SIEMENS

Data sheet 3RB3123-4PB0



Overload relay 1...4 A Electronic For motor protection Size S0, Class 5...30 Contactor mounting Main circuit: Screw Auxiliary circuit: Screw Manual-Automatic-Reset Internal ground fault detection

product brand name	SIRIUS
product designation	solid-state overload relay
product type designation	3RB3
General technical data	
size of overload relay	S0
size of contactor can be combined company-specific	S0
power loss [W] for rated value of the current at AC in hot operating state	0.1 W
● per pole	0.03 W
type of calculation of power loss current-dependent	quadratic
insulation voltage with degree of pollution 3 at AC rated value	690 V
surge voltage resistance rated value	6 kV
maximum permissible voltage for protective separation	
● in networks with ungrounded star point between auxiliary and auxiliary circuit	300 V
● in networks with grounded star point between auxiliary and auxiliary circuit	300 V
● in networks with ungrounded star point between main and auxiliary circuit	600 V
● in networks with grounded star point between main and auxiliary circuit	690 V
shock resistance	15 g / 11 ms
● according to IEC 60068-2-27	15 g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 9g / 11 ms
vibration resistance	1 … 6 Hz, 15 mm; 6 … 500 Hz, 20 m/s²; 10 cycles
thermal current	4 A
recovery time after overload trip	
● with automatic reset typical	3 min
● with remote-reset	0 min
● with manual reset	0 min
reference code according to IEC 81346-2	F
Substance Prohibitance (day/month/year)	10/01/2009
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 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol CAS-No. 119-47-1
Net Weight	0.235 kg
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
● during operation	-25 ... +60 °C
● during storage	-40 ... +80 °C

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● during transport	-40 ... +80 °C
temperature compensation	-25 ... +60 °C
relative humidity during operation	10 ... 95 %
Main circuit	
number of poles for main current circuit	3
adjustable current response value current of the current-dependent overload release	1 ... 4 A
operating voltage	
● rated value	690 V
● for remote-reset function at DC	24 V
● at AC-3e rated value maximum	690 V
operating frequency rated value	50 ... 60 Hz
operational current rated value	4 A
operational current at AC-3e at 400 V rated value	4 A
operating power	
● for 3-phase motors at 400 V at 50 Hz	0.37 ... 1.5 kW
● for AC motors at 500 V at 50 Hz	0.37 ... 2.2 kW
● for AC motors at 690 V at 50 Hz	0.55 ... 3 kW
Auxiliary circuit	
design of the auxiliary switch	integrated
number of NC contacts for auxiliary contacts	1
● note	for contactor disconnection
number of NO contacts for auxiliary contacts	1
● note	for message "tripped"
number of CO contacts for auxiliary contacts	0
operational current of auxiliary contacts at AC-15	
● at 24 V	4 A
● at 110 V	4 A
● at 120 V	4 A
● at 125 V	4 A
● at 230 V	3 A
operational current of auxiliary contacts at DC-13	
● at 24 V	2 A
● at 60 V	0.55 A
● at 110 V	0.3 A
● at 125 V	0.3 A
● at 220 V	0.11 A
Protective and monitoring functions	
trip class	CLASS 5E, 10E, 20E and 30E adjustable
design of the overload release	electronic
response value current of the grounding protection minimum	0.75 x IMotor
response time of the grounding protection in settled state	1 000 ms
operating range of the grounding protection relating to current set value	
● minimum	IMotor > lower current setting value
● maximum	IMotor < upper current setting value x 3.5
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
● at 480 V rated value	4 A
● at 600 V rated value	4 A
contact rating of auxiliary contacts according to UL	B600 / R300
Short-circuit protection	
design of the fuse link	
● for short-circuit protection of the main circuit	
— with type of coordination 1 required	gG: 35 A, RK5: 15 A
— with type of coordination 2 required	gG: 20 A
● for short-circuit protection of the auxiliary switch required	fuse gG: 6 A
Installation/ mounting/ dimensions	
mounting position	any

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fastening method	Contactor mounting
height	87 mm
width	45 mm
depth	84 mm
required spacing	
● for grounded parts	
— forwards	6 mm
— backwards	0 mm
— upwards	6 mm
— at the side	6 mm
— downwards	6 mm
● for live parts	
— forwards	6 mm
— backwards	0 mm
— upwards	6 mm
— downwards	6 mm
— at the side	6 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
arrangement of electrical connectors for main current circuit	Top and bottom
type of connectable conductor cross-sections for main contacts	
● solid	2x (1 ... 2.5 mm²), 2x (2.5 ... 10 mm²)
● stranded	2x 10 mm²
● solid or stranded	1x (1 ... 10 mm²), 2x (1 ... 10 mm²)
● finely stranded with core end processing	1x (1 ... 6 mm²), 2 x (1 ... 6 mm²), 1x 10 mm²
type of connectable conductor cross-sections	
● for auxiliary contacts	
— solid	1x (0.5 ... 4 mm²), 2x (0.5 ... 2.5 mm²)
— solid or stranded	1x (0,5 ... 4 mm²), 2x (0,5 ... 2,5 mm²)
— finely stranded with core end processing	1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²)
● for AWG cables for auxiliary contacts	1x (20 ... 14), 2x (20 ... 14)
tightening torque	
● for main contacts with screw-type terminals	2 ... 2.5 N·m
● for auxiliary contacts with screw-type terminals	0.8 ... 1.2 N·m
design of screwdriver shaft	Diameter 5 to 6 mm
size of the screwdriver tip	Pozidriv PZ 2
design of the thread of the connection screw	
● for main contacts	M4
● of the auxiliary and control contacts	M3
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
Communication/ Protocol	
type of voltage supply via input/output link master	No
Electromagnetic compatibility	
conducted interference	
● due to burst according to IEC 61000-4-4	2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3
● due to conductor-earth surge according to IEC 61000-4-5	2 kV (line to earth) corresponds to degree of severity 3
● due to conductor-conductor surge according to IEC 61000-4-5	1 kV (line to line) corresponds to degree of severity 3
● due to high-frequency radiation according to IEC 61000-4-6	10 V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1 kHz
field-based interference according to IEC 61000-4-3	10 V/m
electrostatic discharge according to IEC 61000-4-2	6 kV contact discharge / 8 kV air discharge
Display	

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display version for switching status	Slide switch

Approvals Certificates

Environment	General Product Approval				
Environmental Confirmations	CCC	cULus	EAC	CE EG-Konf.	UKCA

EMV		For use in hazardous locations	Test Certificates		Maritime application
KC	RCM	ATEX	Type Test Certificates/Test Report	Special Test Certificate	ABS

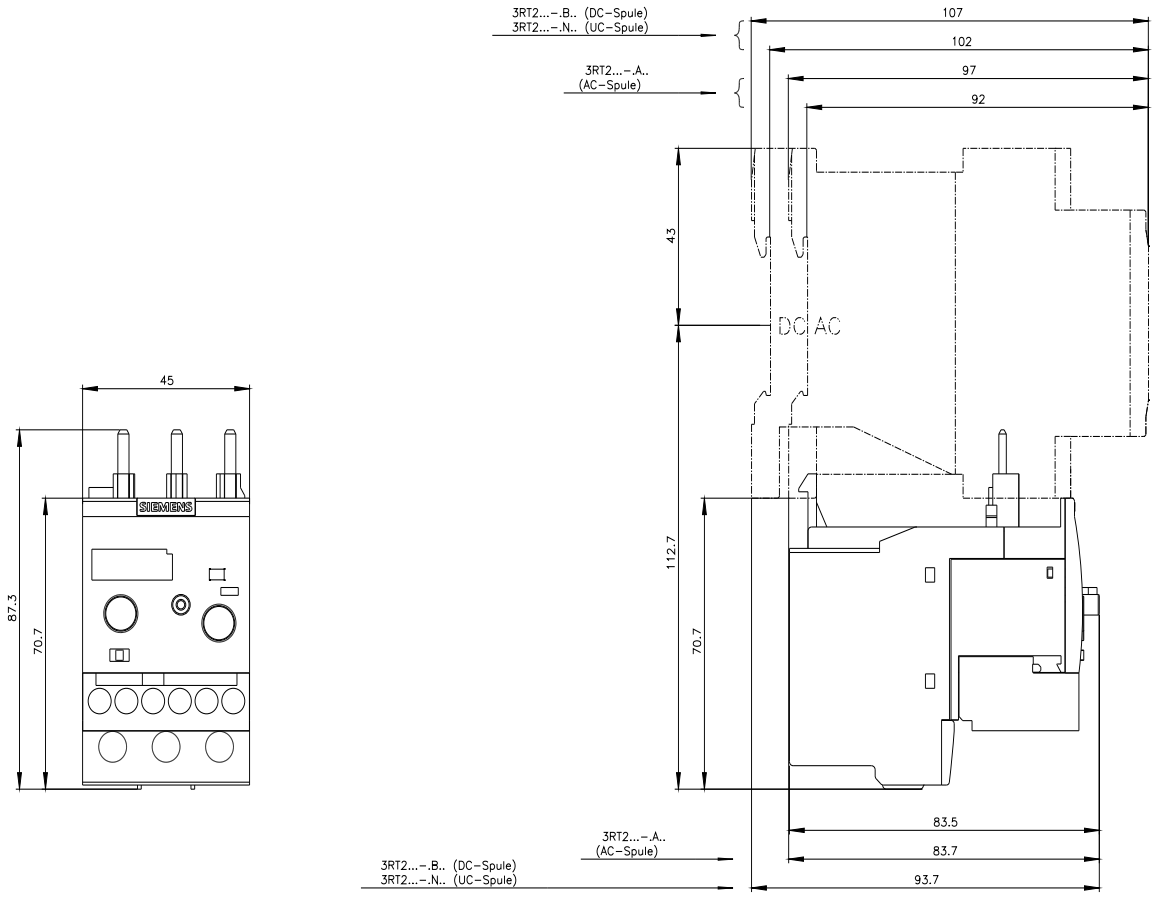
Maritime application					other
BUREAU VERITAS	DNV	LRS	PRS	RINA	Confirmation

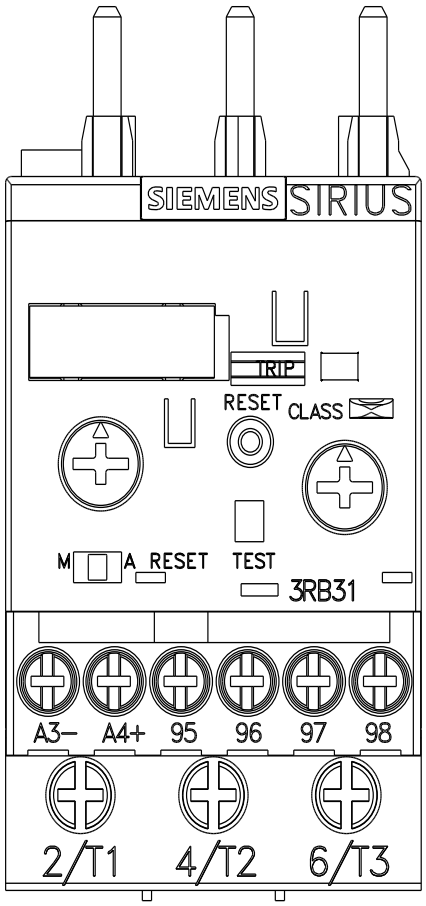
other	
Confirmation	产品合格 QC PASS

Further information

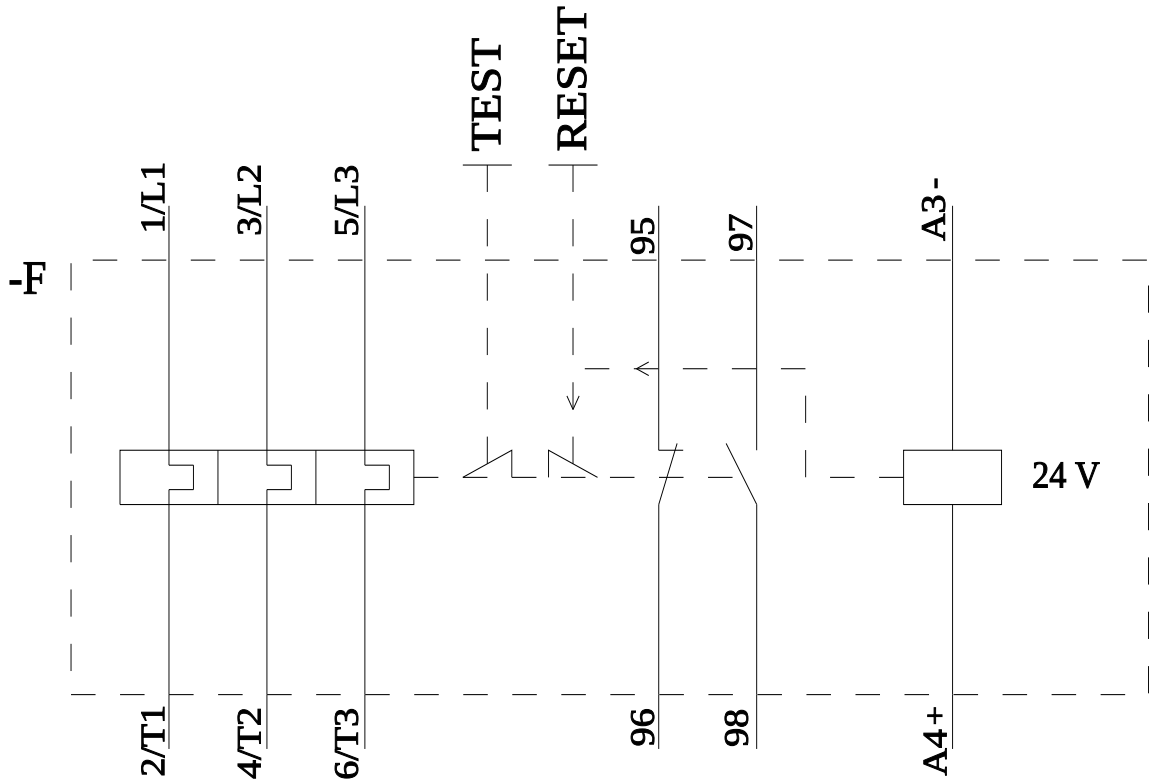
Information on the packaging
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