



Overload relay 3...12 A Electronic For motor protection Size S00, Class 10E  
Contactor mounting Main circuit: Screw Auxiliary circuit: Screw Manual-Automatic-Reset

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|--|--|
| product brand name   | SIRIUS   |
| product designation  | solid-state overload relay   |
| product type designation   | 3RB3   |
| General technical data   |  |
| size of overload relay   | S00  |
| size of contactor can be combined company-specific   | S00  |
| power loss [W] for rated value of the current at AC in hot operating state                 | 0.6 W  |
| • per pole   | 0.2 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 grounded star point |  |
| • 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  |
| shock resistance   | 15g / 11 ms  |
| • according to IEC 60068-2-27  | 15g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 9g / 11 ms |
| thermal current  | 12 A   |
| reference code according to IEC 81346-2  | F  |
| Substance Prohibitance (Date)  | 10/01/2009   |
| SVHC substance name  | Lead monoxide (lead oxide) - 1317-36-8                                   |
| Ambient conditions   |  |
| 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 %  |
| Main circuit   |  |
| number of poles for main current circuit   | 3  |
| adjustable current response value current of the current-dependent overload release        | 3 ... 12 A   |
| operating voltage  |  |
| • rated value  | 690 V  |
| • at AC-3e rated value maximum   | 690 V  |
| operating frequency rated value  | 50 ... 60 Hz   |
| operational current rated value  | 12 A   |
| operational current at AC-3e at 400 V rated value  | 12 A   |

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| <b>operating power</b>  |   |
| • for 3-phase motors at 400 V at 50 Hz  | 1.5 ... 5.5 kW  |
| • for AC motors at 500 V at 50 Hz   | 1.5 ... 5.5 kW  |
| • for AC motors at 690 V at 50 Hz   | 2.2 ... 7.5 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 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>                           |   |
| • at 480 V rated value  | 12 A  |
| • at 600 V rated value  | 12 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: 50 A, RK5: 45 A   |
| — with type of assignment 2 required  | gG: 50 A, J: 45 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  |
| <b>height</b>   | 79 mm   |
| <b>width</b>  | 45 mm   |
| <b>depth</b>  | 73 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  | screw-type terminals  |
| • 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   | 1x (0.5 ... 4 mm²), 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 4 mm²) |
| • solid or stranded   | 1x (0.5 ... 4 mm²), 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 4 mm²) |
| • finely stranded with core end processing                                    | 1x (0.5 ... 2.5 mm²), 2x (0.5 ... 2.5 mm²)                    |
| <b>type of connectable conductor cross-sections</b>                           |   |
| • for auxiliary contacts  |   |
| — solid   | 1x (0.5 ... 4 mm²), 2x (0.5 ... 2.5 mm²)                      |
| — solid or stranded   | 1x (0.5 ... 4 mm²), 2x (0.5 ... 2.5 mm²)                      |
| — finely stranded with core end processing                                    | 1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²)                    |
| • for AWG cables for auxiliary contacts                                       | 1x (20 ... 14), 2x (20 ... 14)                                |

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| <b>tightening torque</b>                                       |   |
| • for main contacts with screw-type terminals                  | 0.8 ... 1.2 N·m   |
| • 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>            |   |
| • for main contacts  | M3  |
| • 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                            |
| <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](#)



| General Product Approval | EMV | For use in hazardous locations | Test Certificates |
|--------------------------|-----|--------------------------------|-------------------|
|--------------------------|-----|--------------------------------|-------------------|



[KC](#)



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

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



| other | Environment |
|-------|-------------|
|-------|-------------|

[Confirmation](#)

[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=3RB3016-1SB0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB3016-1SB0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3016-1SB0>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RB3016-1SB0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3016-1SB0&lang=en)

Characteristic: Tripping characteristics,  $I^2t$ , Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3016-1SB0/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB3016-1SB0&objecttype=14&gridview=view1>



