

Overload relay 32...115 A Electronic For motor protection Size S3,  
Class 10E 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>  | S3                         |
| <b>Size of contactor can be combined company-specific</b>                      | S3                         |
| <b>Power loss [W] for rated value of the current</b>                           |                            |
| • at AC in hot operating state   | 4.6 W                      |
| • at AC in hot operating state per pole  | 1.53 W                     |
| <b>Insulation voltage with degree of pollution 3 at AC rated value</b>         | 1 000 V                    |
| <b>Surge voltage resistance rated value</b>                                    | 8 kV                       |
| <b>maximum permissible voltage for safe isolation</b>                          |                            |
| • in networks with grounded star point between auxiliary and auxiliary circuit | 300 V                      |
| • in networks with grounded star point between auxiliary and auxiliary circuit | 300 V                      |
| • in networks with grounded star point between main and auxiliary circuit      | 600 V                      |

|   |  |
|---|--|
| <ul style="list-style-type: none"> <li>in networks with grounded star point between main and auxiliary circuit</li> </ul> | 690 V  |
| <b>Protection class IP</b>  |  |
| <ul style="list-style-type: none"> <li>on the front</li> </ul>  | IP20   |
| <ul style="list-style-type: none"> <li>of the terminal</li> </ul>   | IP00   |
| <b>Shock resistance</b>   | 8g / 11 ms   |
| <ul style="list-style-type: none"> <li>acc. to IEC 60068-2-27</li> </ul>  | 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>  | 115 A  |
| <b>Recovery time</b>  |  |
| <ul style="list-style-type: none"> <li>after overload trip with automatic reset typical</li> </ul>                        | 3 min  |
| <ul style="list-style-type: none"> <li>after overload trip with remote-reset</li> </ul>                                   | 0 min  |
| <ul style="list-style-type: none"> <li>after overload trip with manual reset</li> </ul>                                   | 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 DIN EN 81346-2</b>  | F  |

#### Ambient conditions

|  |                |
|--|----------------|
| <b>Installation altitude at height above sea level</b>             |                |
| <ul style="list-style-type: none"> <li>maximum</li> </ul>          | 2 000 m        |
| <b>Ambient temperature</b>   |                |
| <ul style="list-style-type: none"> <li>during operation</li> </ul> | -25 ... +60 °C |
| <ul style="list-style-type: none"> <li>during storage</li> </ul>   | -40 ... +80 °C |
| <ul style="list-style-type: none"> <li>during transport</li> </ul> | -40 ... +80 °C |
| <b>Temperature compensation</b>                                    | -25 ... +60 °C |
| Relative humidity during operation                                 | 10 ... 95 %    |

#### Main circuit

|  |                |
|--|----------------|
| <b>Number of poles for main current circuit</b>  | 3              |
| <b>Adjustable pick-up value current of the current-dependent overload release</b>          | 32 ... 115 A   |
| <b>Operating voltage</b>   |                |
| <ul style="list-style-type: none"> <li>rated value</li> </ul>                              | 1 000 V        |
| <ul style="list-style-type: none"> <li>at AC-3 rated value maximum</li> </ul>              | 1 000 V        |
| <b>Operating frequency rated value</b>   | 50 ... 60 Hz   |
| <b>Operating current rated value</b>   | 115 A          |
| <b>Operating power</b>   |                |
| <ul style="list-style-type: none"> <li>for three-phase motors at 400 V at 50 Hz</li> </ul> | 18.5 ... 55 kW |
| <ul style="list-style-type: none"> <li>for AC motors at 500 V at 50 Hz</li> </ul>          | 22 ... 75 kW   |
| <ul style="list-style-type: none"> <li>for AC motors at 690 V at 50 Hz</li> </ul>          | 30 ... 90 kW   |

#### Auxiliary circuit

|   |                             |
|---|-----------------------------|
| <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"       |
| <b>Number of CO contacts</b>                            |                             |
| • for auxiliary contacts                                | 0                           |
| <b>Operating 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>Operating 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                      |

#### Protective and monitoring functions

|                                       |            |
|---------------------------------------|------------|
| <b>Trip class</b>                     | CLASS 10E  |
| <b>Design of the overload release</b> | electronic |

#### UL/CSA ratings

|   |             |
|---|-------------|
| <b>Full-load current (FLA) for three-phase AC motor</b>     |             |
| • at 480 V rated value                                      | 115 A       |
| • at 600 V rated value                                      | 115 A       |
| <b>Contact rating of auxiliary contacts according to UL</b> | B600 / R300 |

#### Short-circuit protection

|   |              |
|---|--------------|
| <b>Design of the fuse link</b>                                  |              |
| • for short-circuit protection of the main circuit              |              |
| — with type of coordination 1 required                          | gG: 315 A    |
| — with type of assignment 2 required                            | gG: 315 A    |
| • for short-circuit protection of the auxiliary switch required | fuse gG: 6 A |

#### Installation/ mounting/ dimensions

|                          |                     |
|--------------------------|---------------------|
| <b>Mounting position</b> | any                 |
| <b>Mounting type</b>     | Contacteur mounting |
| <b>Height</b>            | 106 mm              |
| <b>Width</b>             | 70 mm               |
| <b>Depth</b>             | 124 mm              |

## Connections/ Terminals

|   |   |
|---|---|
| <b>Product function</b> <ul style="list-style-type: none"> <li>removable terminal for auxiliary and control circuit</li> </ul>  | Yes   |
| <b>Type of electrical connection</b> <ul style="list-style-type: none"> <li>for main current circuit</li> <li>for auxiliary and control current 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>single or multi-stranded</li> <li>finely stranded with core end processing</li> </ul> </li> <li>at AWG conductors for main contacts</li> </ul> | 2x (2.5 ... 16 mm <sup>2</sup> )<br>2x 16 mm <sup>2</sup><br>1x (2,5 ... 70 mm <sup>2</sup> ), 2x (2,5 ... 50 mm <sup>2</sup> )<br>1x (2,5 ... 50 mm <sup>2</sup> ), 2x (2,5 ... 35 mm <sup>2</sup> )<br>1x (10 ... 2/0), 2x (10 ... 1/0) |
| <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>single or multi-stranded</li> <li>finely stranded with core end processing</li> </ul> </li> <li>at AWG conductors 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>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>  | 4.5 ... 6 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  |

## 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 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 |
|---|---|




|  |   |
|--|---|
| 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

|   |              |
|---|--------------|
| <b>Display version</b> <ul style="list-style-type: none"> <li>• for switching status</li> </ul> | Slide switch |
|---|--------------|

## Certificates/ approvals

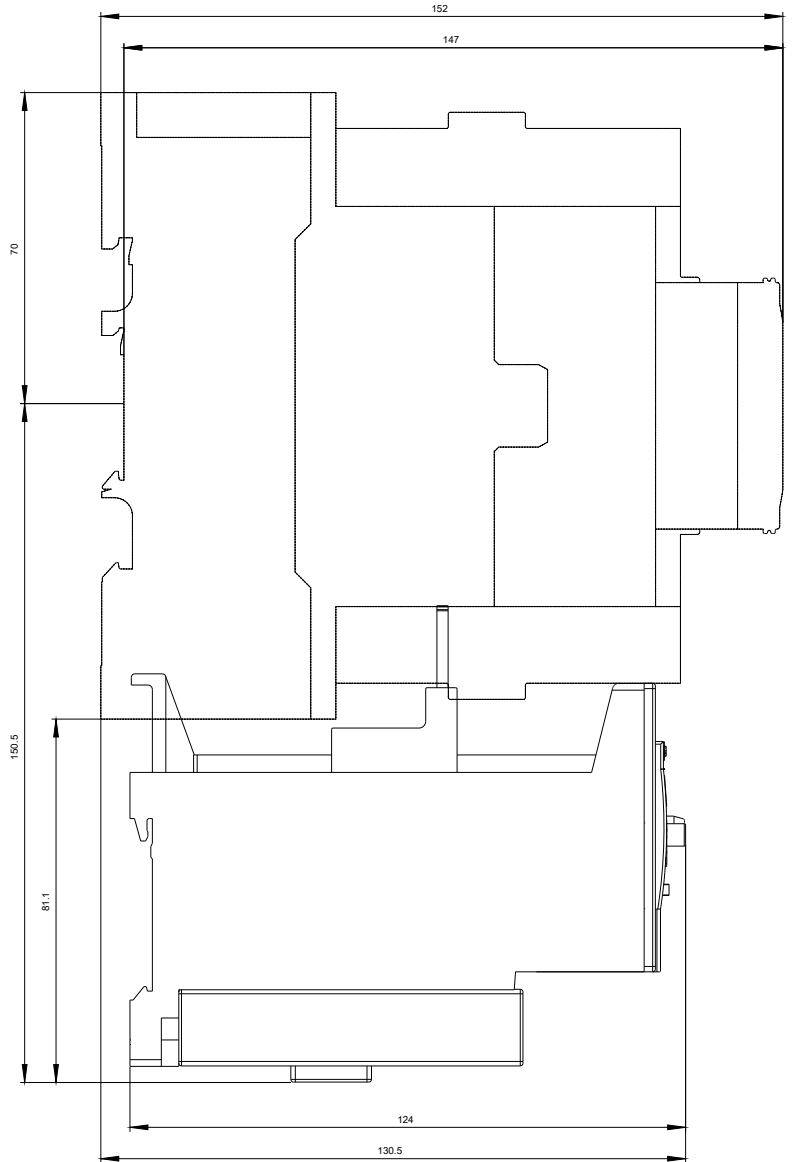
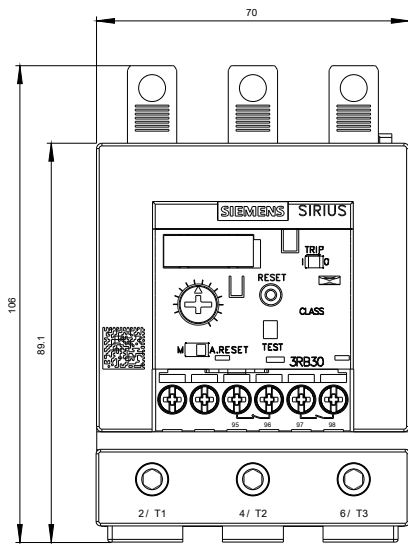
|   |  |   |
|---|--|---|
| <b>General Product Approval</b>   | <b>EMC</b>   | <b>For use in hazardous locations</b>   |
| <br>CCC    | <br>CSA | <br>UL |
|            |  |   |
| <br>RCM  |  |   |
| <br>ATEX |  |   |

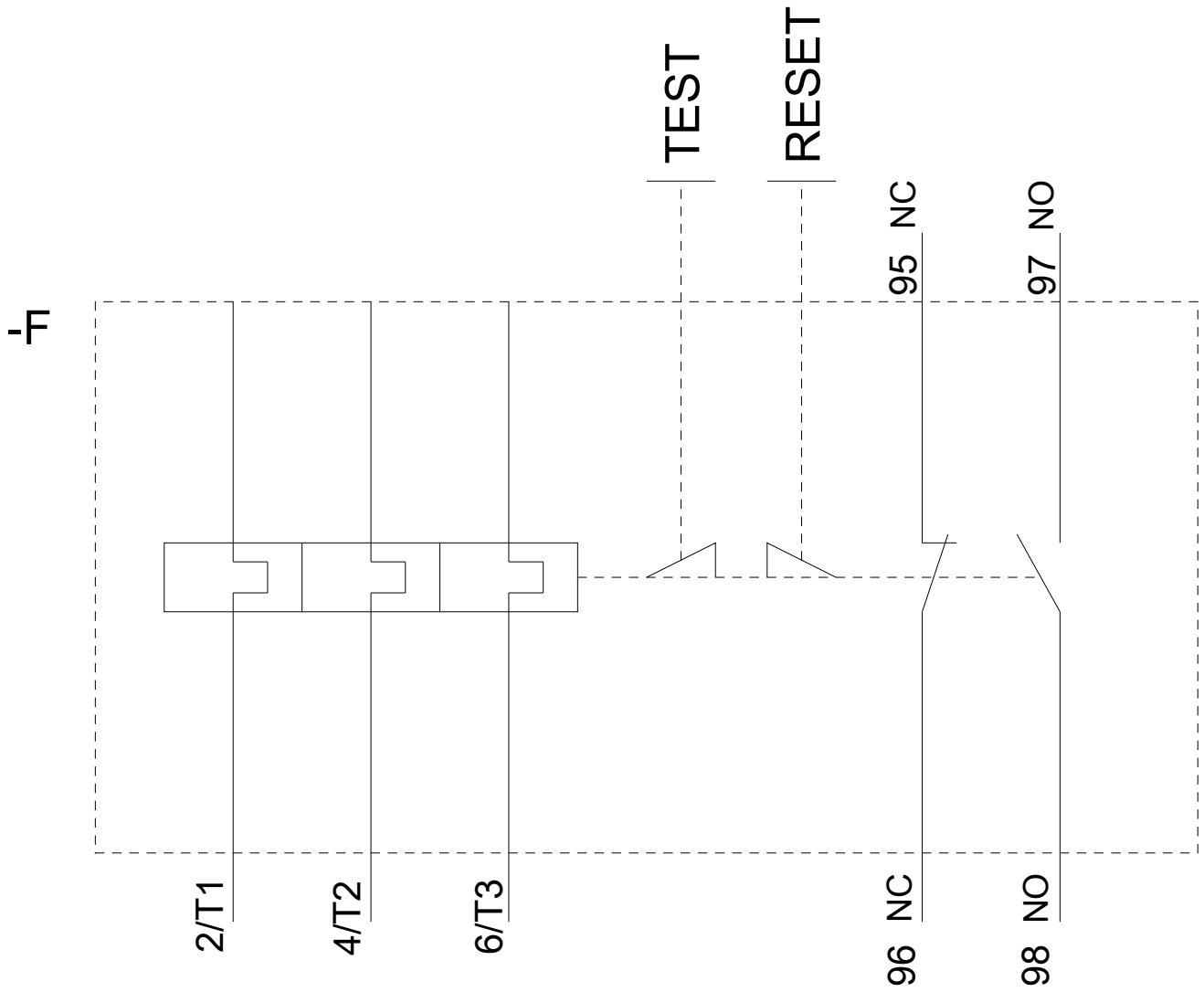
|   |   |   |
|---|---|---|
| <b>Declaration of Conformity</b>  | <b>Test Certificates</b>  | <b>Marine / Shipping</b>  |
| <br>EG-Konf. | <a href="#">Miscellaneous</a><br><a href="#">Type Test Certificates/Test Report</a><br><a href="#">Special Test Certificate</a> | <br>LRS <br>PRS |

|   |   |
|---|---|
| <b>Marine / Shipping</b>  | <b>other</b>  |
| <br>RINA | <br>DNVGL.COM/AF<br><a href="#">Confirmation</a> |

## 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=3RB3046-1XB0>
- Cax online generator**  
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB3046-1XB0>
- Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**  
<https://support.industry.siemens.com/cs/ww/en/ps/3RB3046-1XB0>
- Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**  
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RB3046-1XB0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3046-1XB0&lang=en)
- Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current**  
<https://support.industry.siemens.com/cs/ww/en/ps/3RB3046-1XB0/char>
- Further characteristics (e.g. electrical endurance, switching frequency)**  
<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB3046-1XB0&objecttype=14&gridview=view1>





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