



Overload relay 20...80 A Electronic For motor protection Size S2, Class 20E Stand-alone installation Main circuit: Straight-through transformer 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                                                           | S2                                                                                                                    |
| size of contactor can be combined company-specific                               | S2                                                                                                                    |
| power loss [W] for rated value of the current at AC in hot operating state       | 0.2 W                                                                                                                 |
| • per pole                                                                       | 0.07 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 ungrounded 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 ungrounded star point between main and auxiliary circuit      | 600 V                                                                                                                 |
| • in networks with grounded star point between main and auxiliary circuit        | 690 V                                                                                                                 |
| shock resistance                                                                 | 15g / 11 ms                                                                                                           |
| • according to IEC 60068-2-27                                                    | 15g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 8g / 11 ms                                              |
| vibration resistance                                                             | 1-6 Hz, 15 mm; 6-500 Hz, 20 m/s <sup>2</sup> ; 10 cycles                                                              |
| thermal current                                                                  | 80 A                                                                                                                  |
| recovery time after overload trip                                                |                                                                                                                       |
| • with automatic reset typical                                                   | 3 min                                                                                                                 |
| • with remote-reset                                                              | 0 min                                                                                                                 |
| • with manual reset                                                              | 0 min                                                                                                                 |
| reference code according to IEC 81346-2                                          | F                                                                                                                     |
| Substance Prohibition (Date)                                                     | 10/15/2014                                                                                                            |
| SVHC substance name                                                              | Lead - 7439-92-1<br>Lead monoxide (lead oxide) - 1317-36-8<br>6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol - 119-47-1 |
| Net Weight                                                                       | 0.294 kg                                                                                                              |
| <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                                                                                                                                                                                                                                                     | 20 ... 80 A                                        |
| operating voltage <ul style="list-style-type: none"> <li>rated value</li> <li>at AC-3e rated value maximum</li> </ul>                                                                                                                                                                                                                   | 690 V<br>690 V                                     |
| operating frequency rated value                                                                                                                                                                                                                                                                                                         | 50 ... 60 Hz                                       |
| operational current rated value                                                                                                                                                                                                                                                                                                         | 80 A                                               |
| operational current at AC-3e at 400 V rated value                                                                                                                                                                                                                                                                                       | 80 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>                                                                                                                                                | 11 ... 37 kW<br>15 ... 55 kW<br>18.5 ... 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>                                                                                                                                                                                       | 80 A<br>80 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 coordination 2 required</li> </ul> </li> <li>for short-circuit protection of the auxiliary switch required</li> </ul> | gG: 250 A, RK5: 300 A<br>gG: 250 A<br>fuse gG: 6 A |
| <b>Installation/ mounting/ dimensions</b>                                                                                                                                                                                                                                                                                               |                                                    |
| mounting position                                                                                                                                                                                                                                                                                                                       | any                                                |
| fastening method                                                                                                                                                                                                                                                                                                                        | stand-alone installation                           |
| height                                                                                                                                                                                                                                                                                                                                  | 81 mm                                              |
| width                                                                                                                                                                                                                                                                                                                                   | 55 mm                                              |
| depth                                                                                                                                                                                                                                                                                                                                   | 109 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> </ul>                                                                                                                                                                                                                                | straight-through transformers                      |

|                                                                      |                                                                      |
|----------------------------------------------------------------------|----------------------------------------------------------------------|
| • for auxiliary and control circuit                                  | 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       |                                                                      |
| • solid or stranded                                                  | 1x (1 ... 50 mm <sup>2</sup> ), 2x (1 ... 35 mm <sup>2</sup> )       |
| <b>type of connectable conductor cross-sections</b>                  |                                                                      |
| • for auxiliary contacts                                             |                                                                      |
| — solid                                                              | 1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )   |
| — solid or stranded                                                  | 1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )   |
| — finely stranded with core end processing                           | 1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> ) |
| • for AWG cables for auxiliary contacts                              | 1x (20 ... 14), 2x (20 ... 14)                                       |
| <b>tightening torque</b>                                             |                                                                      |
| • for auxiliary contacts with screw-type terminals                   | 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>                  |                                                                      |
| • of the auxiliary and control contacts                              | M3                                                                   |

|                                                                |                                                  |
|----------------------------------------------------------------|--------------------------------------------------|
| <b>Electrical Safety</b>                                       |                                                  |
| <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>                                 |                                                                             |
| • due to burst according to IEC 61000-4-4                     | 2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3 |
| • due to conductor-earth surge according to IEC 61000-4-5     | 2 kV (line to earth) corresponds to degree of severity 3                    |
| • due to conductor-conductor surge according to IEC 61000-4-5 | 1 kV (line to line) corresponds to degree of severity 3                     |
| • due to high-frequency radiation according to IEC 61000-4-6  | 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

|                    |                                 |
|--------------------|---------------------------------|
| <b>Environment</b> | <b>General Product Approval</b> |
|--------------------|---------------------------------|

[Environmental Confirmations](#)



|            |                                       |                          |                             |
|------------|---------------------------------------|--------------------------|-----------------------------|
| <b>EMV</b> | <b>For use in hazardous locations</b> | <b>Test Certificates</b> | <b>Maritime application</b> |
|------------|---------------------------------------|--------------------------|-----------------------------|



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



|                             |              |
|-----------------------------|--------------|
| <b>Maritime application</b> | <b>other</b> |
|-----------------------------|--------------|



[Confirmation](#)

#### Further information

Information on the packaging

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

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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=3RB3036-2WW1>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3036-2WW1>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RB3036-2WW1&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3036-2WW1&lang=en)

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB3036-2WW1>

Characteristic curves

[https://curves.simaris.siemens.com/curves/<mmp\\_prod\\_noCOMP='HAUPT'></mmp\\_prod\\_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP='HAUPT'></mmp_prod_no>)



