









Overload relay 3...12 A Electronic For motor protection Size S00, 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	S00
size of contactor can be combined company-specific	S00
power loss [W] for rated value of the current at AC in hot operating state	0.6 W
• per pole	0.2 W
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	15g / 11 ms
• according to IEC 60068-2-27	15g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 9g / 11 ms
vibration resistance	1-6 Hz, 15 mm; 6-500 Hz, 20 m/s ² ; 10 cycles
thermal current	12 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 (Date)	10/01/2009
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol - 79-94-7 6,6'-di-tert-butyl-2,2'-methylene-di-p-cresol - 119-47-1
Net Weight	0.223 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	3 ... 12 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	12 A
operational current at AC-3e at 400 V rated value	12 A
operating power	
• for 3-phase motors at 400 V at 50 Hz	1.5 ... 5.5 kW
• for AC motors at 500 V at 50 Hz	1.5 ... 5.5 kW
• for AC motors at 690 V at 50 Hz	2.2 ... 7.5 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	12 A
• at 600 V rated value	12 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: 50 A, RK5: 45 A
— with type of coordination 2 required	gG: 50 A, J: 45 A
• for short-circuit protection of the auxiliary switch required	fuse gG: 6 A
Installation/ mounting/ dimensions	
mounting position	any
fastening method	Contacting mounting

height	79 mm				
width	45 mm				
depth	73 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	1x (0.5 ... 4 mm ²), 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 4 mm ²)				
• solid or stranded	1x (0.5 ... 4 mm ²), 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 4 mm ²)				
• finely stranded with core end processing	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 2.5 mm ²)				
type of connectable conductor cross-sections					
• for auxiliary contacts					
— solid	1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²)				
— solid or stranded	1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²)				
— finely stranded with core end processing	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²)				
• for AWG cables for auxiliary contacts	1x (20 ... 14), 2x (20 ... 14)				
tightening torque					
• for main contacts with screw-type terminals	0.8 ... 1.2 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	M3				
• 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					
display version for switching status	Slide switch				
Approvals Certificates					
General Product Approval	EMV				
					
EMV	For use in hazardous locations	Test Certificates	Maritime application		

KC


[Special Test Certificate](#)
[Type Test Certificates/Test Report](#)


Maritime application

other


[Confirmation](#)

Environment

[Environmental Confirmations](#)

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=3RB3113-4SB0>

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB3113-4SB0>

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

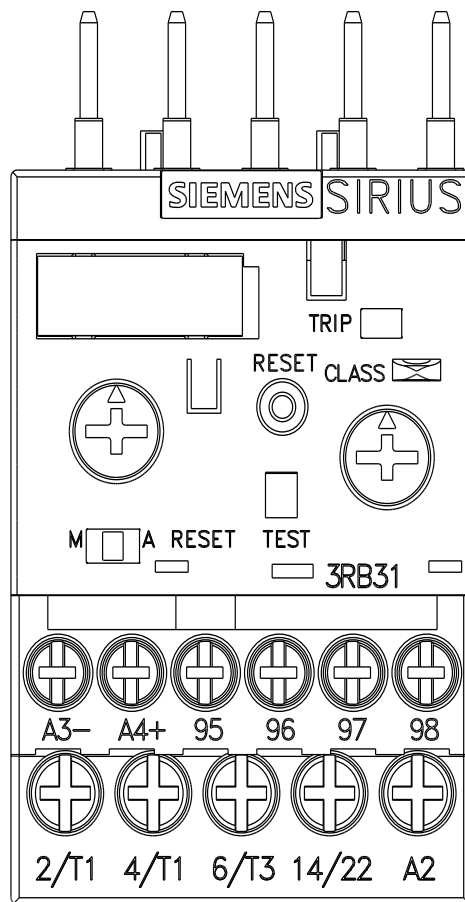
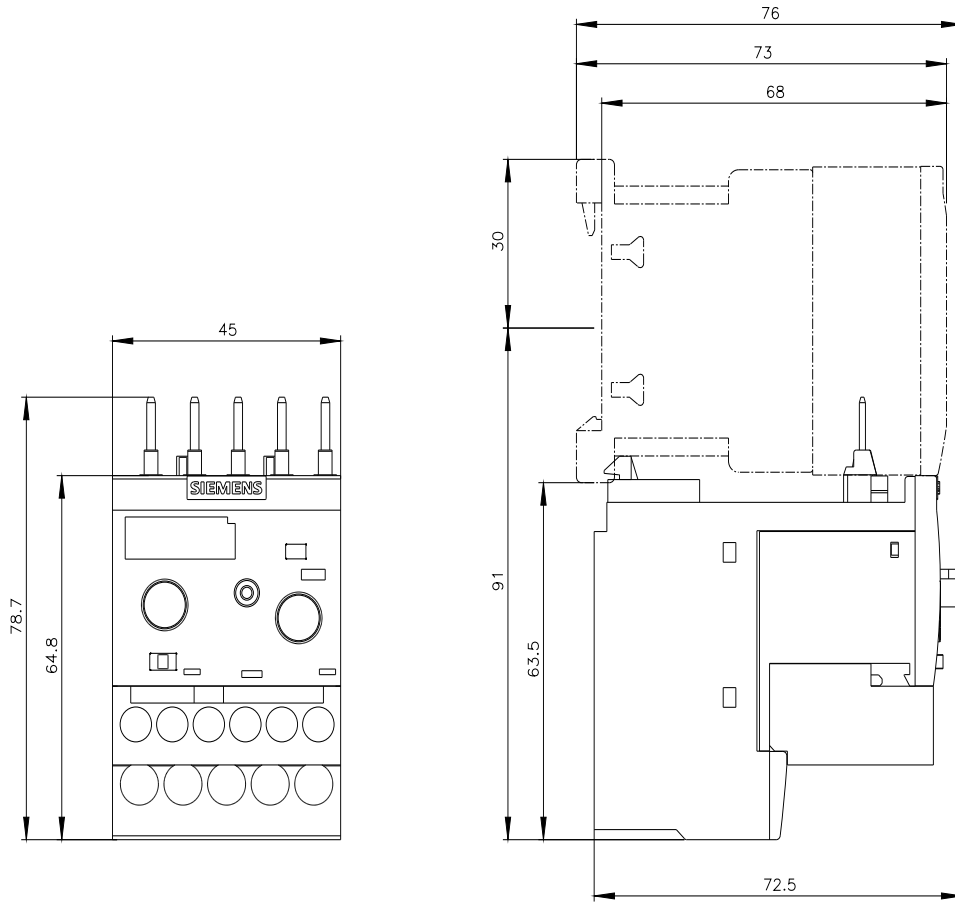
<https://support.industry.siemens.com/cs/ww/en/ps/3RB3113-4SB0>

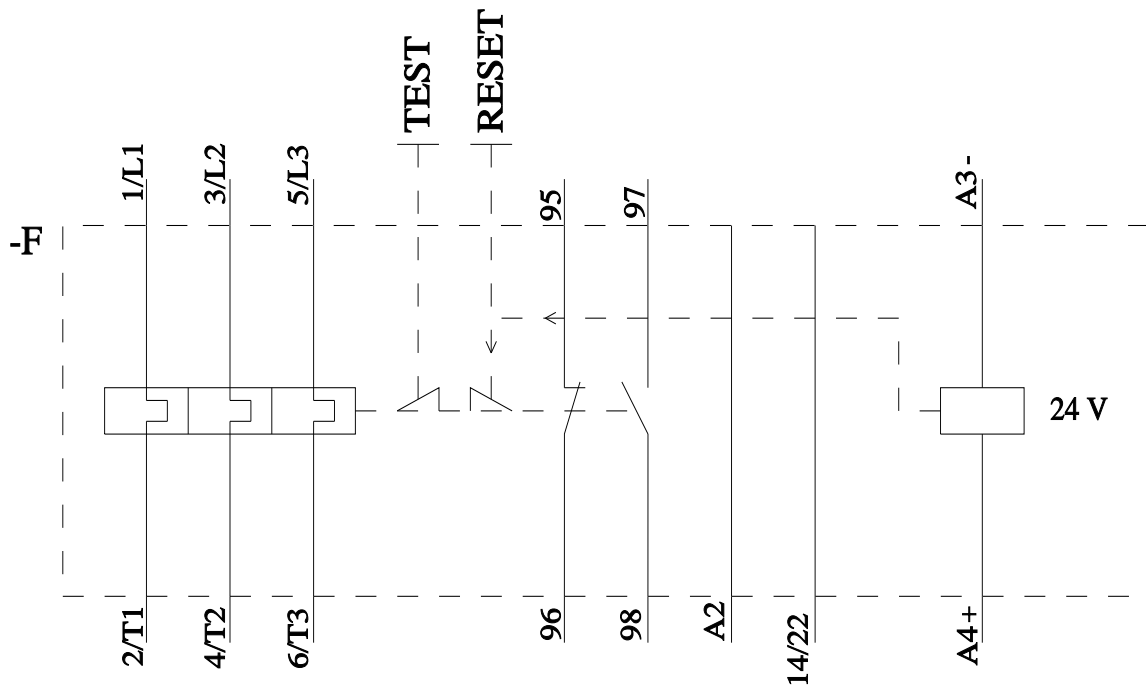
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3113-4SB0&lang=en
Characteristic: Tripping characteristics, I²t, Let-through current
<https://support.industry.siemens.com/cs/ww/en/ps/3RB3113-4SB0/char>

Further characteristics (e.g. electrical endurance, switching frequency)

<https://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB3113-4SB0&objecttype=14&gridview=view1>





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4/2/2025 

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