

Overload relay 1...4 A Electronic For motor protection Size S00,
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	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	0.1 W
• at AC in hot operating state per pole	0.03 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 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

<ul style="list-style-type: none"> • in networks with grounded star point between main and auxiliary circuit 	690 V
protection class IP	
<ul style="list-style-type: none"> • on the front 	IP20
<ul style="list-style-type: none"> • of the terminal 	IP20
shock resistance	15g / 11 ms
<ul style="list-style-type: none"> • acc. 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	4 A
recovery time	
<ul style="list-style-type: none"> • after overload trip with automatic reset typical 	3 min
<ul style="list-style-type: none"> • after overload trip with remote-reset 	0 min
<ul style="list-style-type: none"> • after overload trip with manual reset 	0 min
type of protection according to ATEX directive 2014/34/EU	Ex II (2) G [Ex e] [Ex d] [Ex px] ; Ex II (2) D [Ex t] [Ex p]
certificate of suitability according to ATEX directive 2014/34/EU	PTB 09 ATEX 3001
reference code acc. to IEC 81346-2	F

Ambient conditions

<ul style="list-style-type: none"> • installation altitude at height above sea level maximum 	2 000 m
ambient temperature	
<ul style="list-style-type: none"> • during operation 	-25 ... +60 °C
<ul style="list-style-type: none"> • during storage 	-40 ... +80 °C
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • rated value 	690 V
<ul style="list-style-type: none"> • at AC-3 rated value maximum 	690 V
operating frequency rated value	50 ... 60 Hz
operational current rated value	4 A
operating power	
<ul style="list-style-type: none"> • for 3-phase motors at 400 V at 50 Hz 	0.37 ... 1.5 kW
<ul style="list-style-type: none"> • for AC motors at 500 V at 50 Hz 	0.37 ... 2.2 kW
<ul style="list-style-type: none"> • 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 10E
design of the overload release	electronic

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 assignment 2 required	gG: 20 A
• for short-circuit protection of the auxiliary switch required	fuse gG: 6 A

Installation/ mounting/ dimensions

mounting position	any
fastening method	Contactor mounting
height	79 mm
width	45 mm
depth	73 mm

Connections/ Terminals

product function <ul style="list-style-type: none"> removable terminal for auxiliary and control circuit 	Yes
type of electrical connection <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> for main contacts <ul style="list-style-type: none"> — solid — solid or stranded — finely stranded with core end processing at AWG cables for main contacts 	1x (0.5 ... 4 mm ²), 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 4 mm ²) 1x (0,5 ... 4 mm ²), 2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 4 mm ²) 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 2.5 mm ²) 1x (20 ... 12), 2x (20 ... 12)
<ul style="list-style-type: none"> type of connectable conductor cross-sections for auxiliary contacts <ul style="list-style-type: none"> — solid — solid or stranded — finely stranded with core end processing type of connectable conductor cross-sections at 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 <ul style="list-style-type: none"> for main contacts with screw-type terminals for auxiliary contacts with screw-type terminals 	0.8 ... 1.2 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 <ul style="list-style-type: none"> for main contacts of the auxiliary and control contacts 	M3 M3

Communication/ Protocol

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

conducted interference <ul style="list-style-type: none"> 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
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field-based interference 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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CSA



CCC



UL



RCM



ATEX

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

[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



ABS



BUREAU VERITAS

Marine / Shipping	other
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LRS



PRS



RINA



RMRS



DNVGL.COM/AF

[Confirmation](#)

Further information

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=3RB3016-1PB0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB3016-1PB0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3016-1PB0>

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

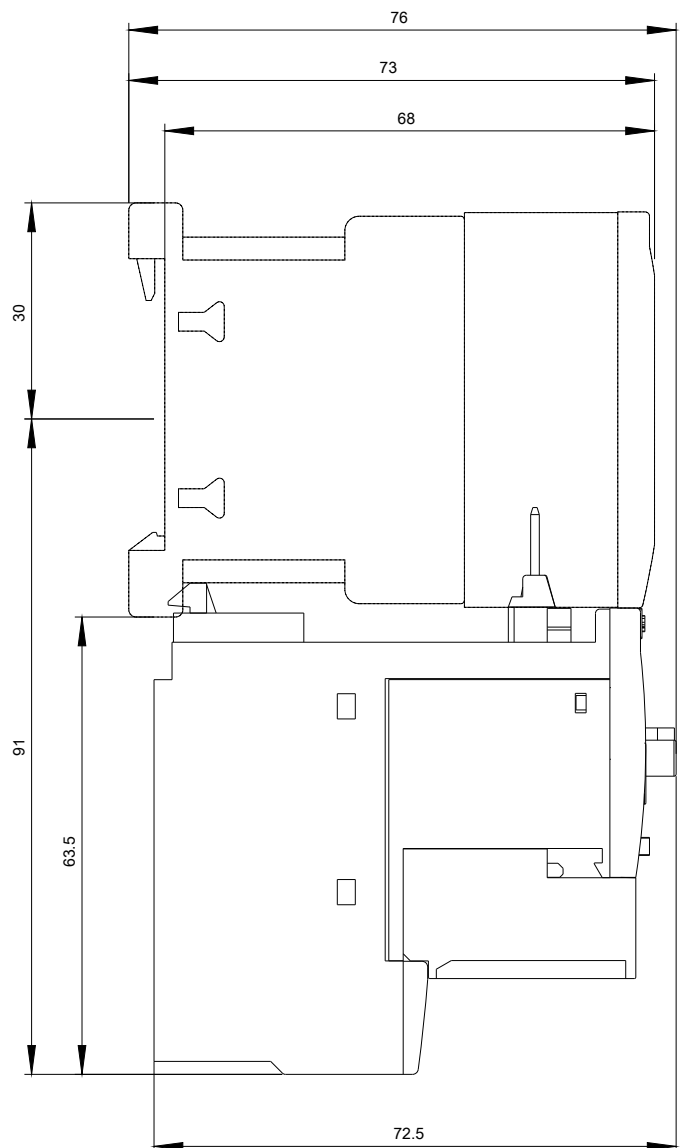
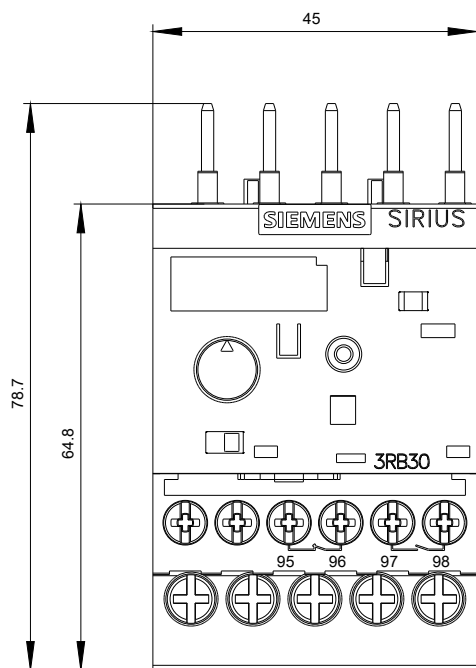
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3016-1PB0&lang=en

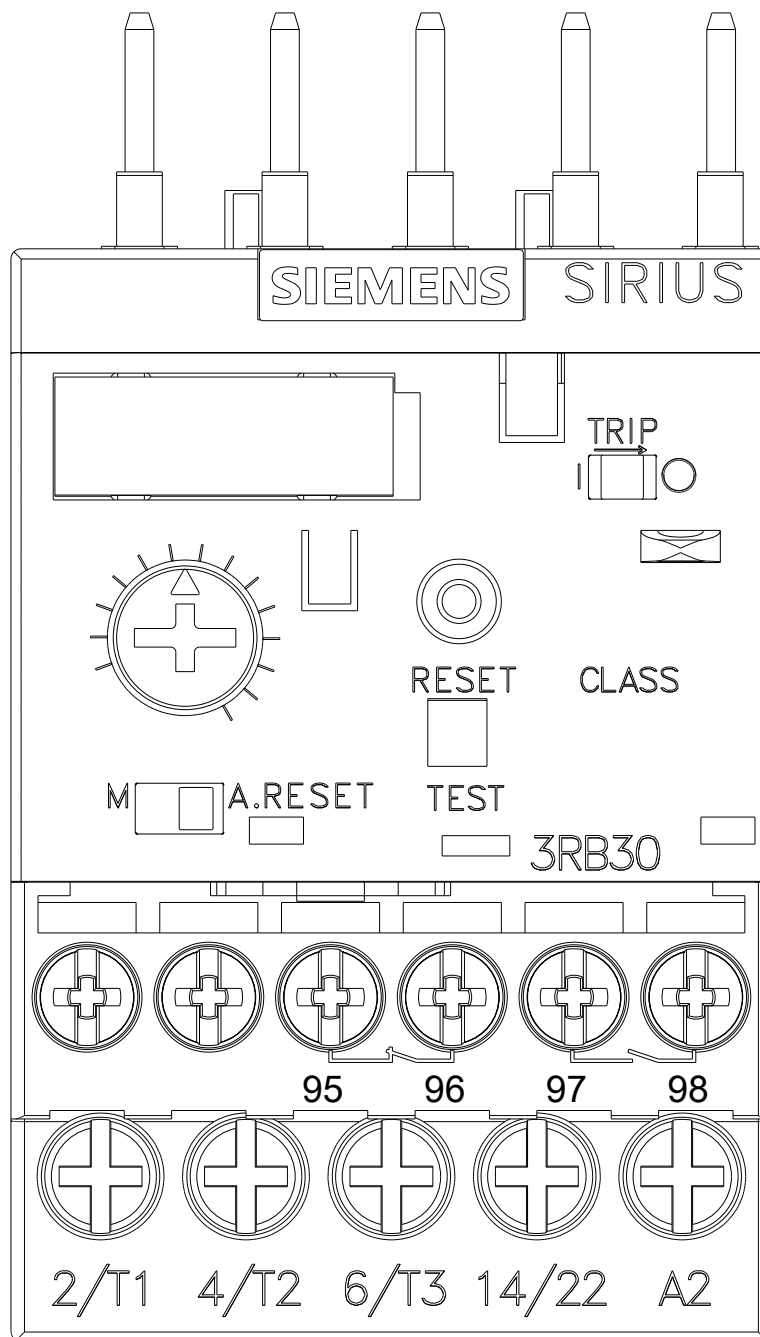
Characteristic: Tripping characteristics, I²t, Let-through current

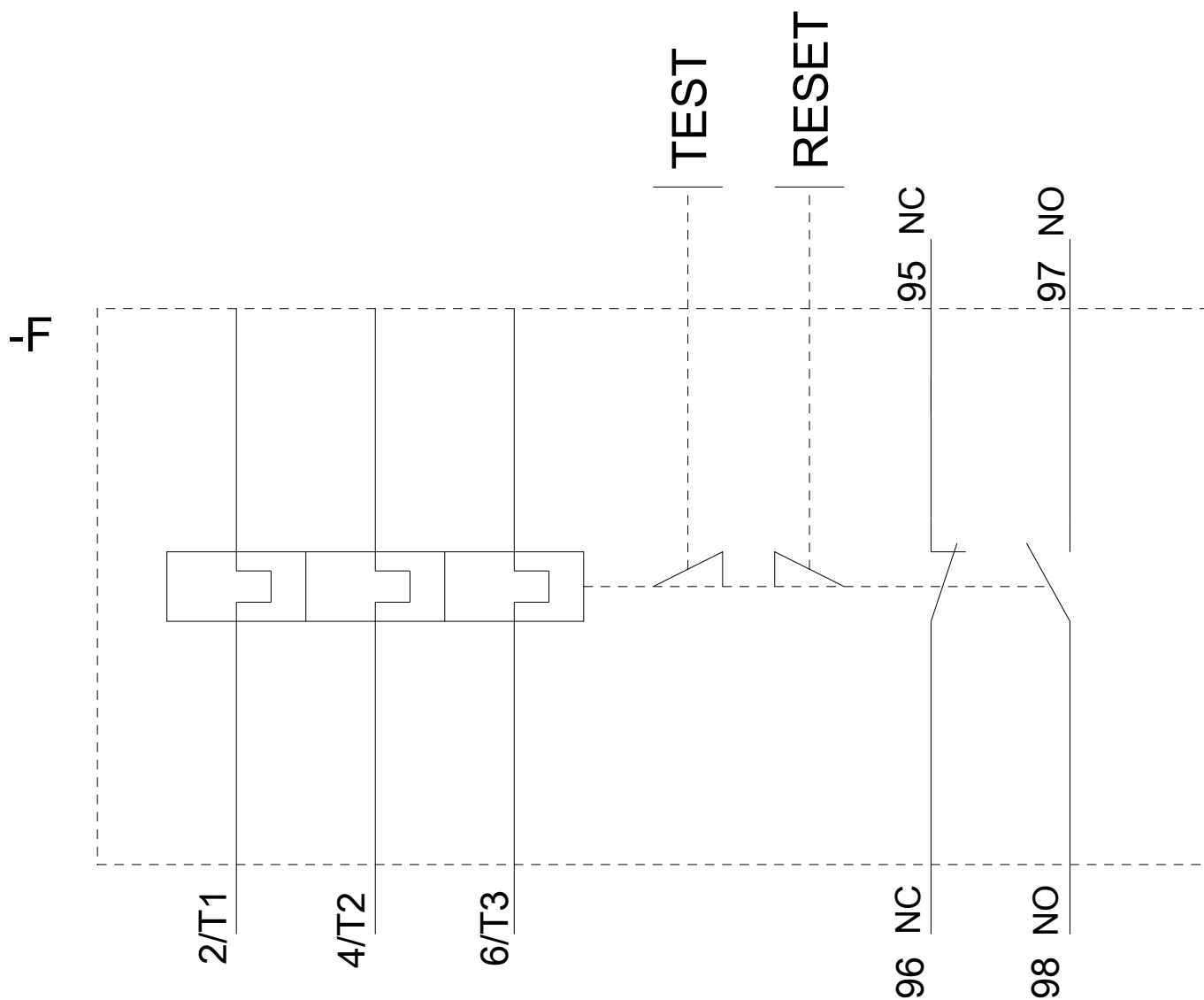
<https://support.industry.siemens.com/cs/ww/en/ps/3RB3016-1PB0/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB3016-1PB0&objecttype=14&gridview=view1>







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11/17/2020