



Overload relay 12.5...50 A Electronic For motor protection Size S2, Class 10E Contactor mounting Main circuit: Screw Auxiliary circuit: Screw Manual-Automatic-Reset

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| <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>  | S2   |
| <b>size of contactor can be combined company-specific</b>                                  | S2   |
| power loss [W] for rated value of the current at AC in hot operating state                 | 1.8 W  |
| • per pole   | 0.6 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": 8g / 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>   | 50 A   |
| <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  |
| <b>Substance Prohibitance (Date)</b>   | 15.10.2014   |
| <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>  |  |
| <b>number of poles for main current circuit</b>  | 3  |
| <b>adjustable current response value current of the current-dependent overload release</b> | 12.5 ... 50 A  |
| <b>operating voltage</b>   |  |

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| <ul style="list-style-type: none"> <li>rated value</li> </ul>   | 690 V  |
| <b>operating frequency rated value</b>  | 50 ... 60 Hz   |
| <b>operational current rated value</b>  | 50 A   |
| <b>operating power</b>  |  |
| <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>  | 7.5 ... 22 kW<br>11 ... 30 kW<br>11 ... 45 kW  |
| <b>Auxiliary circuit</b>  |  |
| <b>design of the auxiliary switch</b>   | integrated   |
| <b>number of NC contacts for auxiliary contacts</b>   | 1  |
| <ul style="list-style-type: none"> <li>note</li> </ul>  | for contactor disconnection  |
| <b>number of NO contacts for auxiliary contacts</b>   | 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> <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  |
| <b>operational current of auxiliary contacts at DC-13</b>   |  |
| <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>  |  |
| <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> <li>at 600 V rated value</li> </ul>  | 50 A<br>50 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> <li>with type of assignment 2 required</li> </ul> </li> <li>for short-circuit protection of the auxiliary switch required</li> </ul> | gG: 250 A<br>gG: 200 A<br>fuse gG: 6 A   |
| <b>Installation/ mounting/ dimensions</b>   |  |
| <b>mounting position</b>  | any  |
| <b>fastening method</b>   | Contacting mounting  |
| <b>height</b>   | 99 mm  |
| <b>width</b>  | 55 mm  |
| <b>depth</b>  | 104 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> <li>for auxiliary and control circuit</li> </ul>   | screw-type terminals<br>screw-type terminals   |
| <b>arrangement of electrical connectors for main current circuit</b>  | Top and bottom   |
| <b>type of connectable conductor cross-sections</b>   |  |
| <ul style="list-style-type: none"> <li>for main contacts               <ul style="list-style-type: none"> <li>solid</li> <li>stranded</li> <li>solid or stranded</li> </ul> </li> </ul>   | 1x (1 ... 50 mm <sup>2</sup> ), 2x (1 ... 35 mm <sup>2</sup> )<br>2x (10 ... 35 mm <sup>2</sup> ), 1x 50 mm <sup>2</sup><br>1x (1 ... 50 mm <sup>2</sup> ), 2x (1 ... 35 mm <sup>2</sup> ) |

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| <ul style="list-style-type: none"> <li>— finely stranded with core end processing</li> <li>• at AWG cables for main contacts</li> </ul>  | 1x (1 ... 35 mm <sup>2</sup> ), 2x (1 ... 25 mm <sup>2</sup> )<br>2x (18 ... 2), 1x (18 ... 1)   |
| <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 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>   | 3 ... 4.5 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>   | M6<br>M3   |

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| <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 |

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

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| <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> <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> <li>• due to high-frequency radiation acc. 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 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> |     |                                |
| General Product Approval       | EMC | For use in hazardous locations |



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| <b>Declaration of Conformity</b> | <b>Test Certificates</b> | <b>Marine / Shipping</b> |
|----------------------------------|--------------------------|--------------------------|



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



|                          |              |
|--------------------------|--------------|
| <b>Marine / Shipping</b> | <b>other</b> |
|--------------------------|--------------|



[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=3RB3036-1UB0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB3036-1UB0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3036-1UB0>

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

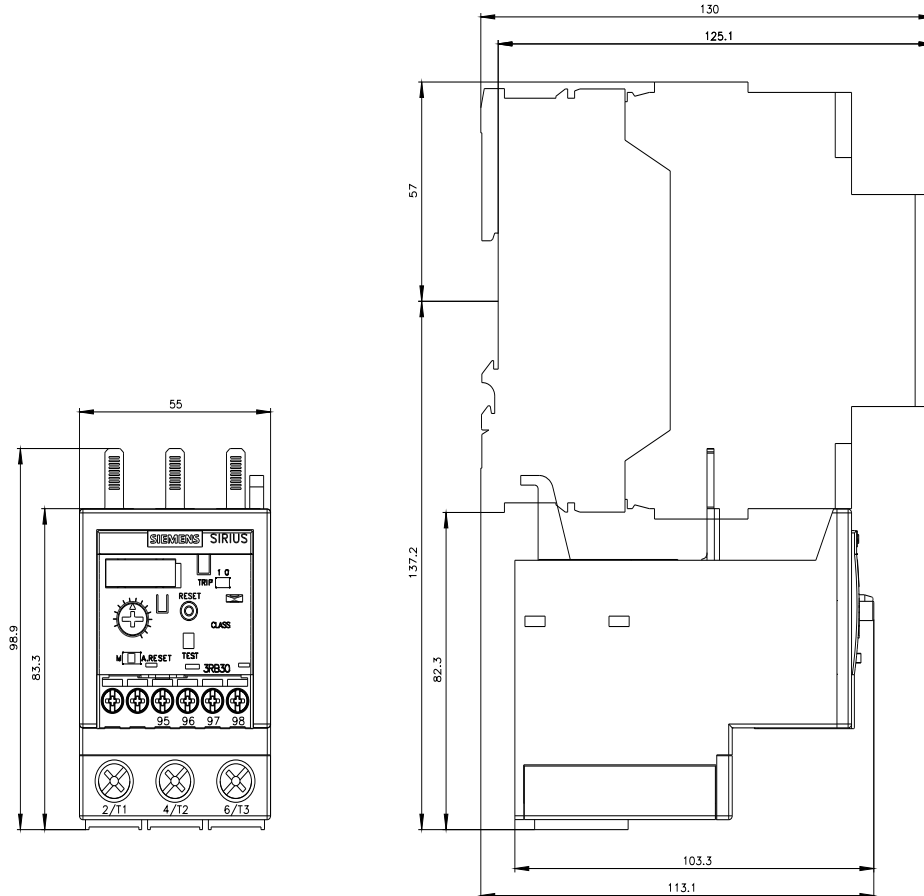
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RB3036-1UB0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3036-1UB0&lang=en)

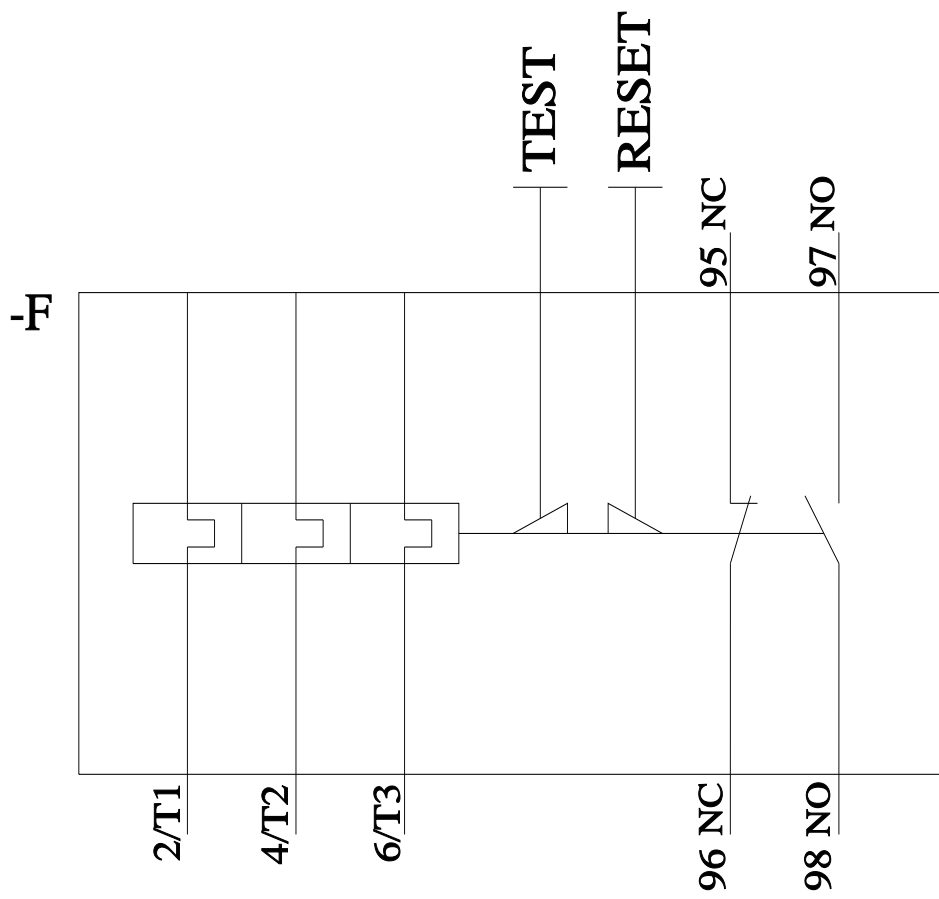
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3036-1UB0/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB3036-1UB0&objecttype=14&gridview=view1>





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