts	1.5 ... 6 mm ²
AWG number as coded connectable conductor cross section for main contacts	1 ... 10 mm ²
tightening torque	
• for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²)
tightening torque [lbf·in]	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²)
• for main contacts with screw-type terminals	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²)
	1x (AWG 20 ... 12)
	10 ... 14
	2 ... 2.5 N·m
	0.5 ... 0.6 N·m
	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 • of the auxiliary and control contacts	M4 M3
stripped length of the cable	
• for main contacts • for auxiliary and control contacts	7 mm 7 mm

Safety related data	
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according 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 • during storage	-25 ... +60 °C -55 ... +80 °C

Electromagnetic compatibility	
conducted interference	
• due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to high-frequency radiation according to IEC 61000-4-6	2 kV / 5 kHz behavior criterion 2 2 kV behavior criterion 2 1 kV behavior criterion 2 140 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 full range R fuse link for semiconductor protection at NH design usable • of back-up R fuse link for semiconductor protection at NH design usable • of back-up R fuse link for semiconductor protection at cylindrical design 22 x 58 mm usable manufacturer's article number • of NEOZED fuse usable	3NE1020-2 3NE8020-1 3NC2280 5SE2335 ; 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
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[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=3RF2370-1BA04>

Cax online generator

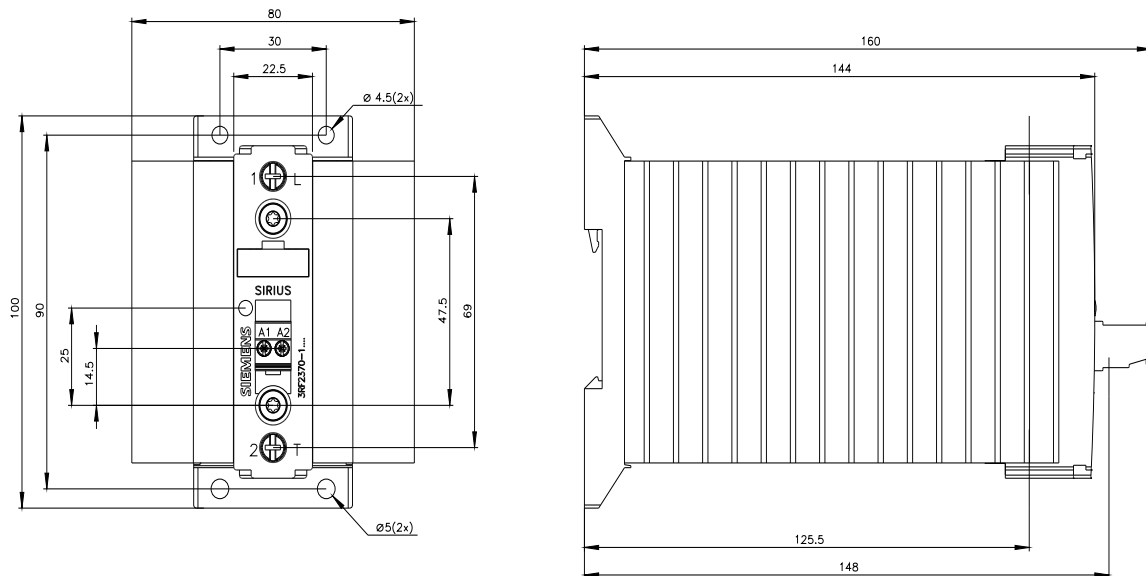
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RF2370-1BA04>

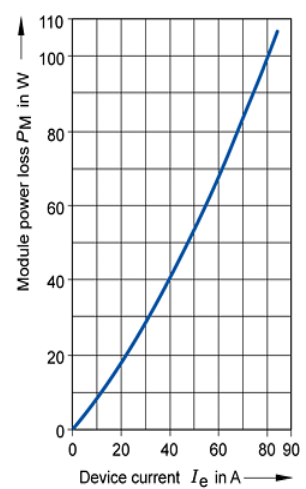
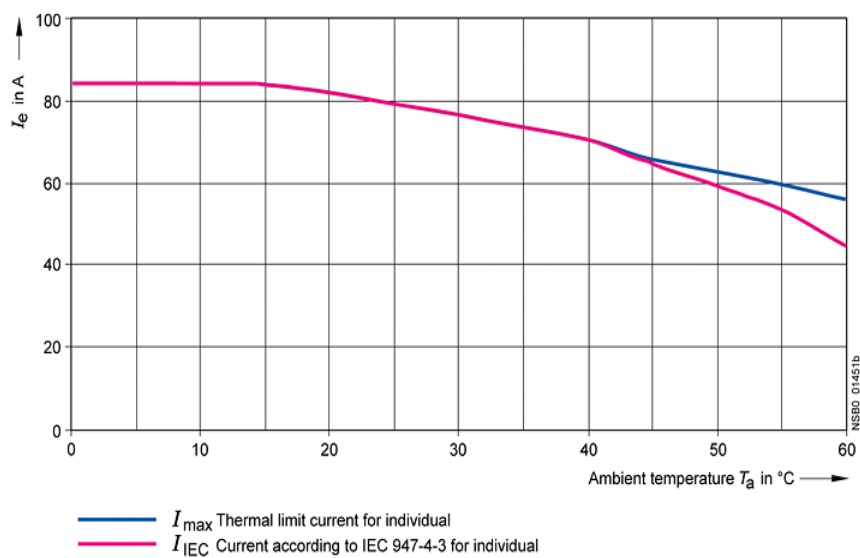
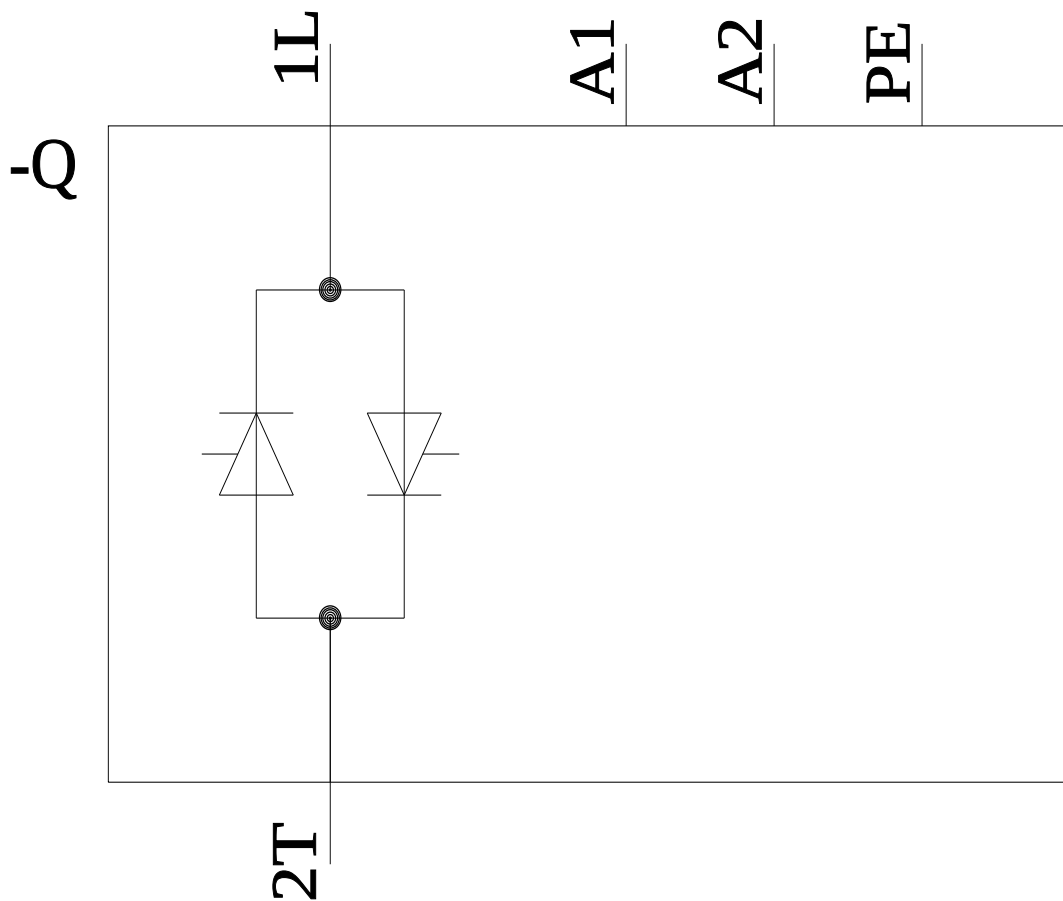
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RF2370-1BA04>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RF2370-1BA04&lang=en





last modified:

1/26/2022