



Solid-state contactor 1-phase 3RF2 AC 51 / 70 A / 40 °C 48-460 V / 24 V
DC Ring cable connection 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
- _3 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
- _3 of the accessories that can be ordered
- _4 of the accessories that can be ordered

SIRIUS
solid-state contactor
single-phase
3RF23

[3RF2900-3PA88](#)
[3RF2900-0EA18](#)
[3RF2990-0GA16](#)

terminal cover
converter
load monitoring

General technical data

product function	zero-point 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)	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	
• 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	70 A
• at AC-51 according to IEC 60947-4-3	70 A
• according to UL 508 rated value	62 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	1 150 A
I ² t value maximum	6 600 A ² ·s

Control circuit/ Control

type of voltage of the control supply voltage	DC
control supply voltage 1	30 V
<ul style="list-style-type: none"> at DC rated value at DC 	15 ... 24 V
control supply voltage	15 V
<ul style="list-style-type: none"> at DC initial value for signal <1> detection at DC full-scale value for signal<0> recognition 	5 V
control current at minimum control supply voltage	13 mA
<ul style="list-style-type: none"> at DC 	15 mA
control current at DC rated value	15 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 fixing and snap-on mounting on standard mounting rail 35 mm according to IEC 60715
<ul style="list-style-type: none"> side-by-side mounting 	Yes
design of the thread of the screw for securing the equipment	M4
height	100 mm
width	80 mm
depth	162 mm

Connections/ Terminals

type of electrical connection	Ring cable lug connection ring terminal lug connection
<ul style="list-style-type: none"> 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
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 — finely stranded without core end processing 	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)
<ul style="list-style-type: none"> at AWG cables for auxiliary and control contacts 	1x (AWG 20 ... 12)
tightening torque	2 ... 2.5 N·m 0.5 ... 0.6 N·m
<ul style="list-style-type: none"> for main contacts with screw-type terminals for auxiliary and control contacts with screw-type terminals 	
tightening torque [lbf·in]	4.5 ... 5.3 lbf·in
<ul style="list-style-type: none"> for auxiliary and control contacts with screw-type terminals 	
design of the thread of the connection screw	M5 M3
<ul style="list-style-type: none"> for main contacts of the auxiliary and control contacts 	
stripped length of the cable	10 mm 10 mm
<ul style="list-style-type: none"> for main contacts for auxiliary and control contacts 	

Safety related data

protection class IP on the front according to IEC 60529	IP00; IP20 with cover
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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 full range R fuse link for semiconductor protection at NH design usable	3NE1020-2
• of back-up R fuse link for semiconductor protection at NH design usable	3NE8020-1
• of back-up R fuse link for semiconductor protection at cylindrical design 22 x 58 mm usable	3NC2280
manufacturer's article number	
• of NEOZED fuse usable	5SE2335 ; These fuses have a smaller rated current than the semiconductor relays

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

Siemens has decided to exit the Russian market (see here).
<https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business>

Siemens is working on the renewal of the current EAC certificates.
 Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

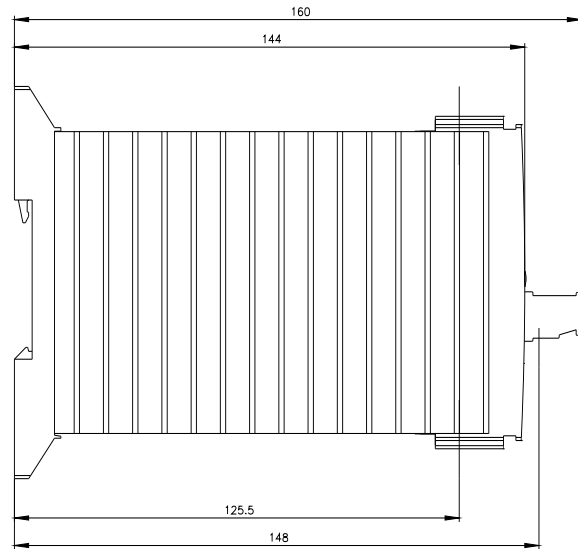
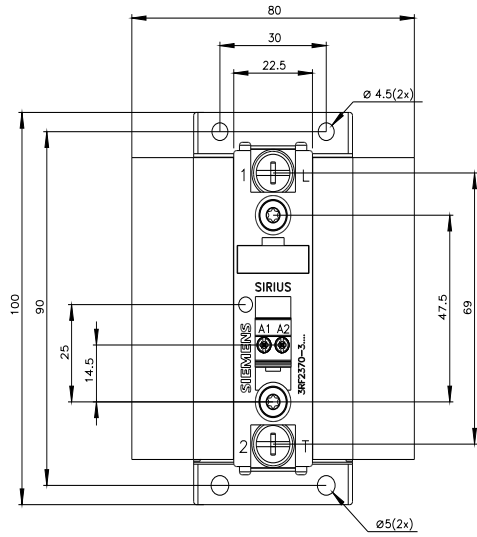
Information on the packaging
<https://support.industry.siemens.com/cs/ww/en/view/109813875>

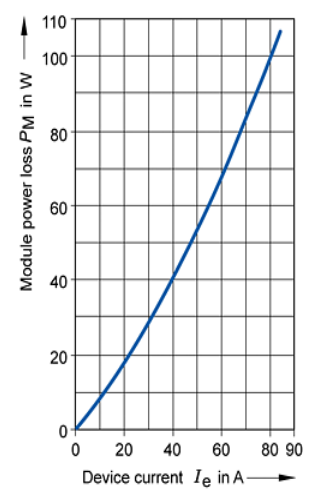
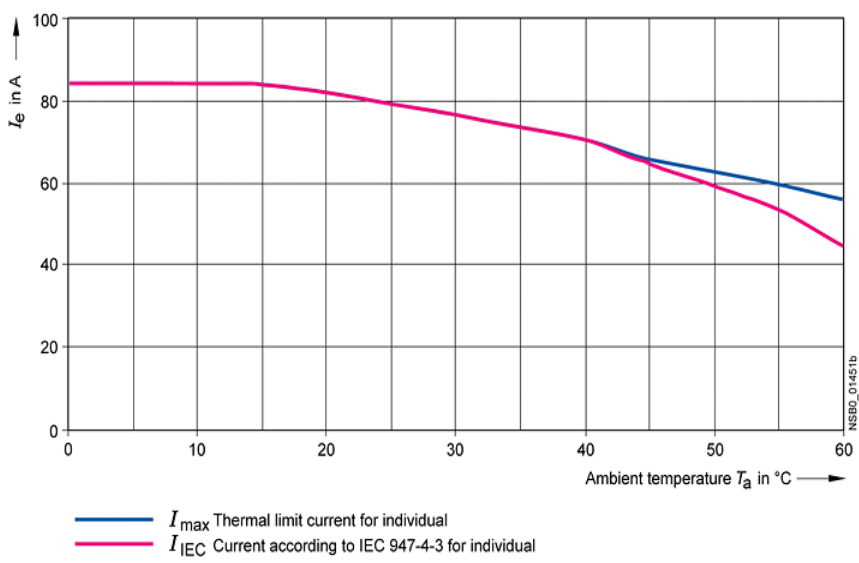
Information- and Downloadcenter (Catalogs, Brochures,...)
<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)
<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RF2370-3AA04>

Cax online generator
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RF2370-3AA04>

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





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