



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   |
| <b>General technical data</b>  |  |
| 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  |
| • 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 protective separation in networks with grounded star point |  |
| • between auxiliary and auxiliary circuit  | 300 V  |
| • between auxiliary and auxiliary circuit  | 300 V  |
| • between main and auxiliary circuit   | 600 V  |
| • between main and auxiliary circuit   | 690 V  |
| • shock resistance   | 15g / 11 ms  |
| • shock resistance according to IEC 60068-2-27   | 15g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 9g / 11 ms |
| thermal current  | 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 Prohibittance (Date)   | 10/01/2009   |
| SVHC substance name  | Bleimonoxyd (Bleioxyd) - 1317-36-8                                       |
| <b>Ambient conditions</b>  |  |
| installation altitude at height above sea level maximum                                    | 2 000 m  |
| ambient temperature  |  |
| • during operation   | -25 ... +60 °C   |
| • during storage   | -40 ... +80 °C   |
| • during transport   | -40 ... +80 °C   |
| temperature compensation   | -25 ... +60 °C   |
| relative humidity during operation   | 10 ... 95 %  |
| <b>Main circuit</b>  |  |
| number of poles for main current circuit   | 3  |
| adjustable current response value current of the current-dependent overload release        | 1 ... 4 A  |
| operating voltage  |  |
| • rated value  | 690 V  |

|  |  |
|--|--|
| <ul style="list-style-type: none"> <li>at AC-3e rated value maximum</li> </ul>   | 690 V  |
| <b>operating frequency rated value</b>   | 50 ... 60 Hz   |
| <b>operational current rated value</b>   | 4 A  |
| operational current at AC-3e at 400 V rated value  | 4 A  |
| <b>operating power</b>   |  |
| <ul style="list-style-type: none"> <li>for 3-phase motors at 400 V at 50 Hz</li> </ul>   | 0.37 ... 1.5 kW  |
| <ul style="list-style-type: none"> <li>for AC motors at 500 V at 50 Hz</li> </ul>  | 0.37 ... 2.2 kW  |
| <ul style="list-style-type: none"> <li>for AC motors at 690 V at 50 Hz</li> </ul>  | 0.55 ... 3 kW  |
| <b>Auxiliary circuit</b>   |  |
| <b>design of the auxiliary switch</b>  | integrated   |
| <b>number of NC contacts for auxiliary contacts</b>  |  |
| <ul style="list-style-type: none"> <li></li> </ul>   | 1  |
| <ul style="list-style-type: none"> <li>note</li> </ul>   | for contactor disconnection  |
| number of NO contacts for auxiliary contacts   |  |
| <ul style="list-style-type: none"> <li></li> </ul>   | 1  |
| <ul style="list-style-type: none"> <li>note</li> </ul>   | for message "tripped"  |
| number of CO contacts for auxiliary contacts   | 0  |
| <b>operational current of auxiliary contacts at AC-15</b>  |  |
| <ul style="list-style-type: none"> <li>at 24 V</li> </ul>  | 4 A  |
| <ul style="list-style-type: none"> <li>at 110 V</li> </ul>   | 4 A  |
| <ul style="list-style-type: none"> <li>at 120 V</li> </ul>   | 4 A  |
| <ul style="list-style-type: none"> <li>at 125 V</li> </ul>   | 4 A  |
| <ul style="list-style-type: none"> <li>at 230 V</li> </ul>   | 3 A  |
| <b>operational current of auxiliary contacts at DC-13</b>  |  |
| <ul style="list-style-type: none"> <li>at 24 V</li> </ul>  | 2 A  |
| <ul style="list-style-type: none"> <li>at 60 V</li> </ul>  | 0.55 A   |
| <ul style="list-style-type: none"> <li>at 110 V</li> </ul>   | 0.3 A  |
| <ul style="list-style-type: none"> <li>at 125 V</li> </ul>   | 0.3 A  |
| <ul style="list-style-type: none"> <li>at 220 V</li> </ul>   | 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>  |  |
| <ul style="list-style-type: none"> <li>at 480 V rated value</li> </ul>   | 4 A  |
| <ul style="list-style-type: none"> <li>at 600 V rated value</li> </ul>   | 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>   |  |
| <ul style="list-style-type: none"> <li>for short-circuit protection of the main circuit <ul style="list-style-type: none"> <li>with type of coordination 1 required</li> </ul> </li> <li>with type of assignment 2 required</li> </ul> | gG: 35 A, RK5: 15 A  |
| <ul style="list-style-type: none"> <li>for short-circuit protection of the auxiliary switch required</li> </ul>  | gG: 20 A<br>fuse gG: 6 A   |
| <b>Installation/ mounting/ dimensions</b>  |  |
| <b>mounting position</b>   | any  |
| <b>fastening method</b>  | Contacteur mounting  |
| <b>height</b>  | 79 mm  |
| <b>width</b>   | 45 mm  |
| <b>depth</b>   | 73 mm  |
| <b>Connections/ Terminals</b>  |  |
| <b>product component removable terminal for auxiliary and control circuit</b>  | Yes  |
| <b>type of electrical connection</b>   |  |
| <ul style="list-style-type: none"> <li>for main current circuit</li> </ul>   | screw-type terminals   |
| <ul style="list-style-type: none"> <li>for auxiliary and control circuit</li> </ul>  | screw-type terminals   |
| <b>arrangement of electrical connectors for main current circuit</b>   | Top and bottom   |
| type of connectable conductor cross-sections for main contacts   |  |
| <ul style="list-style-type: none"> <li>solid</li> </ul>  | 1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 4 mm <sup>2</sup> ) |
| <ul style="list-style-type: none"> <li>solid or stranded</li> </ul>  | 1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 4 mm <sup>2</sup> ) |
| <ul style="list-style-type: none"> <li>finely stranded with core end processing</li> </ul>   | 1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )                                 |

|   |  |
|---|--|
| <b>type of connectable conductor cross-sections</b>   |  |
| <ul style="list-style-type: none"> <li>for auxiliary contacts <ul style="list-style-type: none"> <li>— solid</li> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> </ul> </li> <li>for AWG cables for auxiliary contacts</li> </ul> | 1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )<br>1x (0,5 ... 4 mm <sup>2</sup> ), 2x (0,5 ... 2,5 mm <sup>2</sup> )<br>1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )<br>1x (20 ... 14), 2x (20 ... 14) |
| <b>tightening torque</b>  |  |
| <ul style="list-style-type: none"> <li>for main contacts with screw-type terminals</li> <li>for auxiliary contacts with screw-type terminals</li> </ul>   | 0.8 ... 1.2 N·m<br>0.8 ... 1.2 N·m   |
| <b>design of screwdriver shaft</b>  | Diameter 5 to 6 mm   |
| <b>size of the screwdriver tip</b>  | Pozidriv PZ 2  |
| <b>design of the thread of the connection screw</b>   |  |
| <ul style="list-style-type: none"> <li>for main contacts</li> <li>of the auxiliary and control contacts</li> </ul>  | M3<br>M3   |

**Electrical Safety**

|  |  |
|--|--|
| <b>protection class IP on the front according to IEC 60529</b> | IP20   |
| <b>touch protection on the front according to IEC 60529</b>    | finger-safe, for vertical contact from the front |

**Communication/ Protocol**

|  |    |
|--|----|
| <b>type of voltage supply via input/output link master</b> | No |
|--|----|

**Electromagnetic compatibility**

|   |   |
|---|---|
| <b>conducted interference</b>   |   |
| <ul style="list-style-type: none"> <li>due to burst according to IEC 61000-4-4</li> <li>due to conductor-earth surge according to IEC 61000-4-5</li> <li>due to conductor-conductor surge according to IEC 61000-4-5</li> <li>due to high-frequency radiation according to IEC 61000-4-6</li> </ul> | 2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3<br>2 kV (line to earth) corresponds to degree of severity 3<br>1 kV (line to line) corresponds to degree of severity 3<br>10 V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1 kHz |
| <b>field-based interference according to IEC 61000-4-3</b>  | 10 V/m  |
| <b>electrostatic discharge according to IEC 61000-4-2</b>   | 6 kV contact discharge / 8 kV air discharge   |

**Display**

|                                      |              |
|--------------------------------------|--------------|
| display version for switching status | Slide switch |
|--------------------------------------|--------------|

**Approvals Certificates**

**General Product Approval**



EG-Konf.



CCC

[Confirmation](#)



UL

|                                 |            |                                       |                          |
|---------------------------------|------------|---------------------------------------|--------------------------|
| <b>General Product Approval</b> | <b>EMV</b> | <b>For use in hazardous locations</b> | <b>Test Certificates</b> |
|---------------------------------|------------|---------------------------------------|--------------------------|



RCM

[KC](#)



ATEX

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

**Marine / Shipping**



ABS



BUREAU VERITAS



DNV



LRS



PRS



RINA

**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=3RB3016-1PB0>

### 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, ...)

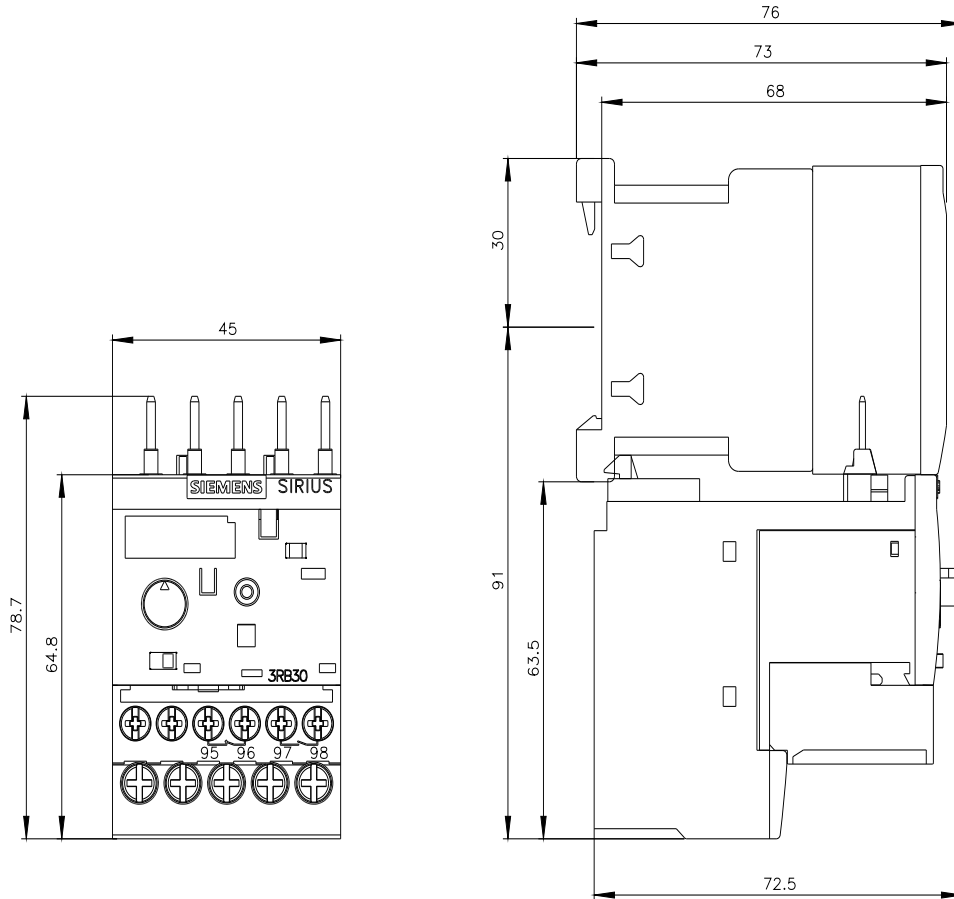
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RB3016-1PB0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3016-1PB0&lang=en)

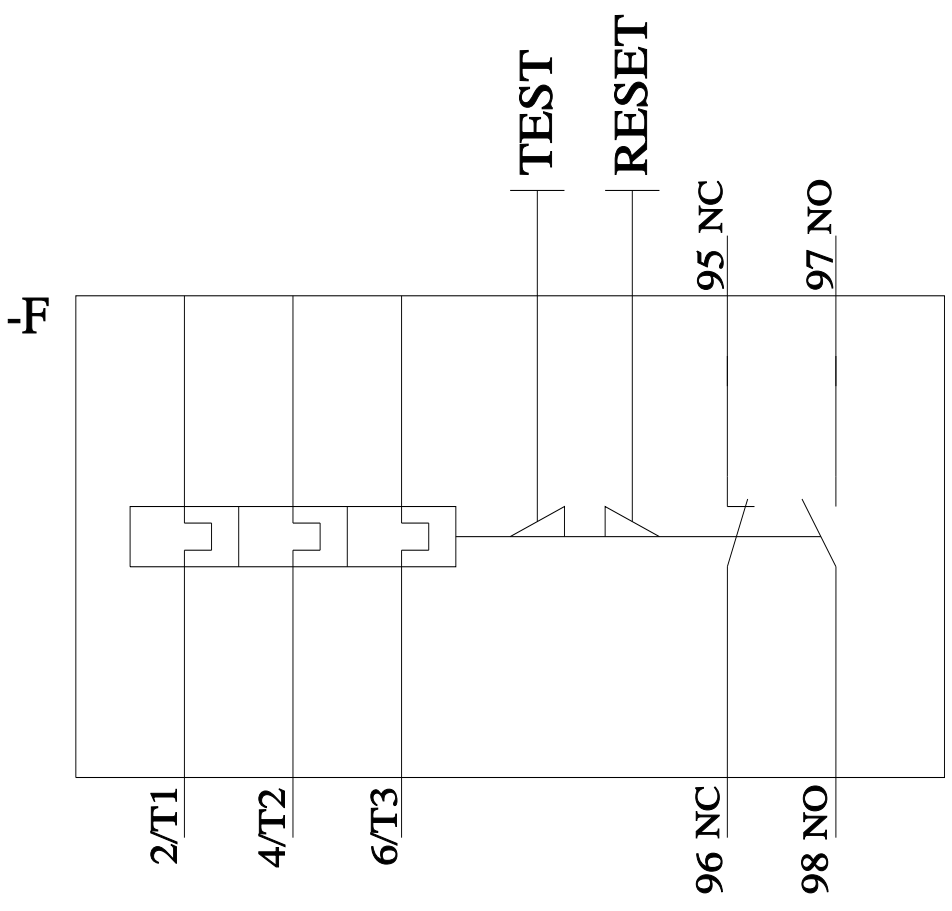
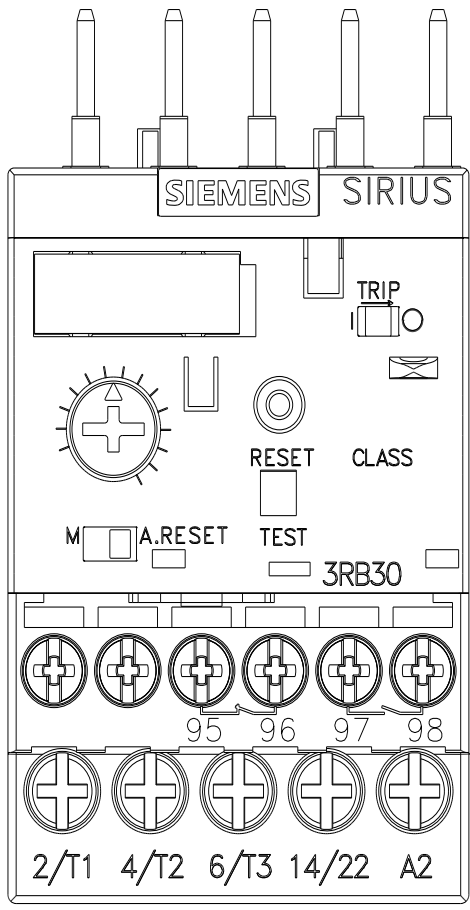
### Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<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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