



overload relay 10...40 A electronic for motor protection frame size S0, class 5...30
for mounting onto contactors 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	3 W
• per pole	1 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	40 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 CAS-No. 7439-92-1 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	0.26 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
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	10 ... 40 A
operating voltage - rated value - for remote-reset function at DC - at AC-3e rated value maximum	690 V 24 V 690 V
operating frequency rated value	50 ... 60 Hz
operational current rated value	40 A
operational current at AC-3e at 400 V rated value	40 A
operating power - for 3-phase motors at 400 V at 50 Hz - for AC motors at 500 V at 50 Hz - for AC motors at 690 V at 50 Hz	5.5 ... 18.5 kW 7.5 ... 22 kW 11 ... 37 kW
Auxiliary circuit	
design of the auxiliary switch	integrated
number of NC contacts for auxiliary contacts note	1 for contactor disconnection
number of NO contacts for auxiliary contacts note	1 for message "tripped"
number of CO contacts for auxiliary contacts	0
operational current of auxiliary contacts at AC-15 - at 24 V - at 110 V - at 120 V - at 125 V - at 230 V	4 A 4 A 4 A 4 A 3 A
operational current of auxiliary contacts at DC-13 - at 24 V - at 60 V - at 110 V - at 125 V - at 220 V	2 A 0.55 A 0.3 A 0.3 A 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 - maximum	IMotor > lower current setting value 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 - at 600 V rated value	40 A 40 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 - with type of coordination 2 required - for short-circuit protection of the auxiliary switch required	gG: 125 A, J: 150 A gG: 80 A, J: 100 A fuse gG: 6 A
Installation/ mounting/ dimensions	

mounting position	any
fastening method	Contactormounting
height	87 mm
width	45 mm
depth	84 mm
required spacing	
• for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — forwards — backwards — upwards — downwards — at the side	6 mm 0 mm 6 mm 6 mm 6 mm 6 mm 0 mm 6 mm 6 mm 6 mm
Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection	
• for main current circuit • for auxiliary and control circuit	screw-type terminals screw-type terminals
arrangement of electrical connectors for main current circuit	Top and bottom
type of connectable conductor cross-sections for main contacts	
• solid • stranded • solid or stranded • finely stranded with core end processing	2x (1 ... 2.5 mm ²), 2x (2.5 ... 10 mm ²) 2x 10 mm ² 1x (1 ... 10 mm ²), 2x (1 ... 10 mm ²) 1x (1 ... 6 mm ²), 2 x (1 ... 6 mm ²), 1x 10 mm ²
type of connectable conductor cross-sections	
• for auxiliary contacts — solid — solid or stranded — finely stranded with core end processing • for AWG cables for auxiliary contacts	1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²) 1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²) 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²) 1x (20 ... 14), 2x (20 ... 14)
tightening torque	
• for main contacts with screw-type terminals • for auxiliary contacts with screw-type terminals	2 ... 2.5 N·m 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 • of the auxiliary and control contacts	M4 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 • 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 (power ports), 1 kV (signal ports) corresponds to degree of severity 3 2 kV (line to earth) corresponds to degree of severity 3 1 kV (line to line) corresponds to degree of severity 3 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

display version for switching status Slide switch

Approvals Certificates

Environment General Product Approval

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EMV For use in hazard- ous locations Test Certificates Maritime application



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Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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=3RB3123-4VB0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3123-4VB0>

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

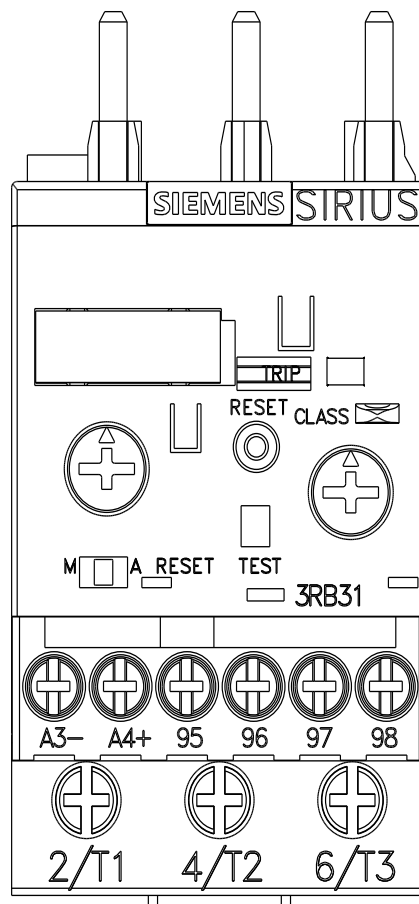
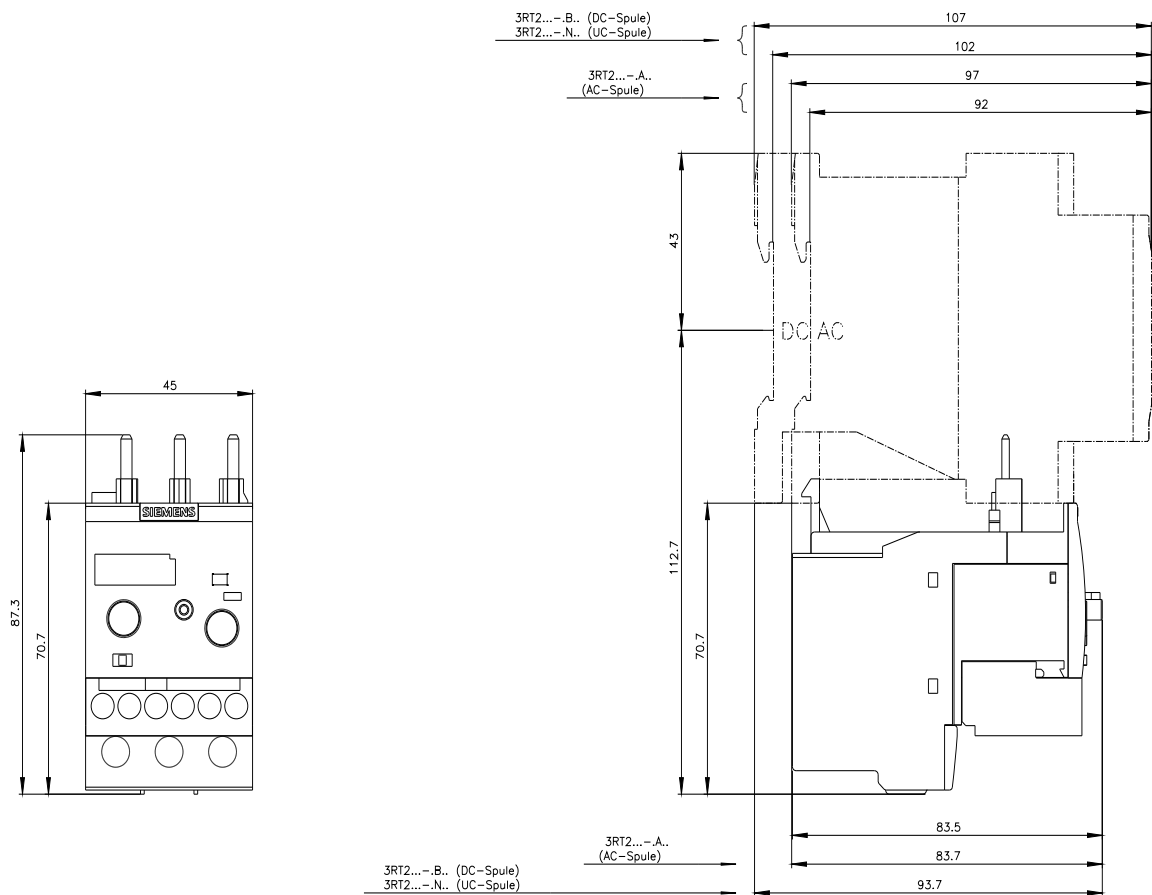
https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3123-4VB0&lang=en

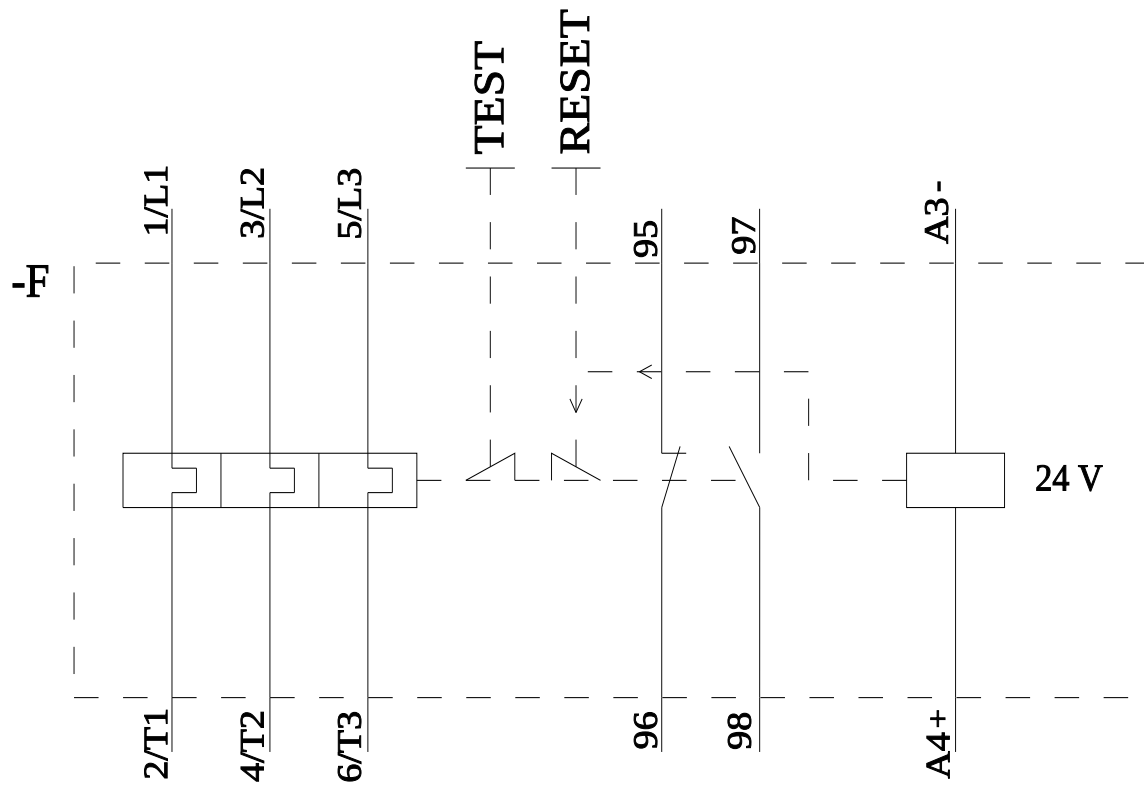
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Characteristic curves

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