SIEMENS

Data sheet 3RF2310-1AA45



Solid-state contactor 1-phase 3RF2 AC 51 / 10.5 A / 40 °C 48-600 V / 4-30 V DC screw terminal Blocking voltage 1200 V

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
 _3 of the accessories that can be ordered 	3RF2900-0EA18
_4 of the accessories that can be ordered	3RF2920-0GA16
 _5 of the accessories that can be ordered 	3RF2920-0FA08
product designation	
_1 of the accessories that can be ordered	terminal cover
 _3 of the accessories that can be ordered 	converter
_4 of the accessories that can be ordered	load monitoring
_5 of the accessories that can be ordered	load monitoring, basis
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
• per pole	11 W
power loss [W] for rated value of the current without load current share typical	0.6 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 acc. to IEC 60068-2-27	15g / 11 ms
vibration resistance acc. to IEC 60068-2-6	2g
reference code acc. to IEC 81346-2	Q
Substance Prohibitance (Date)	28.05.2009 00:00:00
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 60 Hz * at 60-51 rated value * at AC-51 rated value * at AC-51 rated value * at AC-51 rated value * acc. to UL-50 finated value * apace value rate value * apace value rate value * acc. to UL-50 finated value * accesses control supply voltage * accesses control supply voltage * at DC rated value * at		
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osolid or stranded finely stranded with core end processing type of connectable conductor cross-sections of or auxiliary and control contacts — solid — finely stranded with core end processing — finely stranded with core end processing — finely stranded without core end processing — the formula of the following stranded without core end processing of at AWG cables for auxiliary and control contacts AWG number as coded connectable conductor cross 1.5 6 mm² 1 10 mm² 1 x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) 1 x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) 1 x (AWG 20 12) 1 x (AWG 20 12)		2x (14 10)
 solid or stranded finely stranded with core end processing type of connectable conductor cross-sections for auxiliary and control contacts — solid — finely stranded with core end processing — finely stranded without core end processing — finely stranded without core end processing — at AWG cables for auxiliary and control contacts AWG number as coded connectable conductor cross 1.5 6 mm² 1 10 mm² 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) 1x (AWG 20 12) 		
• finely stranded with core end processing type of connectable conductor cross-sections • for auxiliary and control contacts — solid — finely stranded with core end processing — finely stranded without core end processing — finely stranded without core end processing — at AWG cables for auxiliary and control contacts AWG number as coded connectable conductor cross 1 10 mm² 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) 1x (AWG 20 12) AWG number as coded connectable conductor cross 10 14		1.5 6 mm ²
type of connectable conductor cross-sections • for auxiliary and control contacts — solid — finely stranded with core end processing — finely stranded without core end processing — the finely stranded without core end processing • at AWG cables for auxiliary and control contacts AWG number as coded connectable conductor cross • type of connectable conductor cross-sections 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) 1x (AWG 20 12) • type of connectable conductor cross-sections		
 for auxiliary and control contacts solid finely stranded with core end processing finely stranded without core end processing finely stranded without core end processing at AWG cables for auxiliary and control contacts AWG number as coded connectable conductor cross 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) 1x (AWG 20 12) AWG number as coded connectable conductor cross		1 10 111111
 — solid — finely stranded with core end processing — finely stranded without core end processing — finely stranded without core end processing ■ at AWG cables for auxiliary and control contacts AWG number as coded connectable conductor cross 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) 1x (AWG 20 12) 10 14 		
 — finely stranded with core end processing — finely stranded without core end processing • at AWG cables for auxiliary and control contacts AWG number as coded connectable conductor cross 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) 1x (AWG 20 12) 10 14 		1v (0.5 2.5 mm²) 2v (0.5 4.0 mm²)
 — finely stranded without core end processing 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) 1x (AWG 20 12) AWG number as coded connectable conductor cross 10 14 		
• at AWG cables for auxiliary and control contacts 1x (AWG 20 12) AWG number as coded connectable conductor cross 10 14		
AWG number as coded connectable conductor cross 10 14		
	AWG number as coded connectable conductor cross	

manufacturer's article number of the gG fuse • at NH design usable	<u>3NA6801</u>
at cylindrical design 22 x 58 mm usable	
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	3NC2220
at cylindrical design 10 x 38 mm usable of back-up R fuse link for semiconductor protection	<u>3NC1420</u>
at NH design usable of back-up R fuse link for semiconductor protection	3NC1016
at cylindrical design usableof back-up R fuse link for semiconductor protection	<u>3NE8015-1</u>
design usableof full range R fuse link for semiconductor protection	<u>5SE1316</u>
manufacturer's article number ● of gS fuse for semiconductor protection at NH	3NE1813-0
Short-circuit protection, design of the fuse link	
field-bound HF interference emission acc. to CISPR11	Class B for the domestic, business and commercial environments
conducted HF interference emissions acc. to CISPR11	Class A for industrial environment
electrostatic discharge acc. to IEC 61000-4-2	4 kV contact discharging / 8 kV air discharging, behavior criterion 2
field-based interference acc. to IEC 61000-4-3	80 MHz 1 GHz 10 V/m, behavior criterion 1
4-6	
61000-4-5 • due to high-frequency radiation acc. to IEC 61000-	140 dBuV in the frequency range 0.15 80 MHz, behavior criterion 1
due to conductor-conductor surge acc. to IEC due to conductor-conductor surge acc. to IEC	1 kV behavior criterion 2
 due to burst acc. to IEC 61000-4-4 due to conductor-earth surge acc. to IEC 61000-4-5 	2 kV behavior criterion 2
conducted interference ● due to burst acc. to IEC 61000-4-4	2 kV / 5 kHz behavior criterion 2
Electromagnetic compatibility	
during storage Floring and discourse still the storage at th	-55 +80 °C
during operation	-25 +60 °C
ambient temperature	
installation altitude at height above sea level maximum	1 000 m
Ambient conditions	
touch protection on the front acc. to IEC 60529	finger-safe, for vertical contact from the front
protection class IP on the front acc. to IEC 60529	IP20
Safety related data	
 for auxiliary and control contacts 	7 mm
• for main contacts	7 mm
stripped length of the cable	INIO
of the auxiliary and control contacts	M3
design of the thread of the connection screw • for main contacts	M4
terminals	
 for auxiliary and control contacts with screw-type 	4.5 5.3 lbf·in
for main contacts with screw-type terminals	18 22 lbf·in
tightening torque [lbf·in]	
 for auxiliary and control contacts with screw-type terminals 	0.5 0.6 N·m
 for main contacts with screw-type terminals 	2 2.5 N·m











Miscellaneous

Test Certificates other Railway

<u>Special Test Certific-</u> <u>Type Test Certific-</u> <u>Confirmation</u> <u>Vibration and Shock</u> <u>ates/Test Report</u>

Further information

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=3RF2310-1AA45

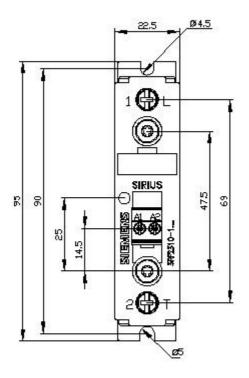
Cax online generator

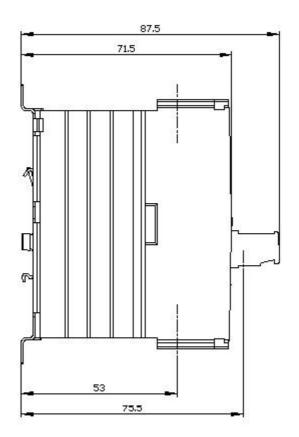
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RF2310-1AA45

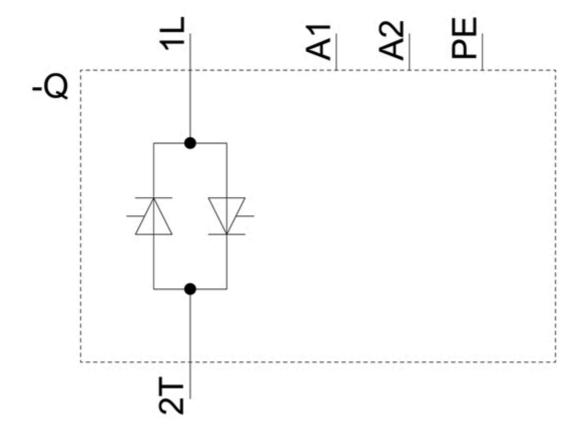
 $Service \& Support \ (Manuals, Certificates, Characteristics, FAQs, ...)$

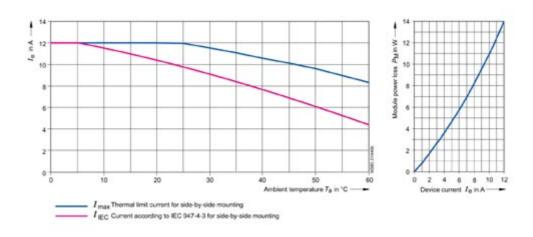
https://support.industry.siemens.com/cs/ww/en/ps/3RF2310-1AA45

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax de.aspx?mlfb=3RF2310-1AA45&lang=en









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