



Solid-state contactor 1-phase 3RF2 AC
Instantaneous switching

product brand name	SIRIUS
product designation	solid-state contactor
design of the product	single-phase
product type designation	3RF23
manufacturer's article number	
_1 of the accessories that	3RF2900-3PA88
_2 of the accessories that	3RF2950-OHA16
_3 of the accessories that	3RF2900-OEA18
_4 of the accessories that	3RF2950-OGA16
product designation	
_1 of the accessories that	terminal cover
_2 of the accessories that	power regulator
_3 of the accessories that	converter
_4 of the accessories that	load monitoring

General technical data	
product function	instantaneous switching
power loss [W] for rated value of the current	
at AC in hot operating sta	54 W
at AC in hot operating sta	54 W
without load current share	0.4 W
insulation voltage rated value	600 V
degree of pollution	3
type of voltage	
of the operating voltage	AC
of the control supply volt	DC
surge voltage resistance of ma	6 kV
protection class IP	IP20
protection class IP on the fro	IP20
shock resistance according to IEC 60068-2-27	15 g / 11 ms
vibration resistance according to IEC 60068-2-6	2 g
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	05/28/2009
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-1 Dibutylbis(pentane-2,4-dionato-O,O')
Weight	0.44 kg

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
type of voltage of the operating voltage	AC

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	36 A
according to UL 508 rated	25 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
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 maximum permissible	30 V
control supply voltage 1 at DC	15 ... 24 V
control supply voltage	
at DC initial value for signal	15 V
at DC full-scale value for signal	5 V
control current at minimum control supply voltage	
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	
type of switching contact	normally open contact (NO)
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 side-by-side	Yes
fastening method	screw fixing and snap-on mounting on to IEC 60715
design of the thread of the screw for securing the equipment	M4
height	100 mm
width	67.5 mm
depth	144.5 mm
Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	Yes
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	2x (1 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²)
for 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	1 ... 10 mm ²

type of connectable conductor cross-sections	
for auxiliary and control	
– solid	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²)
– finely stranded with core	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²)
– finely stranded without core	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²)
for AWG cables for auxiliary and control	1x (AWG 20 ... 12)
AWG number as coded connectable main contacts	10 ... 14
tightening torque	
for main contacts with screw terminals	2 ... 2.5 N·m
for auxiliary and control terminals	0.5 ... 0.6 N·m
tightening torque [lbf·in]	
for main contacts with screw terminals	18 ... 22 lbf·in
for auxiliary and control terminals	4.5 ... 5.3 lbf·in
design of the thread of the connection screw	
for main contacts	M4
of the auxiliary and control terminals	M3
stripped length of the cable	
for main contacts	7 mm
for auxiliary and control terminals	7 mm
Electrical Safety	
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 front
Ambient conditions	
installation altitude at height	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 61000-4-11	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 radiated interference according to IEC 61000-4-6	140 dBuV in the frequency range 0.15 ... 1 MHz
field-based interference according to IEC 61000-4-3	80 MHz ... 1 GHz 10 V/m, behavior criterion 2
electrostatic discharge according to IEC 61000-4-2	4 kV contact discharging / 8 kV air discharge
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 light industrial environment
Short-circuit protection, design of the fuse link	
manufacturer's article number of gS fuse for semiconductor usable	3NE1817-0
manufacturer's article number of full range R fuse link cylindrical design usable	5SE1363
manufacturer's article number of back-up R fuse link for cylindrical design usable	3NE1817-0
manufacturer's article number of back-up R fuse link for cylindrical design 14 x 51 mm usable	3NC1450
manufacturer's article number of back-up R fuse link for cylindrical design 22 x 58 mm usable	3NC2280
manufacturer's article number of NEOZED fuse usable	5SE2335: These fuses have a smaller relay
Approvals Certificates	
General Product Approval	EMV



Confirmation



Test Certificates	other	Railway	Environment
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[Special Test Certificates](#) / [Test Certificates / Test Report](#)



[Special Test Certificates](#) / [Technical Confirmations](#)

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=3RF2350>

Cax online generator

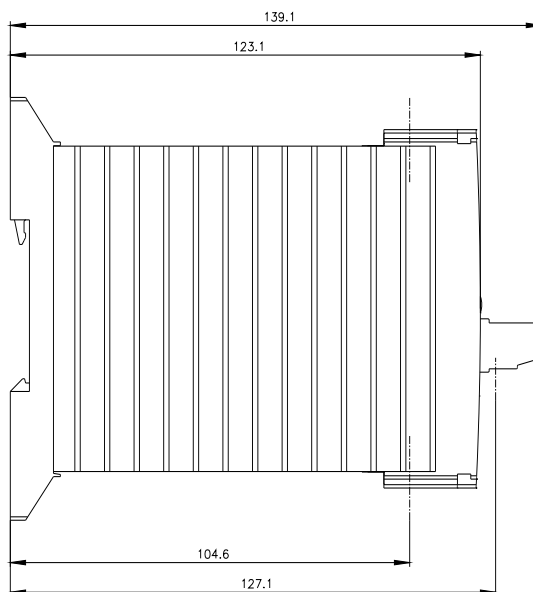
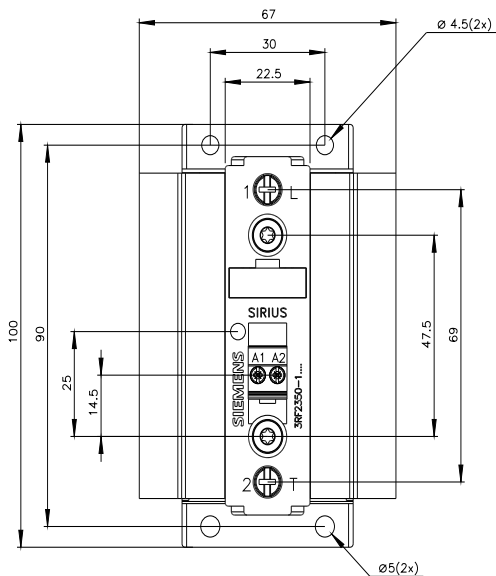
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RF2350>

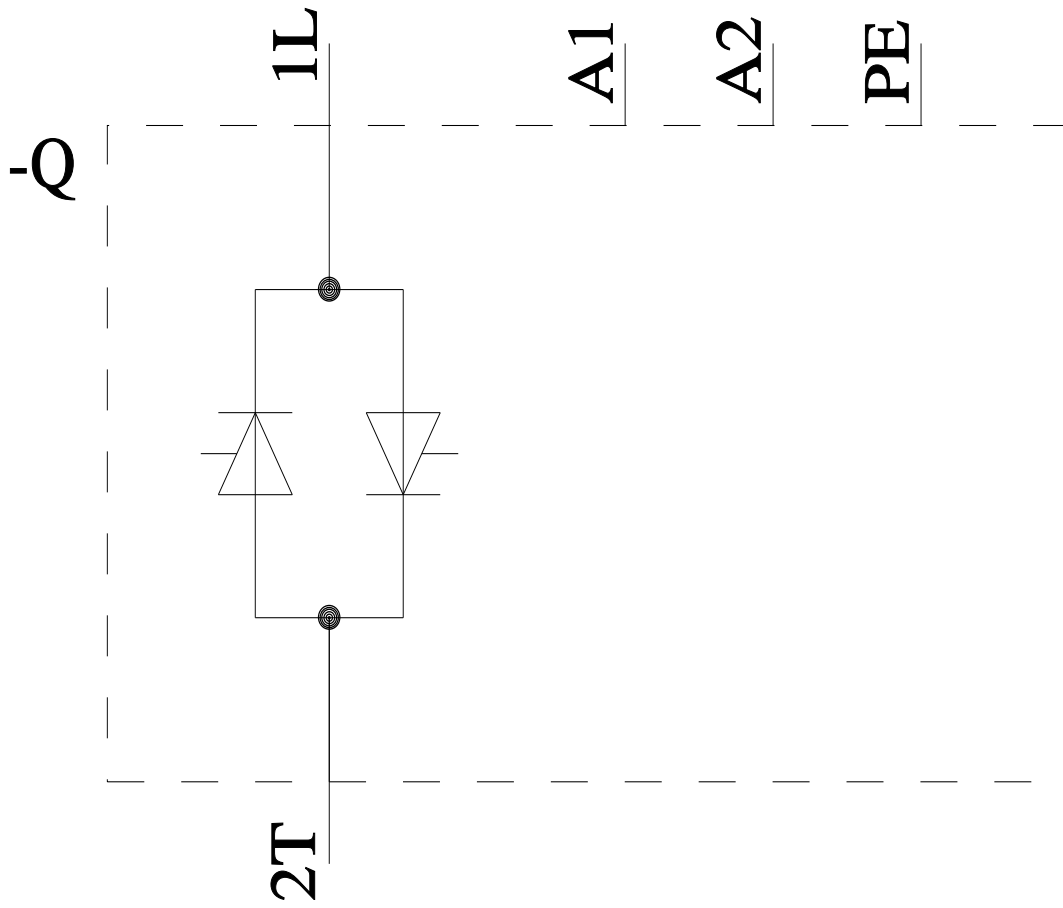
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RF2350-1BA04>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RF2350-1BA04&mlfb=3RF2350-1BA04





last modified:

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