



Overload relay 0.32...1.25 A Electronic For motor protection Size S00,  
Class 20E Contactor mounting Main circuit: Screw Auxiliary circuit: Screw  
Manual-Automatic-Reset

|  |  |
|--|--|
| <b>product brand name</b>  | SIRIUS   |
| <b>product designation</b>   | solid-state overload relay   |
| <b>product type designation</b>  | 3RB3   |
| <b>General technical data</b>  |  |
| <b>size of overload relay</b>  | S00  |
| <b>size of contactor can be combined company-specific</b>                                  | 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  |
| <b>surge voltage resistance rated value</b>  | 6 kV   |
| <b>maximum permissible voltage for safe isolation in networks with grounded star point</b> |  |
| • 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  |
| <b>shock resistance</b>  | 15g / 11 ms  |
| • acc. to IEC 60068-2-27   | 15g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 9g / 11 ms |
| <b>vibration resistance</b>  | 1-6 Hz, 15 mm; 6-500 Hz, 20 m/s <sup>2</sup> ; 10 cycles                 |
| <b>thermal current</b>   | 1.25 A   |
| <b>recovery time after overload trip</b>   |  |
| • with automatic reset typical   | 3 min  |
| • with remote-reset  | 0 min  |
| • with manual reset  | 0 min  |
| <b>type of protection according to ATEX directive 2014/34/EU</b>                           | 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   |
| <b>reference code acc. to IEC 81346-2</b>  | F  |
| Substance Prohibance (Date)  | 01.10.2009 00:00:00  |
| <b>Ambient conditions</b>  |  |
| installation altitude at height above sea level maximum                                    | 2 000 m  |
| <b>ambient temperature</b>   |  |
| • during operation   | -25 ... +60 °C   |
| • during storage   | -40 ... +80 °C   |
| • during transport   | -40 ... +80 °C   |
| <b>temperature compensation</b>  | -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   | 0.32 ... 1.25 A  |
| operating voltage <ul style="list-style-type: none"> <li>rated value</li> <li>at AC-3 rated value maximum</li> </ul>  | 690 V<br>690 V   |
| operating frequency rated value   | 50 ... 60 Hz   |
| operational current rated value   | 1.25 A   |
| operating power <ul style="list-style-type: none"> <li>for 3-phase motors at 400 V at 50 Hz</li> <li>for AC motors at 500 V at 50 Hz</li> <li>for AC motors at 690 V at 50 Hz</li> </ul>  | 0.12 ... 0.37 kW<br>0.12 ... 0.55 kW<br>0.18 ... 0.75 kW |
| <b>Auxiliary circuit</b>  |  |
| design of the auxiliary switch  | integrated   |
| number of NC contacts for auxiliary contacts <ul style="list-style-type: none"> <li>note</li> </ul>   | 1<br>for contactor disconnection                         |
| number of NO contacts for auxiliary contacts <ul style="list-style-type: none"> <li>note</li> </ul>   | 1<br>for message "tripped"                               |
| number of CO contacts for auxiliary contacts  | 0  |
| operational current of auxiliary contacts at AC-15 <ul style="list-style-type: none"> <li>at 24 V</li> <li>at 110 V</li> <li>at 120 V</li> <li>at 125 V</li> <li>at 230 V</li> </ul>  | 4 A<br>4 A<br>4 A<br>4 A<br>3 A                          |
| operational current of auxiliary contacts at DC-13 <ul style="list-style-type: none"> <li>at 24 V</li> <li>at 60 V</li> <li>at 110 V</li> <li>at 125 V</li> <li>at 220 V</li> </ul>   | 2 A<br>0.55 A<br>0.3 A<br>0.3 A<br>0.11 A                |
| <b>Protective and monitoring functions</b>  |  |
| trip class  | CLASS 20E  |
| design of the overload release  | electronic   |
| <b>UL/CSA ratings</b>   |  |
| full-load current (FLA) for 3-phase AC motor <ul style="list-style-type: none"> <li>at 480 V rated value</li> <li>at 600 V rated value</li> </ul>   | 1.25 A<br>1.25 A   |
| contact rating of auxiliary contacts according to UL  | B600 / R300  |
| <b>Short-circuit protection</b>   |  |
| design of the fuse link <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> <li>with type of assignment 2 required</li> </ul> </li> <li>for short-circuit protection of the auxiliary switch required</li> </ul> | gG: 35 A, RK5: 6 A<br>gG: 6 A<br>fuse gG: 6 A            |
| <b>Installation/ mounting/ dimensions</b>   |  |
| mounting position   | any  |
| fastening method  | Contactor mounting                                       |
| height  | 79 mm  |
| width   | 45 mm  |
| depth   | 73 mm  |
| <b>Connections/ Terminals</b>   |  |
| product component removable terminal for auxiliary and control circuit  | Yes  |
| type of electrical connection   |  |

|   |  |                                       |
|---|--|---------------------------------------|
| <ul style="list-style-type: none"><li>• for main current circuit</li><li>• for auxiliary and control circuit</li></ul>  | screw-type terminals   |                                       |
| <b>arrangement of electrical connectors for main current circuit</b>  | screw-type terminals   |                                       |
| <b>type of connectable conductor cross-sections</b>   | Top and bottom   |                                       |
| <ul style="list-style-type: none"><li>• for main 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>• at AWG cables for main contacts</li></ul>           | 1x (0.5 ... 4 mm²), 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 4 mm²)<br>1x (0,5 ... 4 mm²), 2x (0,5 ... 1,5 mm²), 2x (0,75 ... 4 mm²)<br>1x (0.5 ... 2.5 mm²), 2x (0.5 ... 2.5 mm²)<br>1x (20 ... 12), 2x (20 ... 12) |                                       |
| <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>• at AWG cables for auxiliary contacts</li></ul> | 1x (0.5 ... 4 mm²), 2x (0.5 ... 2.5 mm²)<br>1x (0,5 ... 4 mm²), 2x (0,5 ... 2,5 mm²)<br>1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²)<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   |                                       |
| <b>Safety related data</b>  |  |                                       |
| <b>protection class IP on the front acc. to IEC 60529</b>   | IP20   |                                       |
| <b>touch protection on the front acc. to IEC 60529</b>  | finger-safe, for vertical contact from the front   |                                       |
| <b>Communication/ Protocol</b>  |  |                                       |
| <b>type of voltage supply via input/output link master</b>  | No   |                                       |
| <b>Electromagnetic compatibility</b>  |  |                                       |
| <b>conducted interference</b>   |  |                                       |
| <ul style="list-style-type: none"><li>• due to burst acc. to IEC 61000-4-4</li></ul>  | 2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3  |                                       |
| <ul style="list-style-type: none"><li>• due to conductor-earth surge acc. to IEC 61000-4-5</li><li>• due to conductor-conductor surge acc. to IEC 61000-4-5</li></ul>   | 2 kV (line to earth) corresponds to degree of severity 3<br>1 kV (line to line) corresponds to degree of severity 3  |                                       |
| <ul style="list-style-type: none"><li>• due to high-frequency radiation acc. to IEC 61000-4-6</li></ul>   | 10 V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1 kHz  |                                       |
| <b>field-based interference acc. to IEC 61000-4-3</b>   | 10 V/m   |                                       |
| <b>electrostatic discharge acc. to IEC 61000-4-2</b>  | 6 kV contact discharge / 8 kV air discharge  |                                       |
| <b>Display</b>  |  |                                       |
| display version for switching status  | Slide switch   |                                       |
| <b>Certificates/ approvals</b>  |  |                                       |
| <b>General Product Approval</b>   | <b>EMC</b>   | <b>For use in hazardous locations</b> |



|                           |                   |                   |
|---------------------------|-------------------|-------------------|
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## Marine / Shipping

other



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## 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=3RB3016-2NB0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB3016-2NB0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3016-2NB0>

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

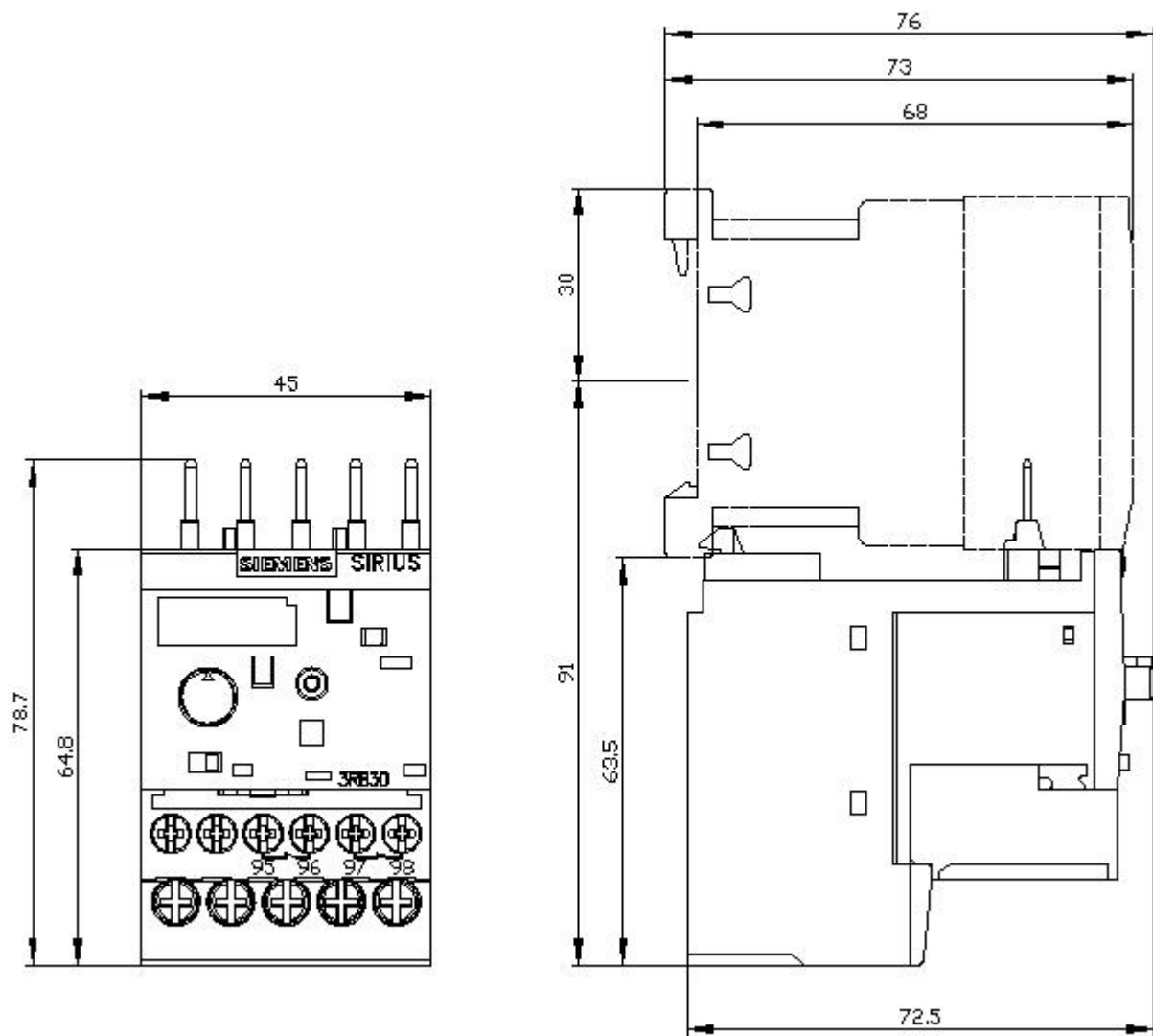
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RB3016-2NB0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3016-2NB0&lang=en)

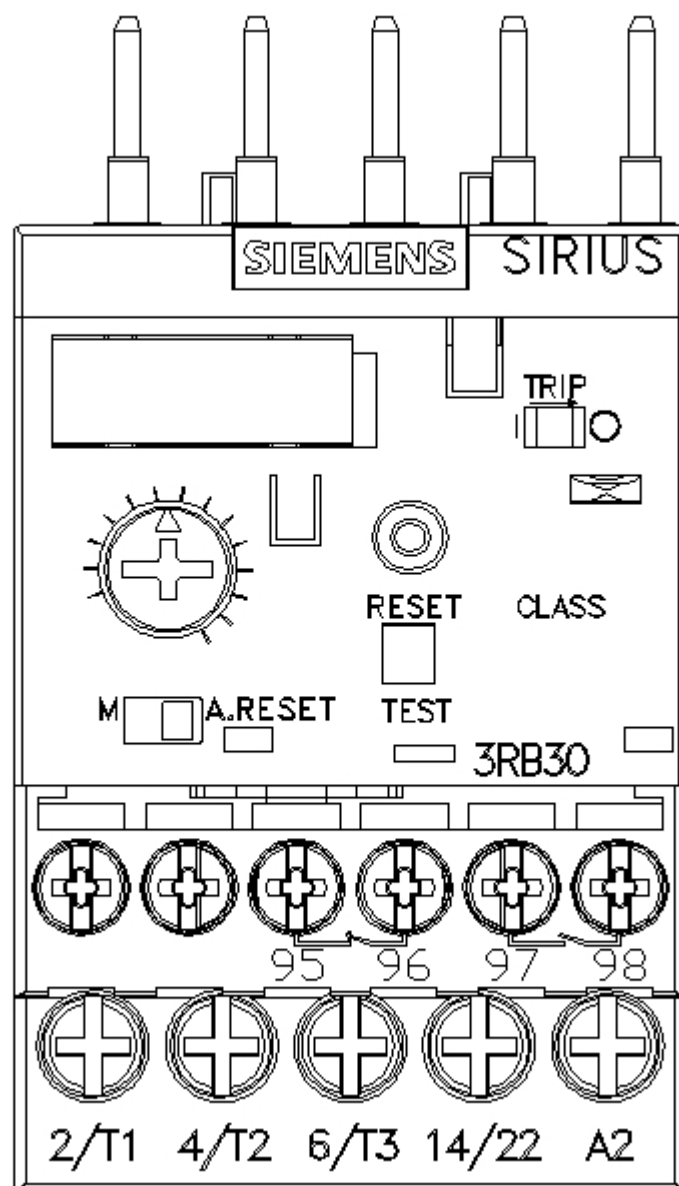
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

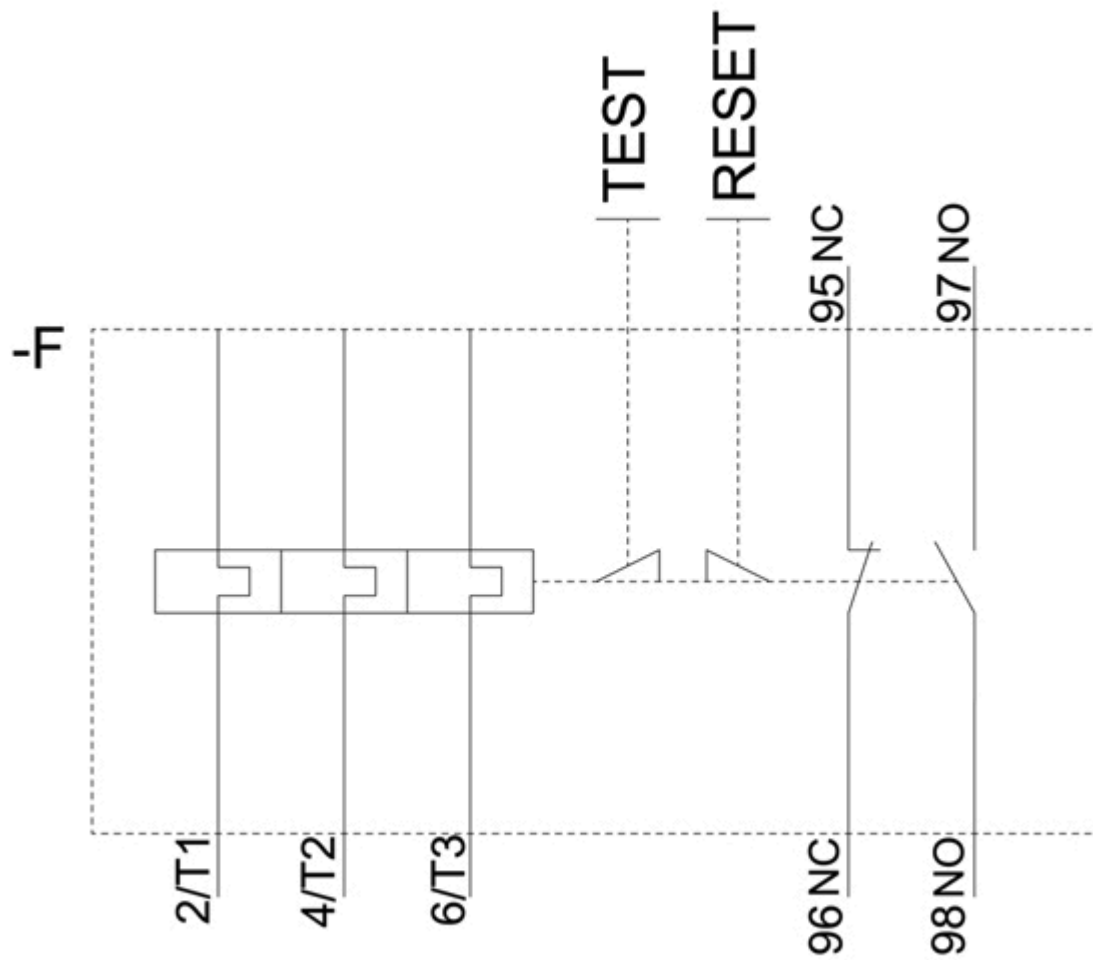
<https://support.industry.siemens.com/cs/ww/en/ps/3RB3016-2NB0/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB3016-2NB0&objecttype=14&gridview=view1>







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