SIEMENS

Data sheet 3RF3310-2AA02

Siemens EcoTech

solid-state contactor 1-pole 3RF33 AC-1 10 A 40 °C / 24-230 V / 24 V DC / spring-loaded terminal



product brand name	SIRIUS
product designation	solid-state contactor
product type designation	3RF33
manufacturer's article number	
• _3 of the accessories that can be ordered	3RF3900-0EA18
product designation	
• _3 of the accessories that can be ordered	converter
General technical data	
product function	zero-point switching
power loss [V·A] maximum	9.4 V·A
power loss [W] for rated value of the current	
• at AC in hot operating state	8.5 W
• at AC in hot operating state per pole	8.5 W
• without load current share typical	0.4 W
type of calculation of power loss current-dependent	linear
insulation voltage rated value	600 V
degree of pollution	3
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	15 g / 11 ms
vibration resistance according to IEC 60068-2-6	2 g
reference code according to IEC 81346-2	Q
Substance Prohibitance (day/month/year)	01/15/2024
SVHC substance name	Lead monoxide (lead oxide) CAS-No. 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5 Melamine CAS-No. 108-78-1 Dibutylbis(pentane-2,4-dionato-O,O')tin CAS-No. 22673-19-4
Net Weight	0.118 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	

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— at 50 Hz rated value	24 ... 230 V
— at 60 Hz rated value	24 ... 230 V
operating frequency rated value	50 ... 60 Hz
relative symmetrical tolerance of the operating frequency	10 %
operating range relative to the operating voltage at AC	
● at 50 Hz	20 ... 253 V
● at 60 Hz	20 ... 253 V
operational current rated value maximum	10 A
operational current	
● at AC-1 at 400 V rated value	10 A
● at AC-51 rated value	10 A
● at AC-51 according to IEC 60947-4-3	10 A
● according to UL 508 rated value	8 A
ampacity maximum	10 A
operational current minimum	100 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	260 A
I2t value maximum	360 A²·s
Control circuit/ Control	
type of voltage of the control supply voltage	DC
control supply voltage at DC	15 ... 24 V
control supply voltage 1 at DC rated value	24 V
control supply voltage at DC	
● initial value for signal <1> detection	15 V
● full-scale value for signal<0> recognition	5 V
operating range factor control supply voltage rated value at DC	
● initial value	0.63
● full-scale value	1
control current at minimum control supply voltage	
● at DC	13 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
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	95 mm
width	22.5 mm
depth	89 mm
Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection	
● for main current circuit	spring-loaded terminals
● for auxiliary and control circuit	spring-loaded terminals
type of connectable conductor cross-sections	
● for main contacts	
— solid	2x (0.5 ... 2.5 mm²)
— finely stranded with core end processing	2x (0.5 ... 1.5 mm²)
— finely stranded without core end processing	2x (0.5 ... 2.5 mm²)
● for AWG cables for main contacts	2x (18 ... 14)

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connectable conductor cross-section for main contacts	
● solid or stranded	0.5 ... 2.5 mm²
● finely stranded with core end processing	0.5 ... 1.5 mm²
● finely stranded without core end processing	0.5 ... 2.5 mm²
type of connectable conductor cross-sections	
● for auxiliary and control contacts	
— solid	0.5 ... 1.5 mm²
— finely stranded with core end processing	0.5 ... 2.5 mm²
— finely stranded without core end processing	0.5 ... 2.5 mm²
● for AWG cables for auxiliary and control contacts	1x (20 ... 12)
AWG number as coded connectable conductor cross section for main contacts	18 ... 14
stripped length of the cable	
● for main contacts	10 mm
● for auxiliary and control contacts	10 mm
type of grounding	grounding by snapping onto grounded DIN rails
UL/CSA ratings	
operational current according to UL 508 rated value	8 A
Electrical Safety	
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 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	3NE8714-1
● of gS fuse for semiconductor protection at NH design usable	3NE1815-0
● of full range R fuse link for semiconductor protection at cylindrical design usable	5SE1325
● of back-up R fuse link for semiconductor protection at NH design usable	3NE8017-1
● of back-up R fuse link for semiconductor protection at cylindrical design 10 x 38 mm usable	3NC1020
● of back-up R fuse link for semiconductor protection at cylindrical design 14 x 51 mm usable	3NC1430
● of back-up R fuse link for semiconductor protection at cylindrical design 22 x 58 mm usable	3NC2220
manufacturer's article number of the gG fuse	
● at NH design usable	3NA6803
● at cylindrical design 10 x 38 mm usable	3NW6003-1
● at cylindrical design 14 x 51 mm usable	3NW6101-1; These fuses have a smaller rated current than the semiconductor relays
● at cylindrical design 14 x 51 mm usable note	These fuses have a smaller rated current than the semiconductor relays
manufacturer's article number	
● of NEOZED fuse usable	5SE2310

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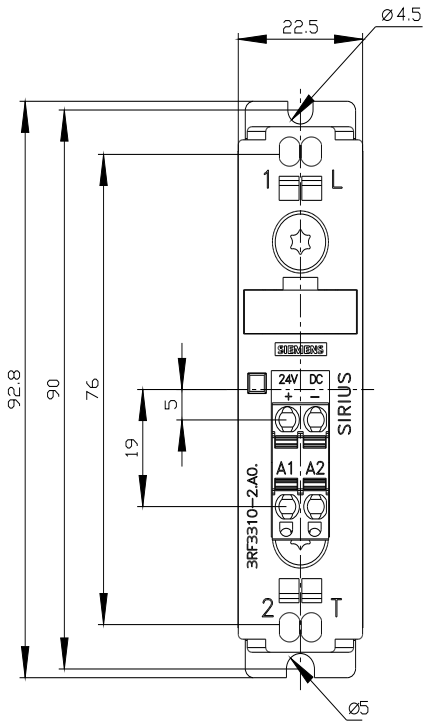
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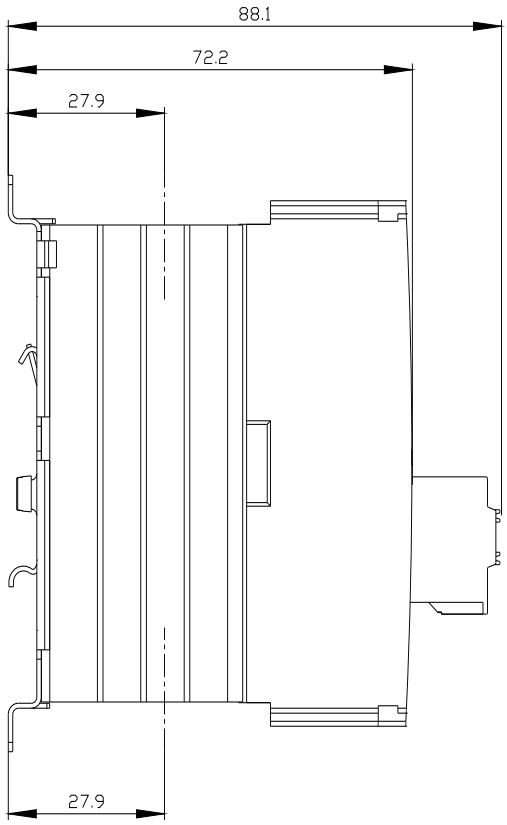
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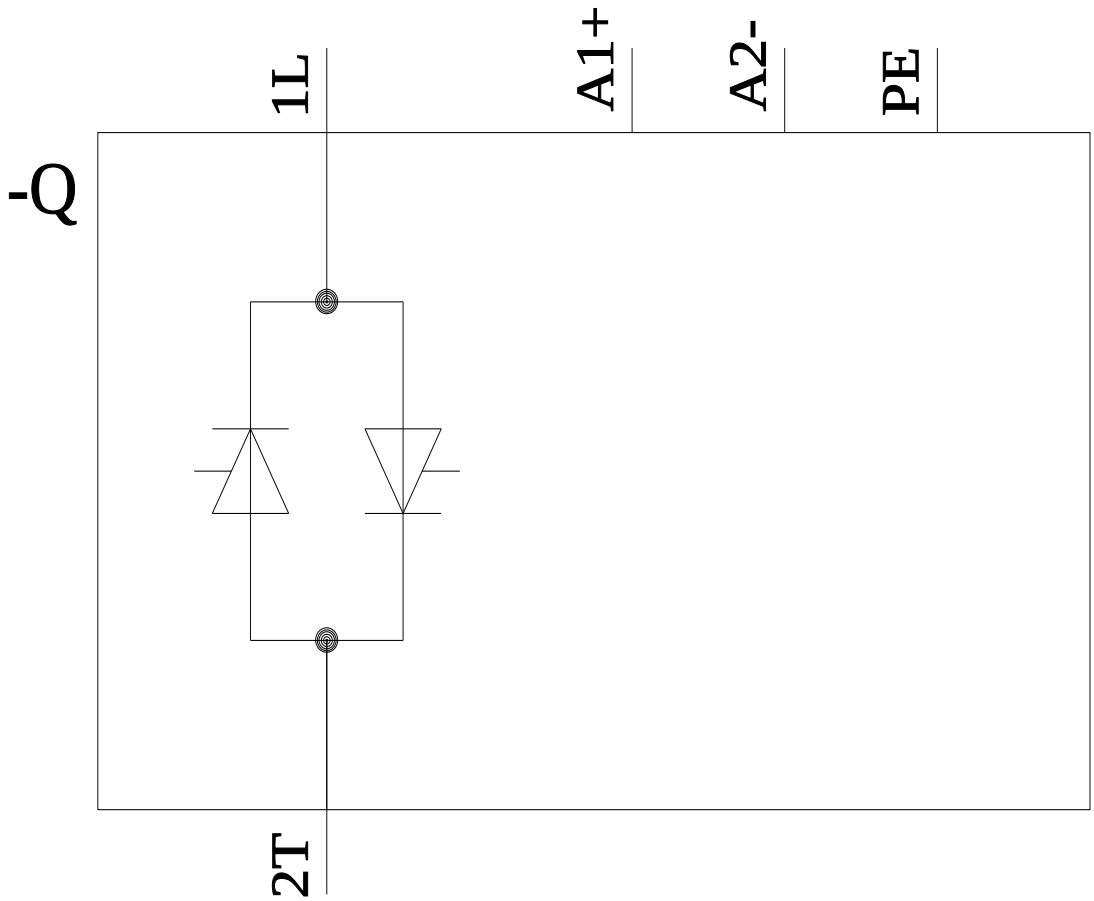
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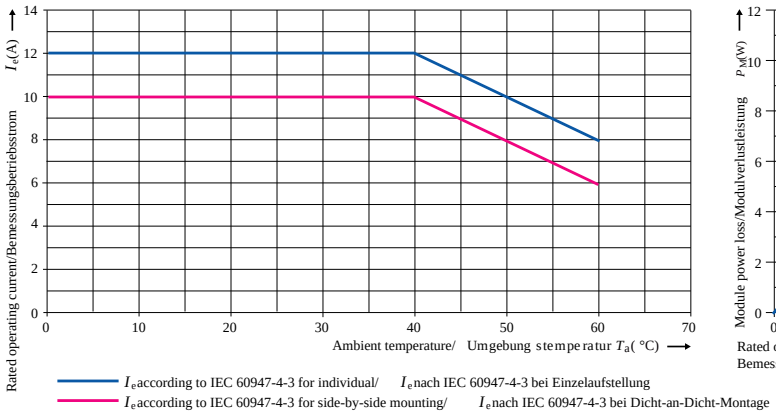
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Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RF3310-2AA02
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
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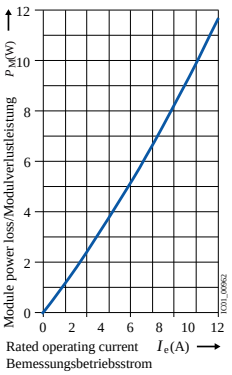




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