



Overload relay 50...200 A for motor protection Size S6, Class 20E Contactor mounting/stand-alone installation Main circuit: straight-through transformer Auxiliary circuit: Spring-type terminal Manual-Automatic-Reset

|  |  |
|--|--|
| product brand name   | SIRIUS   |
| product designation  | solid-state overload relay                                 |
| product type designation   | 3RB2   |
| <b>General technical data</b>  |  |
| size of overload relay   | S6   |
| size of contactor can be combined company-specific   | S6   |
| insulation voltage with degree of pollution 3 at AC rated value  | 1 000 V  |
| surge voltage resistance rated value   | 8 kV   |
| maximum permissible voltage for protective separation <ul style="list-style-type: none"> <li>in networks with ungrounded star point between auxiliary and auxiliary circuit</li> <li>in networks with grounded star point between auxiliary and auxiliary circuit</li> <li>in networks with ungrounded star point between main and auxiliary circuit</li> <li>in networks with grounded star point between main and auxiliary circuit</li> </ul> | 300 V<br>300 V<br>600 V<br>690 V                           |
| shock resistance <ul style="list-style-type: none"> <li>according to IEC 60068-2-27</li> </ul>   | 15g / 11 ms<br>15g / 11 ms                                 |
| vibration resistance   | 1-6 Hz, 15 mm; 6-500 Hz, 20 m/s <sup>2</sup> ; 10 cycles   |
| thermal current  | 200 A  |
| recovery time after overload trip <ul style="list-style-type: none"> <li>with automatic reset typical</li> <li>with remote-reset</li> <li>with manual reset</li> </ul>   | 3 min<br>0 min<br>0 min                                    |
| reference code according to IEC 81346-2  | F  |
| Substance Prohibition (Date)   | 07/01/2006   |
| SVHC substance name  | Lead - 7439-92-1<br>Lead monoxide (lead oxide) - 1317-36-8 |
| Weight   | 0.708 kg   |
| <b>Ambient conditions</b>  |  |
| installation altitude at height above sea level maximum  | 2 000 m  |
| ambient temperature <ul style="list-style-type: none"> <li>during operation</li> <li>during storage</li> <li>during transport</li> </ul>   | -25 ... +60 °C<br>-40 ... +80 °C<br>-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  | 50 ... 200 A   |

|   |   |
|---|---|
| <b>operating voltage</b>  |   |
| • rated value   | 1 000 V                                     |
| • at AC-3e rated value maximum  | 1 000 V                                     |
| <b>operating frequency rated value</b>  | 50 ... 60 Hz                                |
| <b>operational current rated value</b>  | 200 A                                       |
| operational current at AC-3e at 400 V rated value                             | 200 A                                       |
| <b>operating power</b>  |   |
| • for 3-phase motors at 400 V at 50 Hz  | 30 ... 90 kW                                |
| • for AC motors at 500 V at 50 Hz   | 30 ... 132 kW                               |
| • for AC motors at 690 V at 50 Hz   | 55 ... 160 kW                               |
| <b>Auxiliary circuit</b>  |   |
| <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"                       |
| number of CO contacts for auxiliary contacts                                  | 0   |
| <b>operational 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>operational 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                                      |
| <b>Protective and monitoring functions</b>                                    |   |
| <b>trip class</b>   | CLASS 20E                                   |
| <b>design of the overload release</b>   | electronic                                  |
| <b>UL/CSA ratings</b>   |   |
| <b>full-load current (FLA) for 3-phase AC motor</b>                           |   |
| • at 480 V rated value  | 200 A                                       |
| • at 600 V rated value  | 200 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>  |   |
| • for short-circuit protection of the main circuit                            |   |
| — with type of coordination 1 required  | gG: 355 A, Class L: 601 A                   |
| — with type of assignment 2 required  | gG: 315 A                                   |
| • for short-circuit protection of the auxiliary switch required               | fuse gG: 6 A                                |
| <b>Installation/ mounting/ dimensions</b>                                     |   |
| <b>mounting position</b>  | any   |
| <b>fastening method</b>   | Contactor mounting/stand-alone installation |
| <b>height</b>   | 119 mm                                      |
| <b>width</b>  | 120 mm                                      |
| <b>depth</b>  | 155 mm                                      |
| <b>Connections/ Terminals</b>   |   |
| <b>product component removable terminal for auxiliary and control circuit</b> | Yes   |
| <b>type of electrical connection</b>  |   |
| • for main current circuit  | straight-through transformers               |
| • for auxiliary and control circuit   | spring-loaded terminals                     |
| <b>arrangement of electrical connectors for main current circuit</b>          | Top and bottom                              |
| <b>type of connectable conductor cross-sections</b>                           |   |
| • for auxiliary contacts  |   |
| — solid   | 2x (0.25 ... 1.5 mm <sup>2</sup> )          |
| — solid or stranded   | 2x (0,25 ... 1,5 mm <sup>2</sup> )          |

|  |   |
|--|---|
| — finely stranded with core end processing                     | 2x (0.25 ... 1.5 mm <sup>2</sup> )  |
| — finely stranded without core end processing                  | 2x (0.25 ... 1.5 mm <sup>2</sup> )  |
| • for AWG cables for auxiliary contacts                        | 2x (24 ... 16)  |
| <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                            |
| <b>Communication/ Protocol</b>                                 |   |
| <b>type of voltage supply via input/output link master</b>     | No  |
| <b>Electromagnetic compatibility</b>                           |   |
| <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                                 |
| <b>Display</b>   |   |
| display version for switching status                           | Slide switch  |
| <b>Approvals Certificates</b>                                  |   |
| <b>General Product Approval</b>                                |   |



[Confirmation](#)



|     |                                |                   |                   |
|-----|--------------------------------|-------------------|-------------------|
| EMV | For use in hazardous locations | Test Certificates | Marine / Shipping |
|-----|--------------------------------|-------------------|-------------------|



[KC](#)



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



|                   |       |             |
|-------------------|-------|-------------|
| Marine / Shipping | other | Environment |
|-------------------|-------|-------------|



[Confirmation](#)

[Miscellaneous](#)

[Environmental Confirmations](#)

#### 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=3RB2056-2FX2>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB2056-2FX2>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RB2056-2FX2>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RB2056-2FX2&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB2056-2FX2&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RB2056-2FX2/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB2056-2FX2&objecttype=14&gridview=view1>



