



Overload relay 0.1...0.4 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] for rated value of the current at AC in hot operating state	0.1 W
<ul style="list-style-type: none"> <li>per pole</li> </ul>	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	
<ul style="list-style-type: none"> <li>between auxiliary and auxiliary circuit</li> <li>between auxiliary and auxiliary circuit</li> <li>between main and auxiliary circuit</li> <li>between main and auxiliary circuit</li> </ul>	300 V 300 V 600 V 690 V
shock resistance	15g / 11 ms
<ul style="list-style-type: none"> <li>according to IEC 60068-2-27</li> </ul>	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 <sup>2</sup> ; 10 cycles
thermal current	0.4 A
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 according to IEC 81346-2	F
Substance Prohibition (Date)	10/01/2009

### Ambient conditions

installation altitude at height above sea level maximum	2 000 m
ambient temperature	
<ul style="list-style-type: none"> <li>during operation</li> <li>during storage</li> <li>during transport</li> </ul>	-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 current response value current of the current-dependent overload release	0.1 ... 0.4 A
operating voltage	
<ul style="list-style-type: none"> <li>rated value</li> <li>at AC-3e rated value maximum</li> </ul>	690 V 690 V

<b>operating frequency rated value</b>	50 ... 60 Hz
<b>operational current rated value</b>	0.4 A
operational current at AC-3e at 400 V rated value	0.4 A
<b>operating power</b>	
• for 3-phase motors at 400 V at 50 Hz	0.04 ... 0.09 kW
• for AC motors at 500 V at 50 Hz	0.04 ... 0.12 kW
• for AC motors at 690 V at 50 Hz	0.06 ... 0.18 kW
<b>Auxiliary circuit</b>	
<b>design of the auxiliary switch</b>	integrated
<b>number of NC contacts for auxiliary contacts</b>	1
• note	for contactor disconnection
<b>number of NO contacts for auxiliary contacts</b>	1
• note	for message "tripped"
number of CO contacts for auxiliary contacts	0
<b>operational current of auxiliary contacts at AC-15</b>	
• 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
<b>operational current of auxiliary contacts at DC-13</b>	
• 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
<b>Protective and monitoring functions</b>	
<b>trip class</b>	CLASS 10E
<b>design of the overload release</b>	electronic
<b>UL/CSA ratings</b>	
<b>full-load current (FLA) for 3-phase AC motor</b>	
• at 480 V rated value	0.4 A
• at 600 V rated value	0.4 A
<b>contact rating of auxiliary contacts according to UL</b>	B600 / R300
<b>Short-circuit protection</b>	
<b>design of the fuse link</b>	
• for short-circuit protection of the main circuit	
— with type of coordination 1 required	gG: 35 A, RK5: 3 A
— with type of assignment 2 required	gG: 4 A
• for short-circuit protection of the auxiliary switch required	fuse gG: 6 A
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	any
<b>fastening method</b>	Contacteur mounting
<b>height</b>	72 mm
<b>width</b>	45 mm
<b>depth</b>	90 mm
<b>Connections/ Terminals</b>	
<b>product component removable terminal for auxiliary and control circuit</b>	Yes
<b>type of electrical connection</b>	
• for main current circuit	spring-loaded terminals
• for auxiliary and control circuit	spring-loaded terminals
<b>arrangement of electrical connectors for main current circuit</b>	Top and bottom
type of connectable conductor cross-sections for main contacts	
• solid	1x (0.5 ... 4 mm²)
• solid or stranded	1x (0.5 ... 4 mm²)
• finely stranded with core end processing	1x (0.5 ... 2.5 mm²)
• finely stranded without core end processing	1x (0.5 ... 2.5 mm²)
<b>type of connectable conductor cross-sections</b>	
• for auxiliary contacts	

- solid
  - solid or stranded
  - finely stranded with core end processing
  - finely stranded without core end processing
  - at AWG cables for auxiliary contacts
- design of screwdriver shaft**
- size of the screwdriver tip**

2x (0.25 ... 1.5 mm<sup>2</sup>)

2x (0,25 ... 1,5 mm<sup>2</sup>)

2x (0.25 ... 1.5 mm<sup>2</sup>)

2x (0.25 ... 1.5 mm<sup>2</sup>)

1x (24 ... 16), 2x (24 ... 16)

Diameter 5 to 6 mm

Pozidriv PZ 2

#### Safety related data

**protection class IP on the front according to IEC 60529**

**touch protection on the front according to IEC 60529**

IP20

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
- due to conductor-earth surge according to IEC 61000-4-5
- due to conductor-conductor surge according to IEC 61000-4-5
- due to high-frequency radiation according 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

10 V/m

6 kV contact discharge / 8 kV air discharge

**field-based interference according to IEC 61000-4-3**

**electrostatic discharge according to IEC 61000-4-2**

#### Display

display version for switching status

Slide switch

#### Certificates/ approvals

**General Product Approval**

**EMC**



[Confirmation](#)



**For use in hazardous locations**

**Declaration of Conformity**

**Test Certificates**

**Marine / Shipping**



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



#### Marine / Shipping



**other**

[Confirmation](#)

#### Further information

**Information on the packaging**

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

**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=3RB3016-1RE0>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB3016-1RE0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3016-1RE0>

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

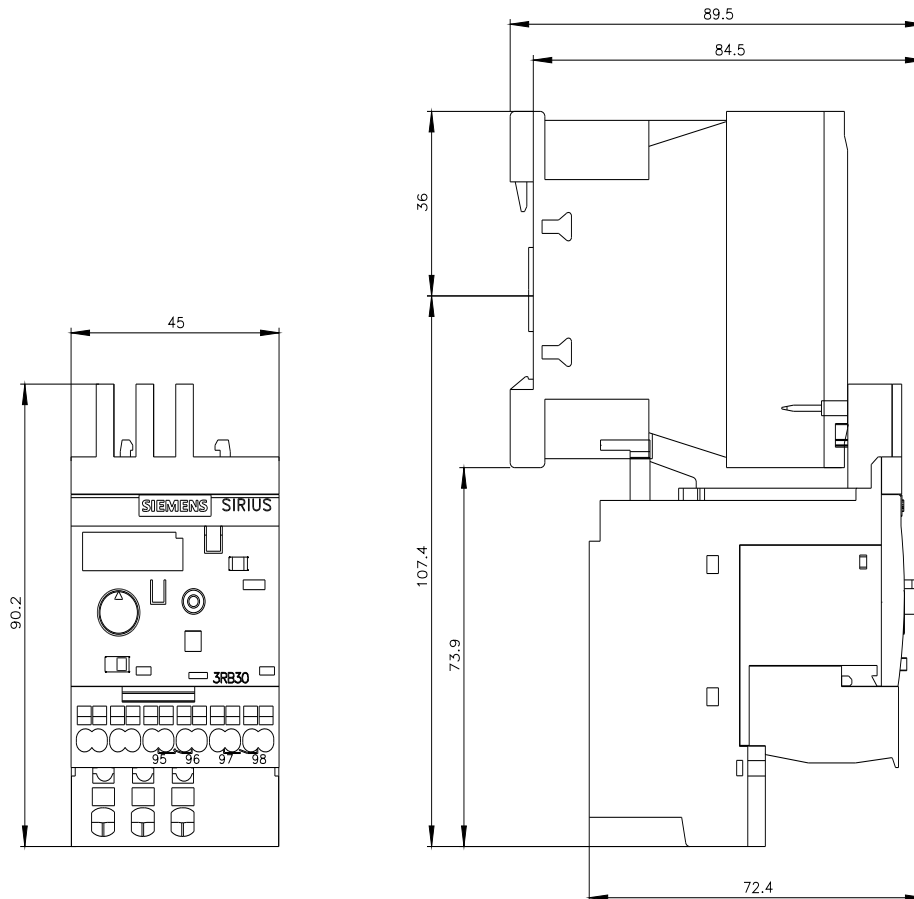
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RB3016-1RE0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3016-1RE0&lang=en)

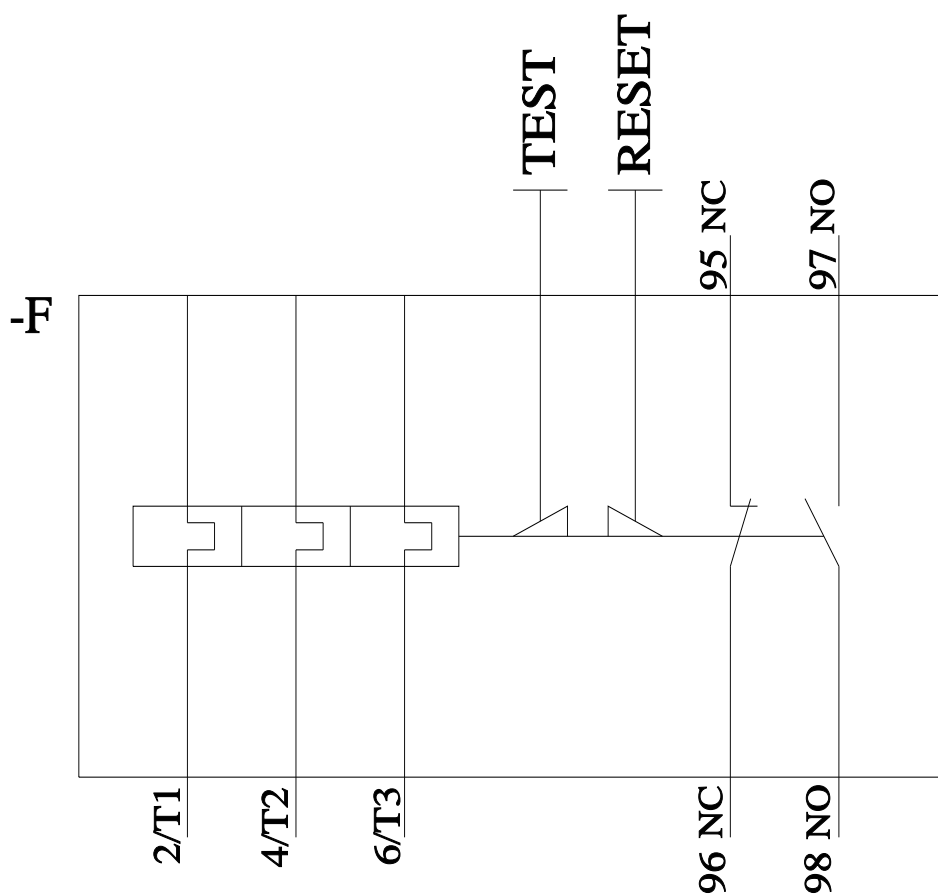
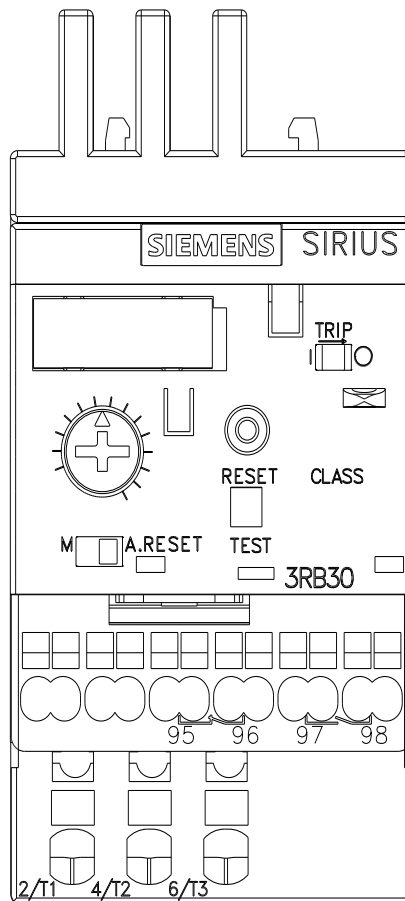
**Characteristic: Tripping characteristics, I<sub>t</sub>, Let-through current**

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3016-1RE0/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB3016-1RE0&objecttype=14&gridview=view1>





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