



Solid-state contactor 1-phase 3RF2 AC 15 / 27.5 A / 40 °C 48-600 V / 110-230 V AC 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
- _4 of the accessories that can be ordered

product designation

- _1 of the accessories that can be ordered
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SIRIUS

solid-state contactor

single-phase

3RF23

[3RF2900-3PA88](#)

[3RF2950-0HA36](#)

[3RF2950-0GA36](#)

terminal cover

power regulator

load monitoring

General technical data

product function

instantaneous switching

power loss [W] for rated value of the current

- at AC in hot operating state
- at AC in hot operating state per pole
- without load current share typical

83 W

83 W

3.5 W

insulation voltage rated value

600 V

degree of pollution

3

type of voltage of the control supply voltage

AC

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

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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
- at 60 Hz rated value

48 ... 600 V

48 ... 600 V

operating frequency rated value

50 ... 60 Hz

operating range relative to the operating voltage at AC

- at 50 Hz
- at 60 Hz

40 ... 660 V

40 ... 660 V

operational current

- at AC-51 rated value
- at AC-51 according to IEC 60947-4-3
- according to UL 508 rated value

50 A

50 A

27.5 A

operational current minimum	500 mA
rate of voltage rise at the thyristor for main contacts maximum permissible	1 000 V/ μ s
blocking voltage at the thyristor for main contacts maximum permissible	1 600 V
reverse current of the thyristor	10 mA
derating temperature	40 °C
surge current resistance rated value	1 150 A
I ² t value maximum	6 600 A ² ·s
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage 1 at AC	
• at 50 Hz	110 ... 230 V
• at 60 Hz	110 ... 230 V
control supply voltage frequency	
• 1 rated value	50 Hz
• 2 rated value	60 Hz
control supply voltage at AC	
• at 50 Hz full-scale value for signal<0> recognition	40 V
• at 60 Hz full-scale value for signal<0> recognition	40 V
control supply voltage	
• at AC initial value for signal <1> detection	90 V
symmetrical line frequency tolerance	5 Hz
control current at minimum control supply voltage	
• at AC	2 mA
control current at AC rated value	15 mA
ON-delay time	40 ms
OFF-delay time	40 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	screw-type terminals
• for auxiliary and control circuit	screw-type terminals
type of connectable conductor cross-sections	
• for main contacts	
— solid	2x (1.5 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²)
— finely stranded with core end processing	2x (1 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²), 1x 10 mm ²
• at AWG cables for main contacts	2x (14 ... 10)
connectable conductor cross-section for main contacts	
• solid or stranded	1.5 ... 6 mm ²
• finely stranded with core end processing	1 ... 10 mm ²
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)
AWG number as coded connectable conductor cross section for main contacts	10 ... 14
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 - for auxiliary and control contacts with screw-type terminals	18 ... 22 lbf·in 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	3NE1020-2 3NE8020-1 3NC2280

Certificates/ approvals

General Product Approval	EMC	Declaration of Conformity
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[Confirmation](#)



Declaration of Conformity	Test Certificates	other
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[Type Test Certificates/Test Report](#)

[Confirmation](#)



Further information

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

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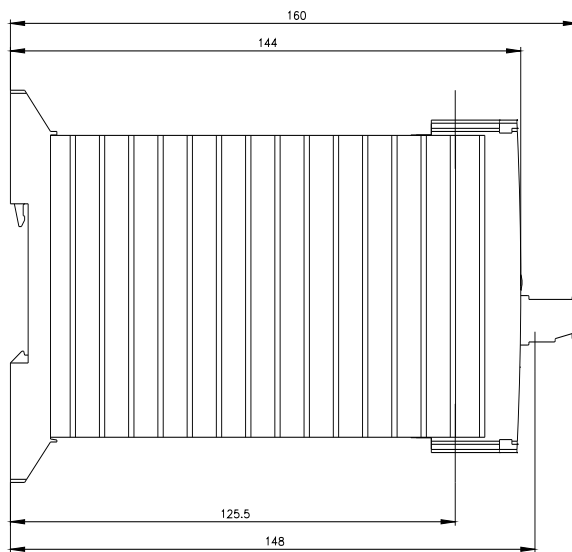
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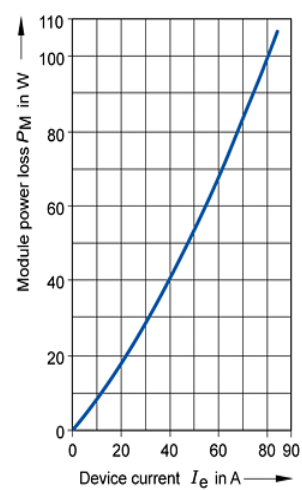
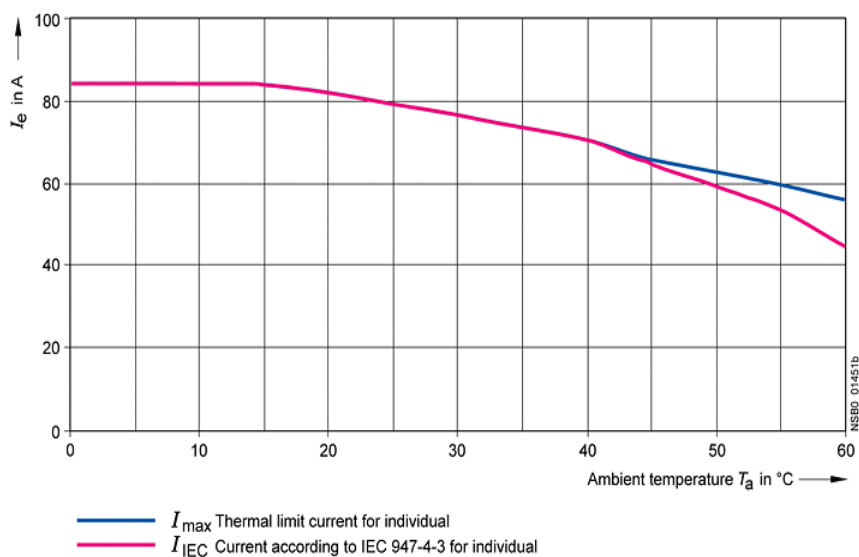
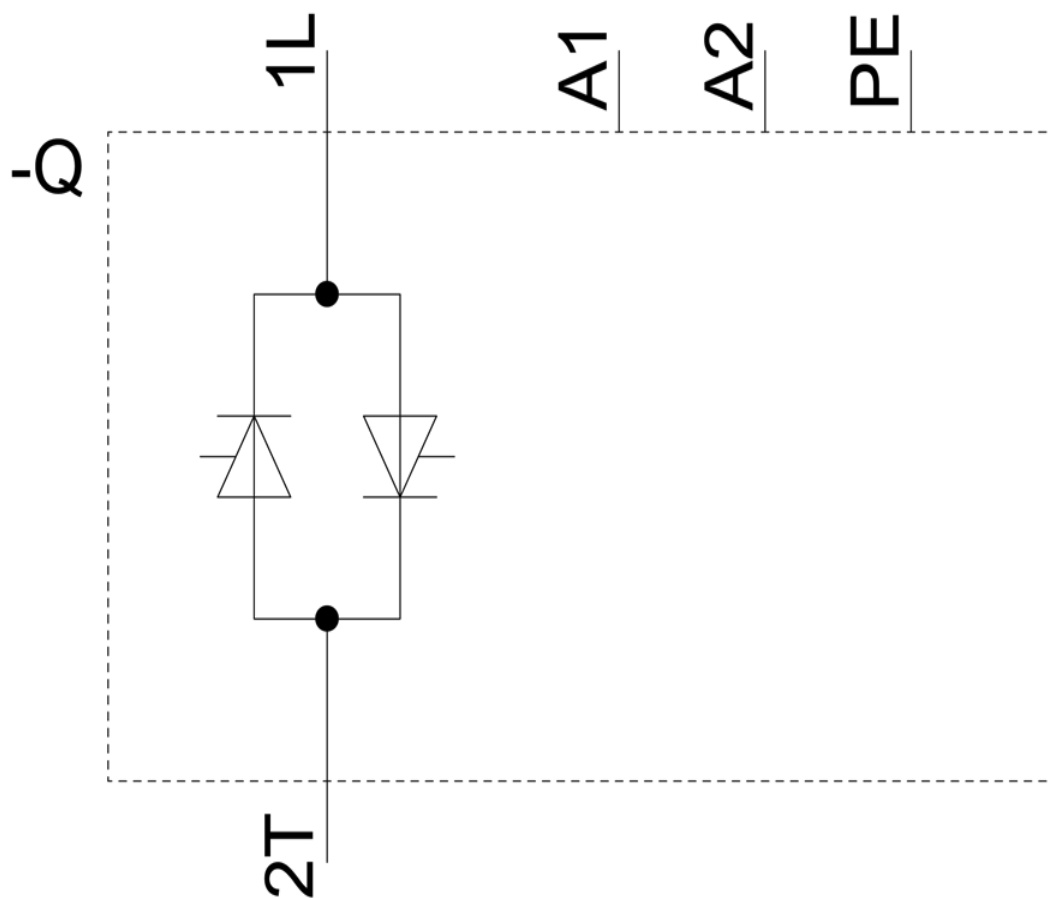
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Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RF2370-1BA26&lang=en





last modified:

1/26/2022

