


















Solid-state contactor 1-phase 3RF2 AC 51 / 10 A / 40 °C 48-600 V / 110-230 V AC screw terminal

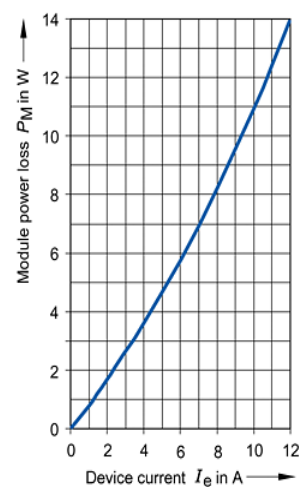
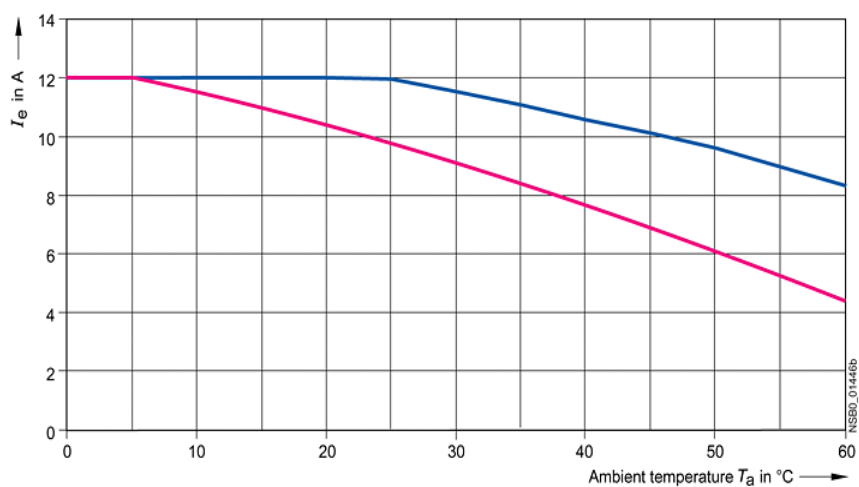
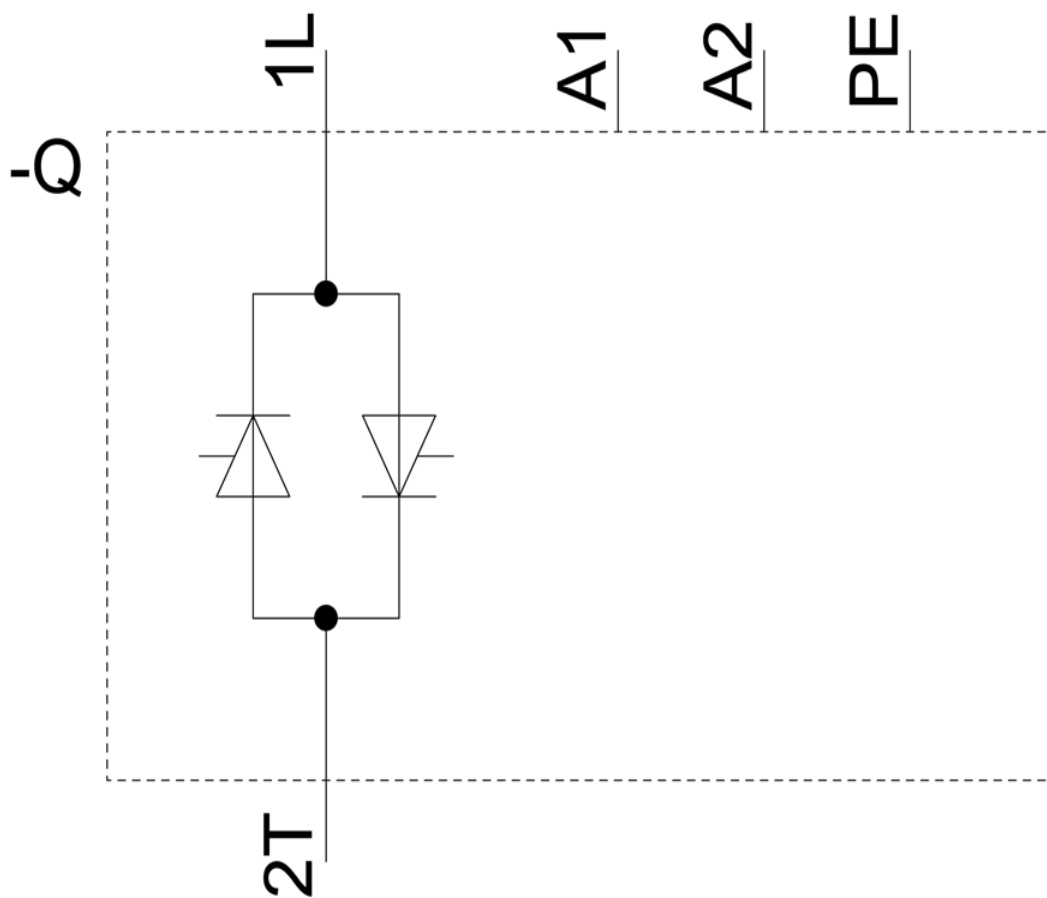
product brand name	SIRIUS
product designation	solid-state contactor
design of the product	single-phase
product type designation	3RF23
manufacturer's article number	
• _1 of the accessories that can be ordered	3RF2900-3PA88
• _4 of the accessories that can be ordered	3RF2920-0GA36
product designation	
• _1 of the accessories that can be ordered	terminal cover
• _4 of the accessories that can be ordered	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	11 W
• at AC in hot operating state per pole	11 W
• without load current share typical	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 EN 61346-2	Q
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 ... 600 V
• at 60 Hz rated value	48 ... 600 V
operating frequency rated value	50 ... 60 Hz
operating range relative to the operating voltage at AC	
• at 50 Hz	40 ... 660 V
• at 60 Hz	40 ... 660 V
operational current	
• at AC-51 rated value	10.5 A
• at AC-51 according to IEC 60947-4-3	7.5 A
• according to UL 508 rated value	9.6 A

operational current minimum	100 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	400 A
I ² t value maximum	800 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; additionally max. one half-wave
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	95 mm
width	22.5 mm
depth	88 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
• 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 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)
• for 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	

<ul style="list-style-type: none">• for main contacts with screw-type terminals• for auxiliary and control contacts with screw-type terminals	2 ... 2.5 N·m 0.5 ... 0.6 N·m						
tightening torque [lbf·in] <ul style="list-style-type: none">• 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 <ul style="list-style-type: none">• for main contacts• of the auxiliary and control contacts	M4 M3						
stripped length of the cable <ul style="list-style-type: none">• 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 <ul style="list-style-type: none">• during operation• during storage	-25 ... +60 °C -55 ... +80 °C						
Electromagnetic compatibility							
conducted interference <ul style="list-style-type: none">• 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 <ul style="list-style-type: none">• of gS fuse for semiconductor protection at NH design usable• of full range R fuse link for semiconductor protection at cylindrical 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 10 x 38 mm usable• of back-up R fuse link for semiconductor protection at cylindrical design 14 x 51 mm usable• of back-up R fuse link for semiconductor protection at cylindrical design 22 x 58 mm usable	3NE1813-0 5SE1316 3NE8015-1 3NC1032 3NC1440 3NC2240						
manufacturer's article number of the gG fuse <ul style="list-style-type: none">• at NH design usable	3NA6803-6						
Certificates/ approvals							
<table><tr><td>General Product Approval</td><td>EMC</td><td>Declaration of Con- formity</td></tr></table>		General Product Approval	EMC	Declaration of Con- formity			
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http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RF2310-1AA26&lang=en





— I_{max} Thermal limit current for side-by-side mounting
— I_{IEC} Current according to IEC 947-4-3 for side-by-side mounting

last modified:

1/26/2022

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