

Overload relay 12.5...50 A Electronic For motor protection Size S2, Class 10E Contactor mounting Main circuit: Screw Auxiliary circuit: Screw Manual-Automatic-Reset



Product brand name	SIRIUS
Product designation	solid-state overload relay
Product type designation	3RB3
General technical data	
Size of overload relay	S2
Size of contactor can be combined company-specific	S2
Power loss [W] total typical	1.8 W
Insulation voltage with degree of pollution 3 rated value	690 V
Surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation	<ul style="list-style-type: none">in networks with grounded star point between auxiliary and auxiliary circuitin networks with grounded star point between auxiliary and auxiliary circuitin networks with grounded star point between main and auxiliary circuitin networks with grounded star point between main and auxiliary circuit
Protection class IP	

• on the front	IP20
• of the terminal	IP00
Shock resistance	15g / 11 ms
• acc. to IEC 60068-2-27	15g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 8g / 11 ms
Thermal current	50 A
Recovery time	
• after overload trip with automatic reset typical	3 min
• after overload trip with remote-reset	0 min
• after overload trip with manual reset	0 min
Protection against electrical shock	finger-safe when touched vertically from front acc. to IEC 60529
Reference code acc. to DIN EN 81346-2	F

Ambient conditions	
Installation altitude at height above sea level	
• maximum	2 000 m
Temperature compensation	-25 ... +60 °C
Relative humidity during operation	10 ... 95 %

Main circuit	
Number of poles for main current circuit	3
Adjustable pick-up value current of the current-dependent overload release	12.5 ... 50 A
Operating voltage	
• rated value	690 V
• at AC-3 rated value maximum	690 V
Operating frequency rated value	50 ... 60 Hz
Operating current rated value	50 A
Operating power	
• for three-phase motors at 400 V at 50 Hz	7.5 ... 22 kW
• for AC motors at 500 V at 50 Hz	11 ... 30 kW
• for AC motors at 690 V at 50 Hz	11 ... 45 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	0
Operating 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
Operating 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 10E
Design of the overload release	electronic
UL/CSA ratings	
Full-load current (FLA) for three-phase AC motor	
• at 480 V rated value	50 A
• at 600 V rated value	50 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: 250 A
— with type of assignment 2 required	gG: 200 A
• for short-circuit protection of the auxiliary switch required	fuse gG: 6 A
Installation/ mounting/ dimensions	
Mounting position	any
Mounting type	Contactor mounting
Height	99 mm
Width	55 mm
Depth	104 mm
Required spacing	
• with side-by-side mounting	
— forwards	0 mm
— Backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	0 mm
• for grounded parts	
— forwards	10 mm
— Backwards	0 mm

— upwards	10 mm
— at the side	6 mm
— downwards	10 mm
• for live parts	
— forwards	10 mm
— Backwards	0 mm
— upwards	10 mm
— downwards	10 mm
— at the side	10 mm

Connections/Terminals

Product function	
• removable terminal for auxiliary and control circuit	Yes
Type of electrical connection	
• for main current circuit	screw-type terminals
• for auxiliary and control current 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 (1 ... 50 mm ²), 2x (1 ... 35 mm ²)
— stranded	2x (10 ... 35 mm ²), 1x 50 mm ²
— single or multi-stranded	1x (1 ... 50 mm ²), 2x (1 ... 35 mm ²)
— finely stranded with core end processing	1x (1 ... 35 mm ²), 2x (1 ... 25 mm ²)
• at AWG conductors for main contacts	2x (18 ... 2), 1x (18 ... 1)
Type of connectable conductor cross-sections	
• for auxiliary contacts	
— solid	1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²)
— single or multi-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)
• at AWG conductors for auxiliary contacts	1x (20 ... 14), 2x (20 ... 14)
Tightening torque	
• for main contacts with screw-type terminals	3 ... 4.5 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	M6
• of the auxiliary and control contacts	M3

Communication/ Protocol

Type of voltage supply via input/output link master	No
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Electromagnetic compatibility

Conducted interference

- due to burst acc. to IEC 61000-4-4
- due to conductor-earth surge acc. to IEC 61000-4-5
- due to conductor-conductor surge acc. to IEC 61000-4-5
- due to high-frequency radiation acc. 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-bound parasitic coupling acc. to IEC 61000-4-3

10 V/m

Electrostatic discharge acc. to IEC 61000-4-2

6 kV contact discharge / 8 kV air discharge

Display

Display version

- for switching status

Slide switch

Certificates/approvals

General Product Approval	EMC	For use in hazardous locations
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CCC



CSA



UL



C-Tick



ATEX

Declaration of Conformity	Test Certificates	Marine / Shipping
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EG-Konf.

[Miscellaneous](#)

[Type Test Certificates/Test Report](#)



ABS



LRS



PRC

Marine / Shipping	other
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RINA



RMRS



[Confirmation](#)

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RB3036-1UB0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB3036-1UB0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3036-1UB0>

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

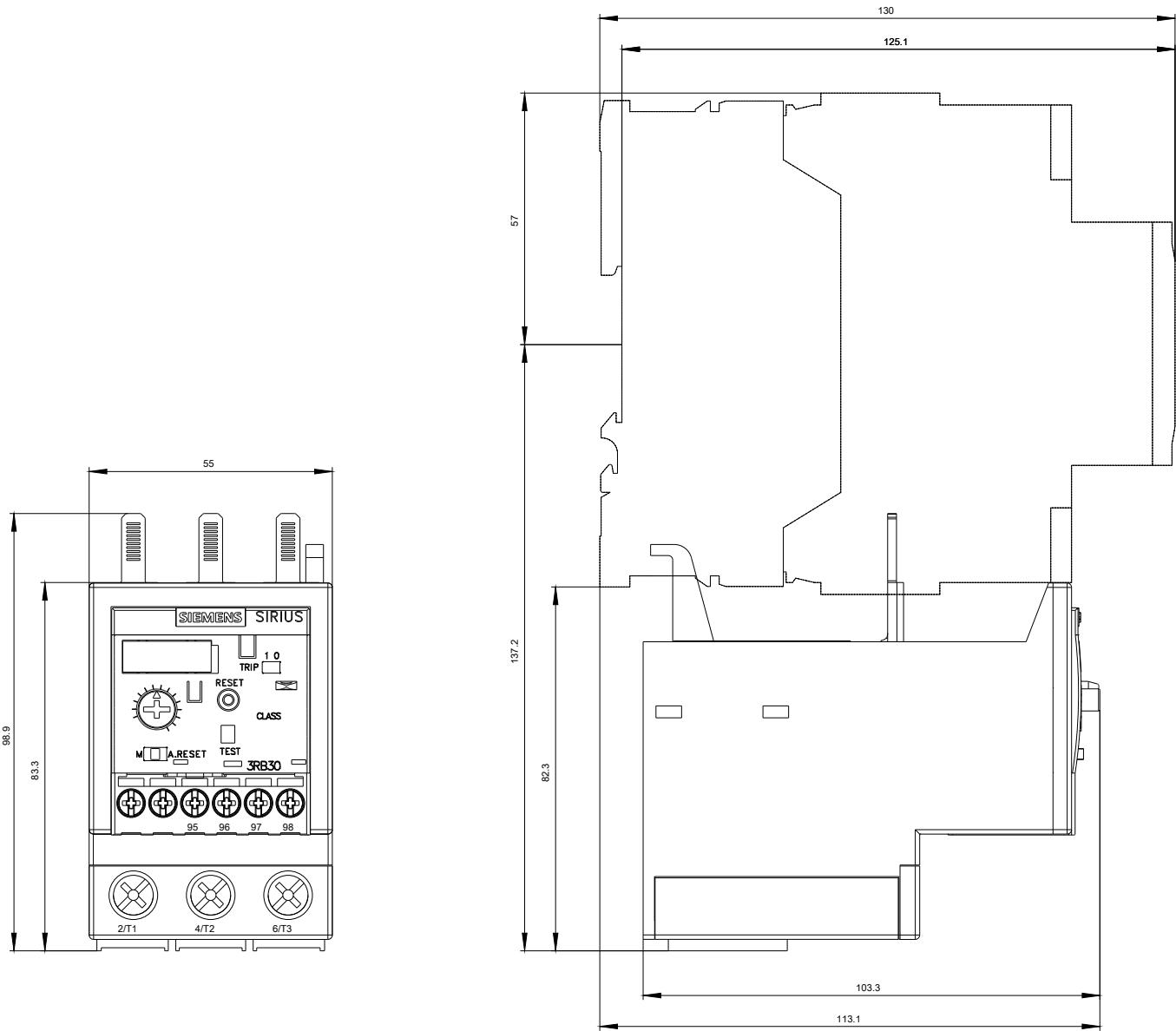
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3036-1UB0&lang=en

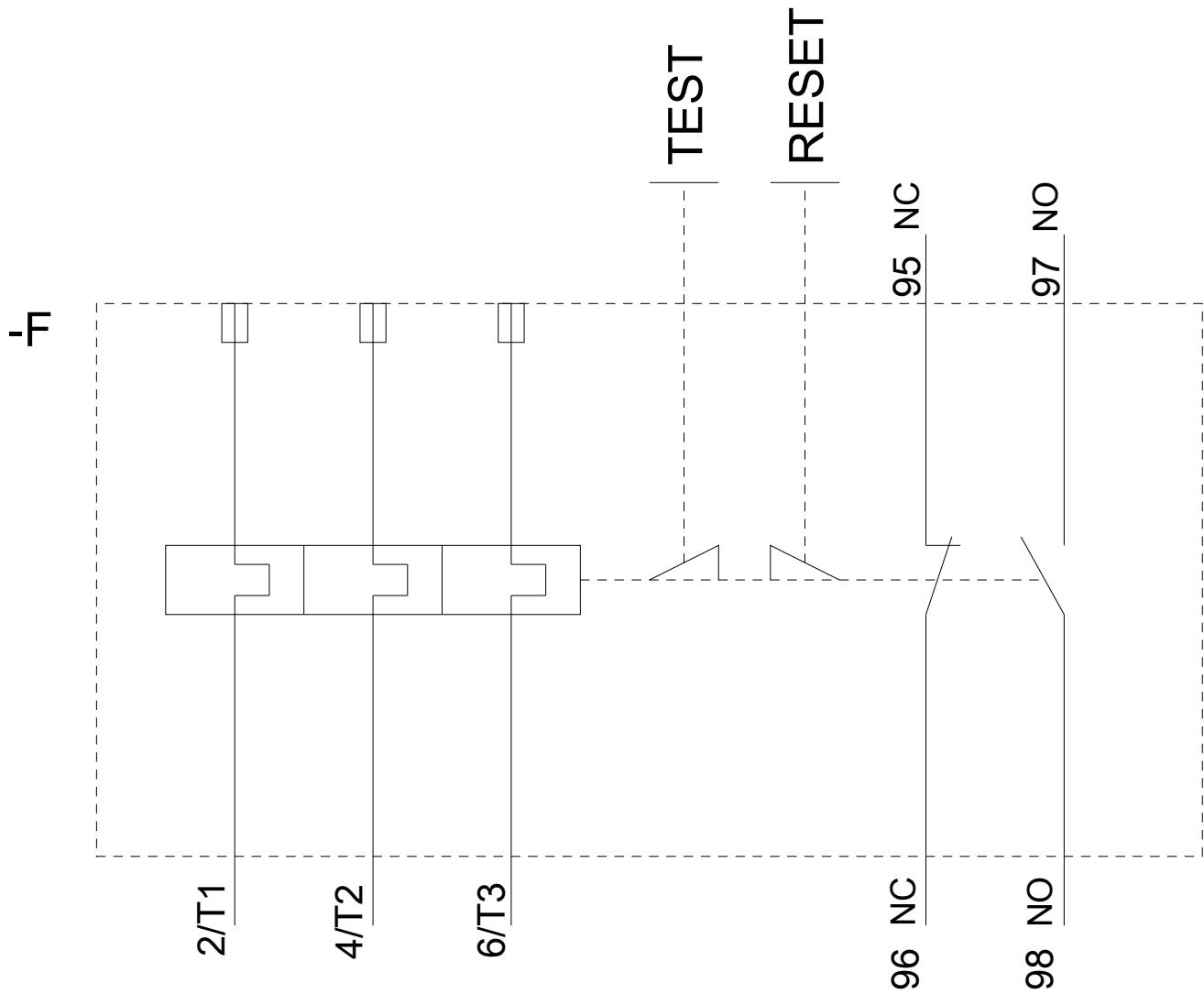
Characteristic: Tripping characteristics, I^2t , Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3036-1UB0/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB3036-1UB0&objecttype=14&gridview=view1>





last modified:

05/07/2019