

Overload relay 3...12 A Electronic For motor protection Size S00, Class 10E Contactor mounting Main circuit: Spring-type terminal Auxiliary circuit: Spring-type terminal Manual-Automatic-Reset



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] total typical	0.6 W
Surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation	
• in networks with grounded 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 grounded star point between main and auxiliary circuit	600 V
• in networks with grounded star point between main and auxiliary circuit	690 V
Protection class IP	
• on the front	IP20

• of the terminal	IP20
Shock resistance	15g / 11 ms
• acc. to IEC 60068-2-27	15g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 9g / 11 ms
Thermal current	12 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
Certificate of suitability according to ATEX directive 2014/34/EU	PTB 09 ATEX 3001
Protection against electrical shock	finger-safe
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	3 ... 12 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	12 A
Operating power	
• for three-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
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	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 assignment 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
Mounting type	Contactor mounting
Height	72 mm
Width	45 mm
Depth	90 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	6 mm
— Backwards	0 mm

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

Connections/Terminals

Product function	
• removable terminal for auxiliary and control circuit	Yes
Type of electrical connection	
• for main current circuit	spring-loaded terminals
• for auxiliary and control current circuit	spring-loaded 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)
— single or multi-stranded	1x (0,5 ... 4 mm ²)
— finely stranded with core end processing	1x (0.5 ... 2.5 mm ²)
— finely stranded without core end processing	1x (0.5 ... 2.5 mm ²)
• at AWG conductors for main contacts	1x (20 ... 12)
Type of connectable conductor cross-sections	
• for auxiliary contacts	
— solid	2x (0.25 ... 1.5 mm ²)
— single or multi-stranded	2x (0,25 ... 1,5 mm ²)
— finely stranded with core end processing	2x (0.25 ... 1.5 mm ²)
— finely stranded without core end processing	2x (0.25 ... 1.5 mm ²)
• at AWG conductors for auxiliary contacts	1x (24 ... 16), 2x (24 ... 16)
Design of screwdriver shaft	Diameter 5 to 6 mm
Size of the screwdriver tip	Pozidriv PZ 2

Communication/ Protocol

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

Conducted interference	
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- due to burst acc. to IEC 61000-4-4

2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3

- due to conductor-earth surge acc. to IEC 61000-4-5

2 kV (line to earth) corresponds to degree of severity 3

- due to conductor-conductor surge acc. to IEC 61000-4-5

1 kV (line to line) corresponds to degree of severity 3

- due to high-frequency radiation acc. to IEC 61000-4-6

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



Declaration of Conformity

Test Certificates

Marine / Shipping



EG-Konf.

[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping

other



LRS



PRS



RINA



RMRS



DNVGL.COM/AF

[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=3RB3016-1SE0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB3016-1SE0>

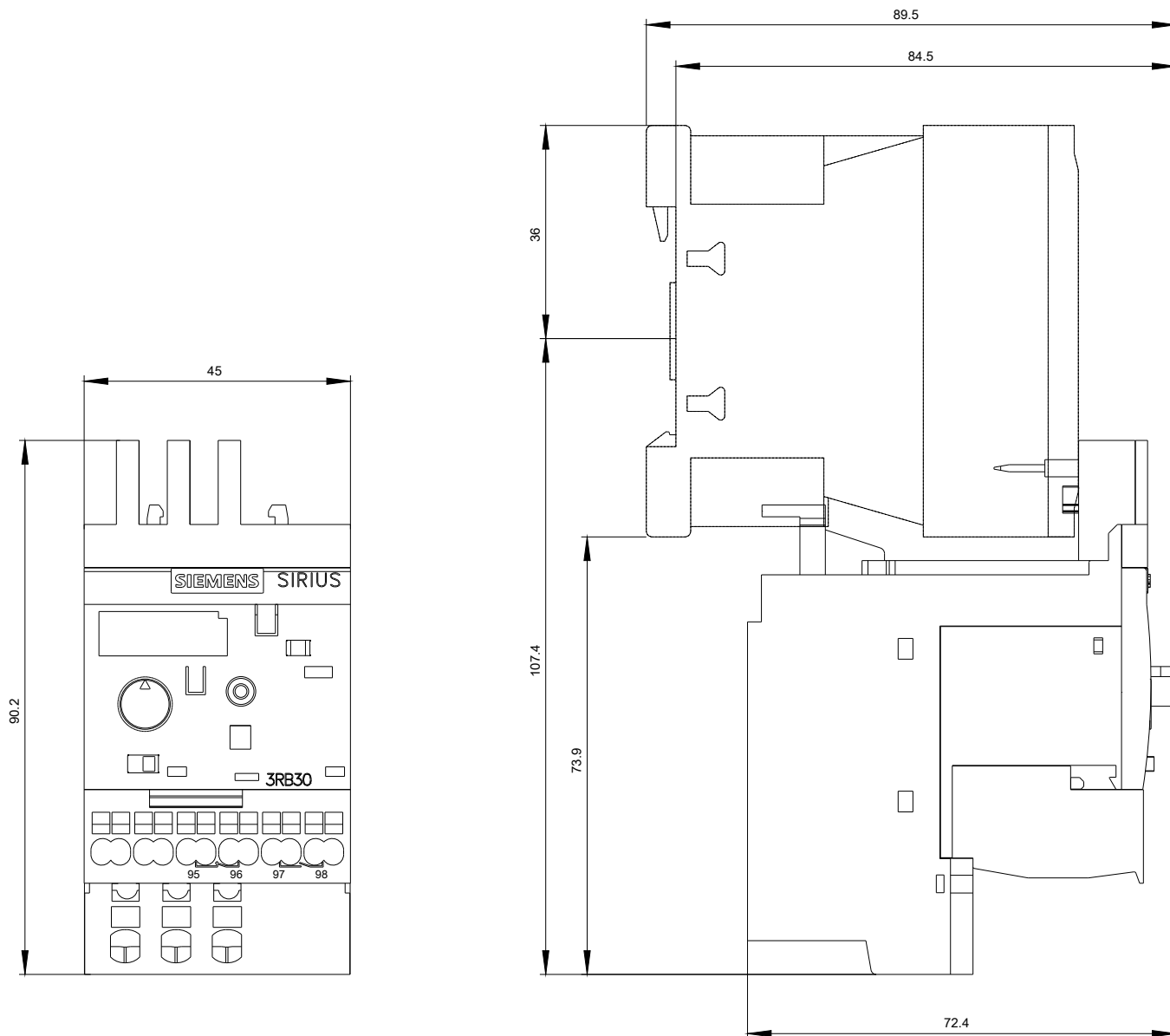
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

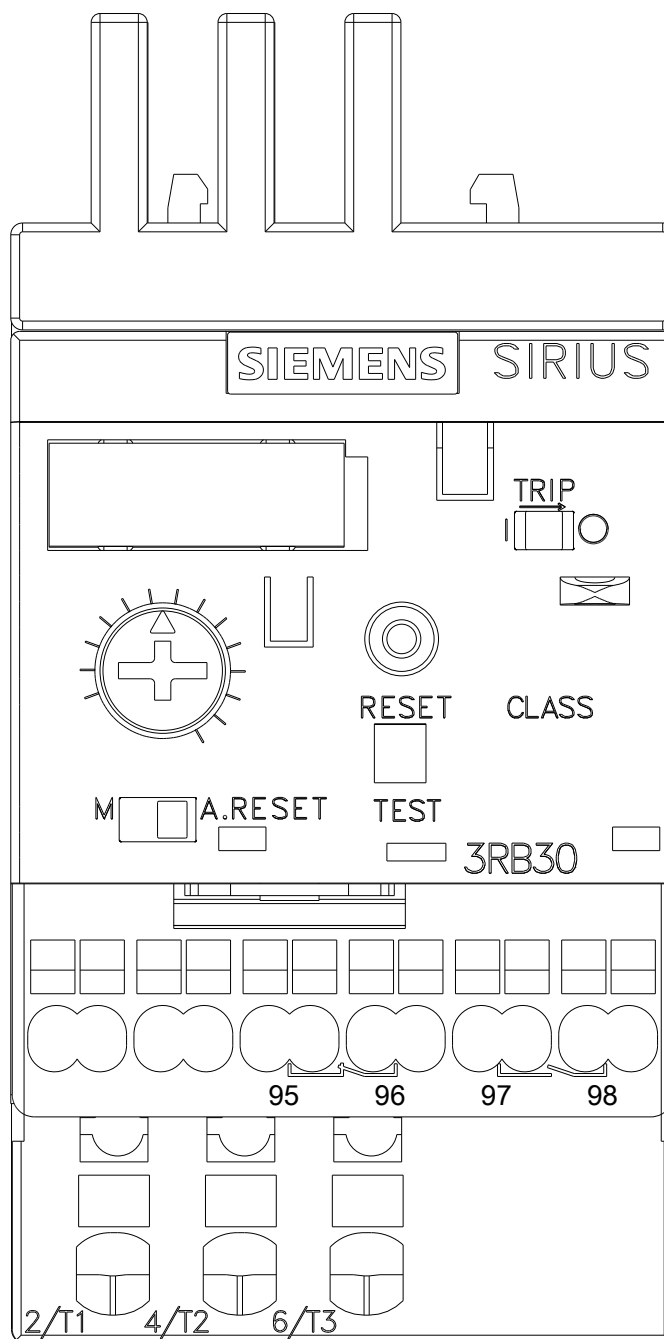
<https://support.industry.siemens.com/cs/ww/en/ps/3RB3016-1SE0>

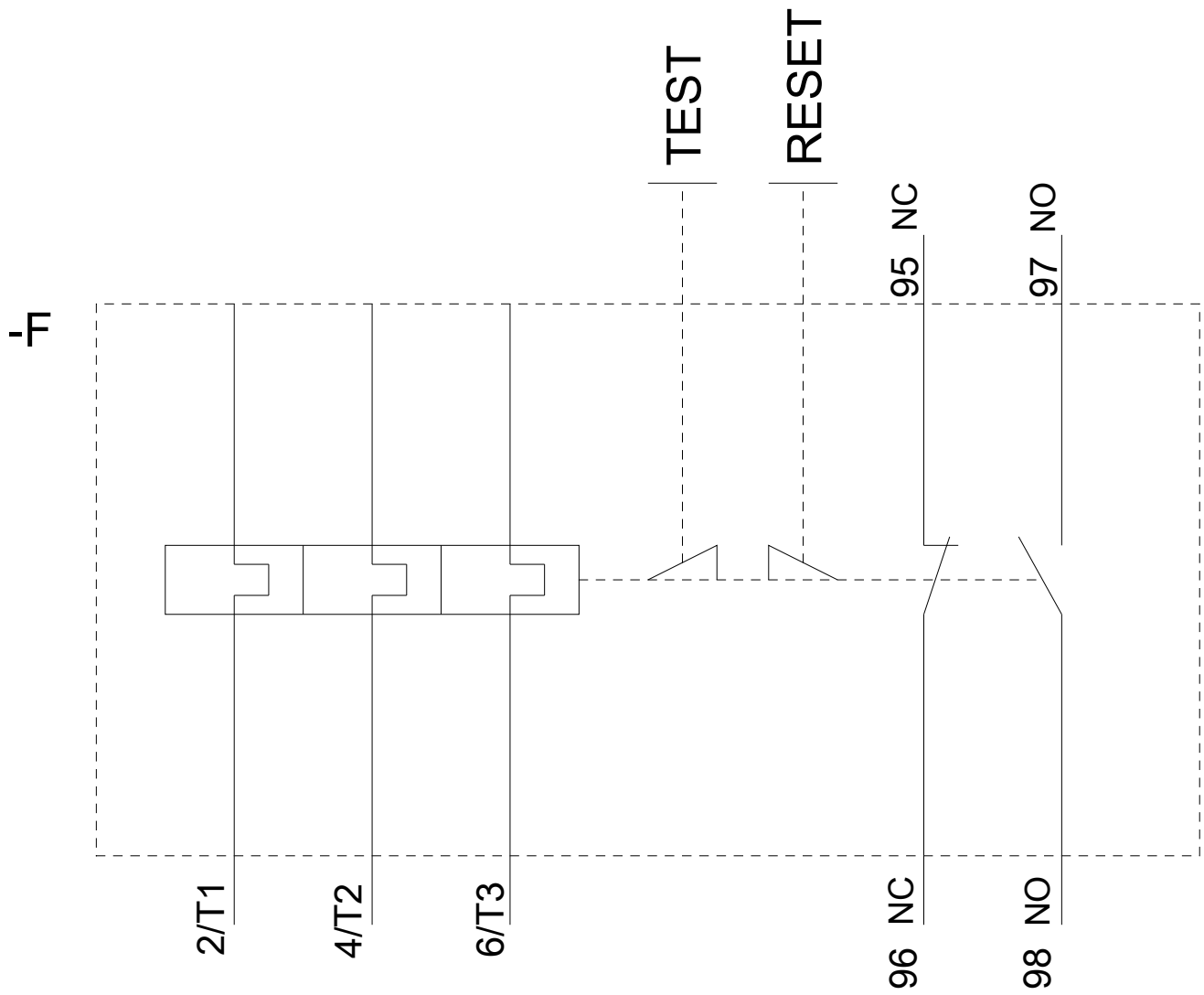
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3016-1SE0&lang=en

Characteristic: Tripping characteristics, I^2t , Let-through current
<https://support.industry.siemens.com/cs/ww/en/ps/3RB3016-1SE0/char>

Further characteristics (e.g. electrical endurance, switching frequency)
<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB3016-1SE0&objecttype=14&gridview=view1>







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