

Overload relay 3...12 A 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
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 circuit 	300 V
<ul style="list-style-type: none"> • in networks with grounded star point between auxiliary and auxiliary circuit 	300 V
<ul style="list-style-type: none"> • 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 • of the terminal 	IP20 IP20
Shock resistance <ul style="list-style-type: none"> • acc. to IEC 60068-2-27 	15g / 11 ms 15g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 9g / 11 ms
Thermal current	12 A
Recovery time <ul style="list-style-type: none"> • after overload trip with automatic reset typical • after overload trip with remote-reset • after overload trip with manual reset 	3 min 0 min 0 min
Type of protection	II (2) G [Ex e] [Ex d] [Ex px] II (2) D [Ex t] [Ex p]
Certificate of suitability relating to ATEX	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 <ul style="list-style-type: none"> • maximum 	2 000 m
Ambient temperature <ul style="list-style-type: none"> • during operation • during storage • during transport 	-25 ... +60 °C -40 ... +80 °C -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 pick-up value current of the current-dependent overload release	3 ... 12 A
Operating voltage <ul style="list-style-type: none"> • rated value • at AC-3 rated value maximum 	690 V 690 V
Operating frequency rated value	50 ... 60 Hz
Operating current rated value	12 A
Operating power <ul style="list-style-type: none"> • for three-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 	1.5 ... 5.5 kW 1.5 ... 5.5 kW 2.2 ... 7.5 kW

Auxiliary circuit

Design of the auxiliary switch	integrated
Number of NC contacts for auxiliary contacts <ul style="list-style-type: none"> • Note 	1 for contactor disconnection
Number of NO contacts for auxiliary contacts <ul style="list-style-type: none"> • Note 	1 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
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	Yes
<ul style="list-style-type: none"> removable terminal for auxiliary and control circuit 	
Type of electrical connection	spring-loaded terminals
<ul style="list-style-type: none"> for main current circuit 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	
<ul style="list-style-type: none"> for main contacts <ul style="list-style-type: none"> — solid — single or multi-stranded — finely stranded with core end processing — finely stranded without core end processing at AWG conductors for main contacts 	1x (0.5 ... 4 mm ²) 1x (0,5 ... 4 mm ²) 1x (0.5 ... 2.5 mm ²) 1x (0.5 ... 2.5 mm ²) 1x (20 ... 12)
Type of connectable conductor cross-sections	
<ul style="list-style-type: none"> for auxiliary contacts <ul style="list-style-type: none"> — solid — single or multi-stranded — finely stranded with core end processing — finely stranded without core end processing at AWG conductors for auxiliary contacts 	2x (0.25 ... 1.5 mm ²) 2x (0,25 ... 1,5 mm ²) 2x (0.25 ... 1.5 mm ²) 2x (0.25 ... 1.5 mm ²) 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	
<ul style="list-style-type: none"> • due to burst acc. to IEC 61000-4-4 	2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3
<ul style="list-style-type: none"> • due to conductor-earth surge acc. to IEC 61000-4-5 	2 kV (line to earth) corresponds to degree of severity 3
<ul style="list-style-type: none"> • due to conductor-conductor surge acc. to IEC 61000-4-5 	1 kV (line to line) corresponds to degree of severity 3
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • for switching status 	Slide switch

Certificates/approvals

General Product Approval	EMC	For use in hazardous locations
 CCC	 CSA	 UL
 EAC	 C-Tick	 ATEX

Declaration of Conformity	Test Certificates	Marine / Shipping
 EG-Konf.	Special Test Certificate	Type Test Certificates/Test Report
	 ABS	 BUREAU VERITAS
		 LRS

Marine / Shipping	other
 PRS	Confirmation
 RINA	
 RMRS	
 DNV-GL	

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, ...)

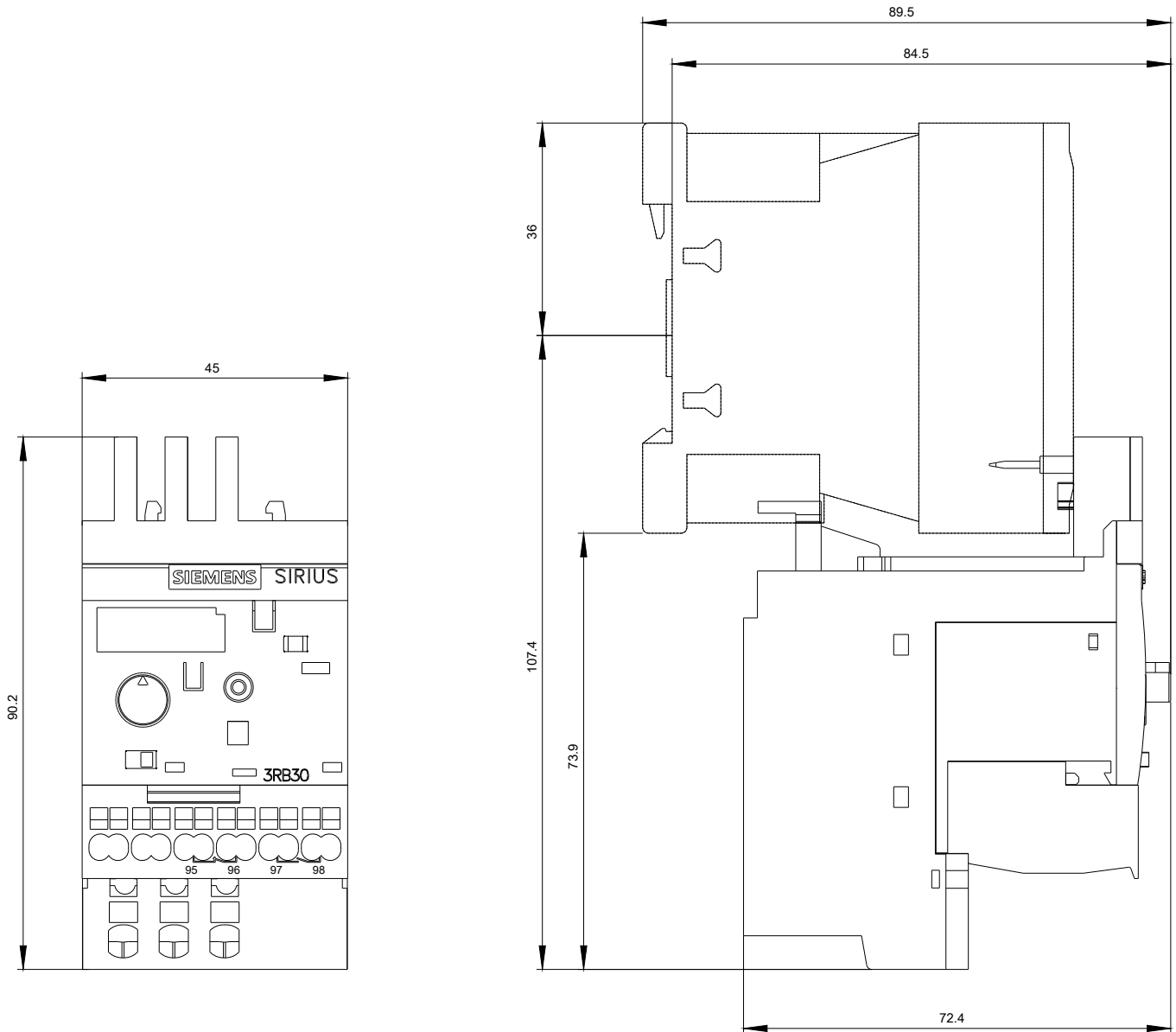
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3016-1SE0&lang=en

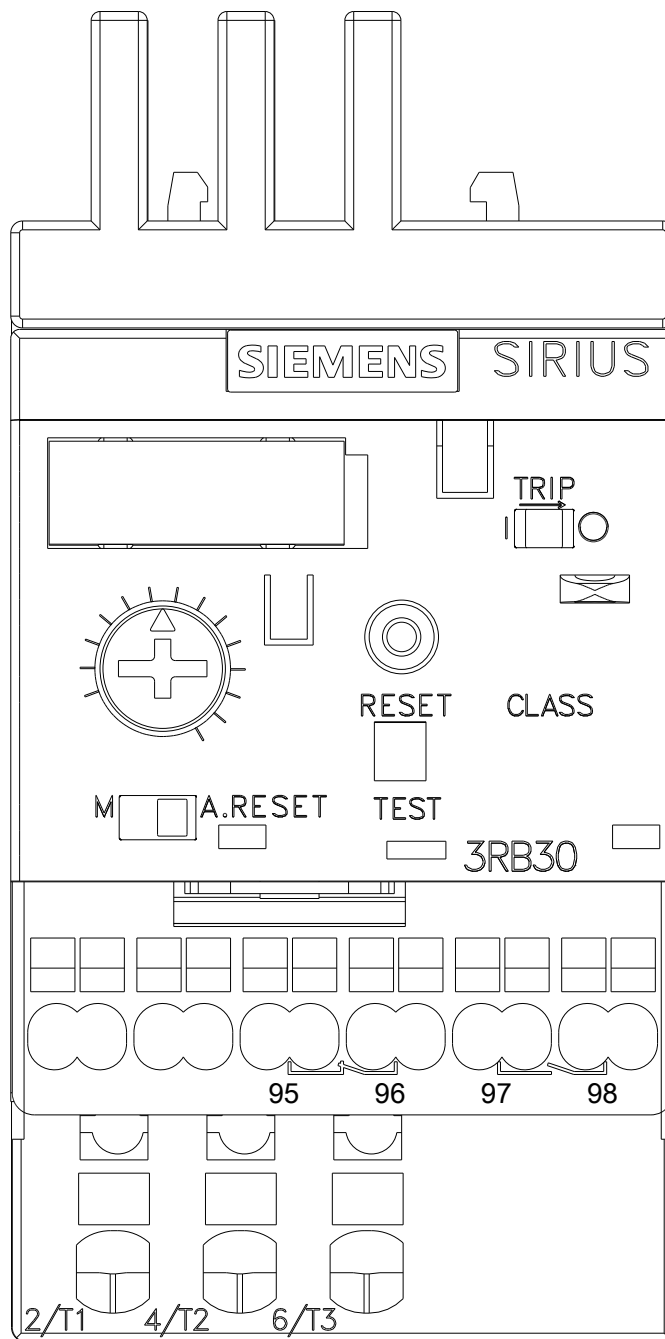
Characteristic: Tripping characteristics, I²t, Let-through current

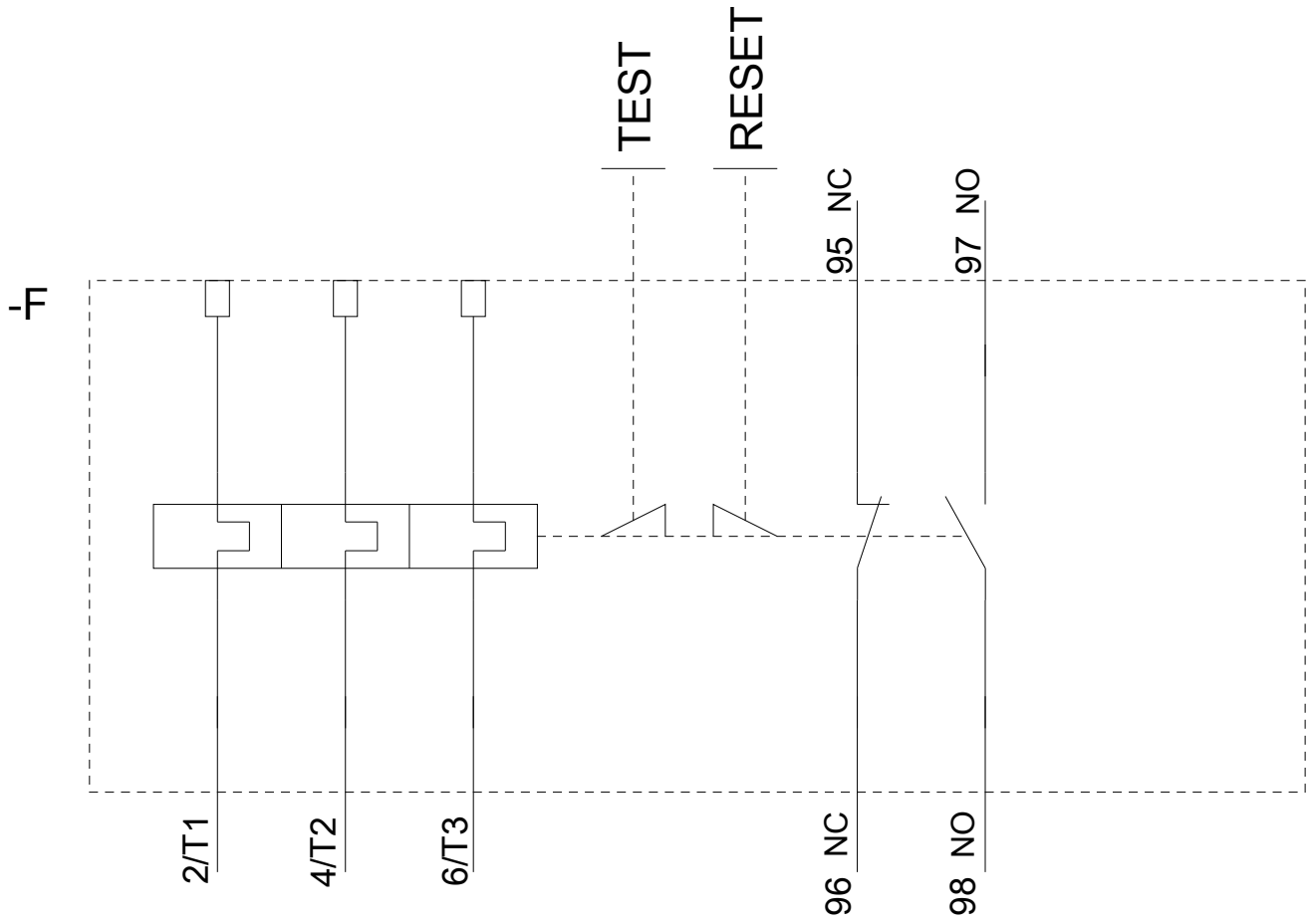
<https://support.industry.siemens.com/cs/ww/en/ps/3RB3016-1SE0/char>

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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12/13/2018