SIEMENS

Data sheet 3RF2330-1BA22



Solid-state contactor 1-phase 3RF2 AC 15 / 15 A / 40 $^{\circ}\text{C}$ 24-230 V / 110-230 V 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 can be ordered	3RF2900-3PA88
_2 of the accessories that can be ordered	3RF2950-0HA33
_4 of the accessories that can be ordered	3RF2950-0GA33
product designation	
_1 of the accessories that can be ordered	terminal cover
_2 of the accessories that can be ordered	power regulator
_4 of the accessories that can be ordered	load monitoring
General technical data	
product function	instantaneous switching
power loss [W] for rated value of the current	
 at AC in hot operating state 	33 W
 at AC in hot operating state per pole 	33 W
without load current share typical	3.5 W
insulation voltage rated value	600 V
degree of pollution	3
type of voltage	
 of the operating voltage 	AC
 of the control supply voltage 	AC
surge voltage resistance of main circuit rated value	6 kV
protection class IP	IP20
protection class IP on the front according to IEC 60529	IP20
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)	05/28/2009
SVHC substance name	Lead - 7439-92-1
	Lead monoxide (lead oxide) - 1317-36-8 Dibutylbis(pentane-2,4-dionato-O,O')tin - 22673-19-4
Weight	0.3 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 50 Hz rated value	24 230 V
— at 60 Hz rated value	24 230 V
operating frequency rated value	50 60 Hz
operating range relative to the operating voltage at AC	
● at 50 Hz	20 253 V
● at 60 Hz	20 253 V
operational current	
 at AC-51 rated value 	30 A
at AC-51 according to IEC 60947-4-3	22 A
according to UL 508 rated value	15 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	800 V
reverse current of the thyristor	10 mA
derating temperature	40 °C
surge current resistance rated value	600 A
I2t value maximum	1 800 A²·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	
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 mounting	Yes
fastening method	screw fixing and snap-on mounting on standard mounting rail 35 mm according to IEC 60715
design of the thread of the screw for securing the equipment	M4
height	100 mm
width	45 mm
depth	139 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 mm²), 2x (2.5 6 mm²)
 finely stranded with core end processing 	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²

for AWG cables for main contacts	2x (14 10)
connectable conductor cross-section for main contacts	<u> </u>
solid or stranded	1.5 6 mm²
finely stranded with core end processing	1 10 mm²
type of connectable conductor cross-sections	
for auxiliary and control contacts	
— solid	1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²)
finely stranded with core end processing	1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²)
finely stranded without core end processing	1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²)
 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	
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	18 22 lbf·in
for auxiliary and control contacts with screw-type terminals	4.5 5.3 lbf·in
design of the thread of the connection screw	
• for main contacts	M4
 of the auxiliary and control contacts 	M3
stripped length of the cable	
• for main contacts	7 mm
for auxiliary and control contacts	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 from the front
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 let / contact discharging / 0 let / six discharging habouring pritories 0
conducted HF interference emissions according to CISPR11	4 kV contact discharging / 8 kV air discharging, behavior criterion 2
field-bound HF interference emission according to CISPR11	Class A for industrial environment
	0 0
Short-circuit protection, design of the fuse link	Class A for industrial environment
manufacturer's article number	Class A for industrial environment
	Class A for industrial environment
manufacturer's article number • of gS fuse for semiconductor protection at NH design	Class A for industrial environment Class B for the domestic, business and commercial environments
manufacturer's article number • of gS fuse for semiconductor protection at NH design usable • of full range R fuse link for semiconductor protection at	Class A for industrial environment Class B for the domestic, business and commercial environments 3NE1803-0
manufacturer's article number 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	Class A for industrial environment Class B for the domestic, business and commercial environments 3NE1803-0 5SE1335
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• at cylindrical design 14 x 51 mm usable

• at cylindrical design 22 x 58 mm usable

manufacturer's article number

• of DIAZED fuse usable

• of NEOZED fuse usable

3NW6107-1 3NW6207-1

5SB2711: These fuses have a smaller rated current than the semiconductor

5SE2320; These fuses have a smaller rated current than the semiconductor

Approvals Certificates

General Product Approval

EMV





Confirmation







Test Certificates

other

Railway

Environment

Type Test Certificates/Test Report

Special Test Certific-<u>ate</u>

Confirmation



Special Test Certificate

Environmental 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=3RF2330-1BA22

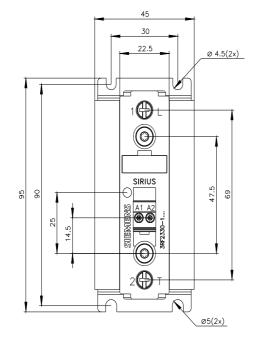
Cax online generator

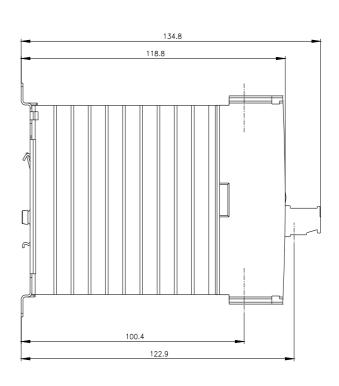
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

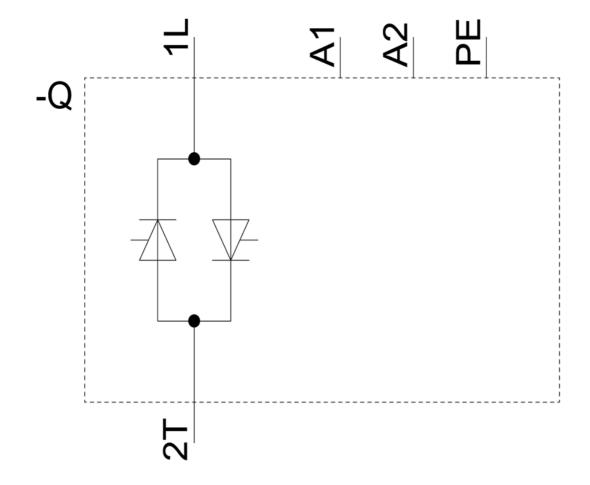
https://support.industry.siemens.com/cs/ww/en/ps/3RF2330-1BA2

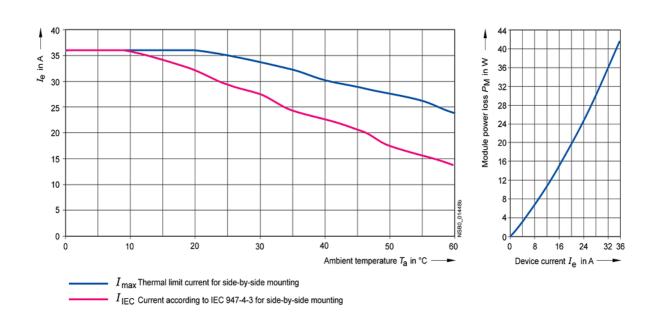
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RF2330-1BA22&lang=en









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