



Overload relay 5.5...8.0 A Thermal For motor protection Size S00, Class 10  
 Contactor mounting Main circuit: Screw Auxiliary circuit: Screw Manual-Automatic-Reset

|                                                                                  |                        |
|----------------------------------------------------------------------------------|------------------------|
| product brand name                                                               | SIRIUS                 |
| product designation                                                              | thermal overload relay |
| product type designation                                                         | 3RU2                   |
| <b>General technical data</b>                                                    |                        |
| 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       | 6.6 W                  |
| • per pole                                                                       | 2.2 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 ungrounded star point between auxiliary and auxiliary circuit | 440 V                  |
| • in networks with grounded star point between auxiliary and auxiliary circuit   | 440 V                  |
| • in networks with ungrounded star point between main and auxiliary circuit      | 440 V                  |
| • in networks with grounded star point between main and auxiliary circuit        | 440 V                  |
| shock resistance according to IEC 60068-2-27                                     | 8g / 11 ms             |
| reference code according to IEC 81346-2                                          | F                      |
| Substance Prohibitance (Date)                                                    | 10/01/2009             |
| SVHC substance name                                                              | Lead - 7439-92-1       |
| Weight                                                                           | 0.159 kg               |
| <b>Ambient conditions</b>                                                        |                        |
| installation altitude at height above sea level maximum                          | 2 000 m                |
| ambient temperature                                                              |                        |
| • during operation                                                               | -40 ... +70 °C         |
| • during storage                                                                 | -55 ... +80 °C         |
| • during transport                                                               | -55 ... +80 °C         |
| temperature compensation                                                         | -40 ... +60 °C         |
| relative humidity during operation                                               | 10 ... 95 %            |
| <b>Environmental footprint</b>                                                   |                        |
| Environmental Product Declaration (EPD)                                          | Yes                    |
| global warming potential [CO2 eq] total                                          | 39.9 kg                |
| global warming potential [CO2 eq] during manufacturing                           | 0.921 kg               |
| global warming potential [CO2 eq] during sales                                   | 0.039 kg               |
| global warming potential [CO2 eq] during operation                               | 39 kg                  |
| global warming potential [CO2 eq] after end of life                              | -0.015 kg              |
| <b>Main circuit</b>                                                              |                        |
| number of poles for main current circuit                                         | 3                      |

|                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                |
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| <b>adjustable current response value current of the current-dependent overload release</b>                                                                                                                                                                                                                                                                                                 | 5.5 ... 8 A                                                                                                                                                                                                                    |
| <b>operating voltage</b> <ul style="list-style-type: none"> <li>• rated value</li> <li>• at AC-3e rated value maximum</li> </ul>                                                                                                                                                                                                                                                           | 690 V<br>690 V                                                                                                                                                                                                                 |
| <b>operating frequency rated value</b>                                                                                                                                                                                                                                                                                                                                                     | 50 ... 60 Hz                                                                                                                                                                                                                   |
| <b>operational current rated value</b>                                                                                                                                                                                                                                                                                                                                                     | 8 A                                                                                                                                                                                                                            |
| operational current at AC-3e at 400 V rated value                                                                                                                                                                                                                                                                                                                                          | 8 A                                                                                                                                                                                                                            |
| <b>operating power</b> <ul style="list-style-type: none"> <li>• at AC-3 <ul style="list-style-type: none"> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> </ul> </li> <li>• at AC-3e <ul style="list-style-type: none"> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> </ul> </li> </ul> | 3 kW<br>4 kW<br>5.5 kW<br><br>3 kW<br>4 kW<br>5.5 kW                                                                                                                                                                           |
| <b>Auxiliary circuit</b>                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                |
| <b>design of the auxiliary switch</b>                                                                                                                                                                                                                                                                                                                                                      | integrated                                                                                                                                                                                                                     |
| <b>number of NC contacts for auxiliary contacts</b> <ul style="list-style-type: none"> <li>• note</li> </ul>                                                                                                                                                                                                                                                                               | 1<br>for contactor disconnection                                                                                                                                                                                               |
| <b>number of NO contacts for auxiliary contacts</b> <ul style="list-style-type: none"> <li>• note</li> </ul>                                                                                                                                                                                                                                                                               | 1<br>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> <li>• at 400 V</li> <li>• at 690 V</li> </ul>                                                                                                                                              | 3 A<br>3 A<br>3 A<br>3 A<br>2 A<br>1 A<br>0.75 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>0.3 A<br>0.22 A<br>0.22 A<br>0.11 A                                                                                                                                                                                     |
| <b>contact rating of auxiliary contacts according to UL</b>                                                                                                                                                                                                                                                                                                                                | B600 / R300                                                                                                                                                                                                                    |
| <b>Protective and monitoring functions</b>                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                |
| <b>trip class</b>                                                                                                                                                                                                                                                                                                                                                                          | CLASS 10                                                                                                                                                                                                                       |
| <b>design of the overload release</b>                                                                                                                                                                                                                                                                                                                                                      | thermal                                                                                                                                                                                                                        |
| <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>                                                                                                                                                                                                                               | 8 A<br>8 A                                                                                                                                                                                                                     |
| <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 auxiliary switch required</li> </ul>                                                                                                                                                                                                                                           | fuse gG: 6 A, quick: 10 A                                                                                                                                                                                                      |
| <b>Installation/ mounting/ dimensions</b>                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                |
| <b>mounting position</b>                                                                                                                                                                                                                                                                                                                                                                   | for mounting on contactors: with a vertical mounting plane +/-135° rotatable & +/- 22.5° tiltable, stand-alone installation: with a vertical mounting plane +/-135° rotatable and +/-45° tiltable; for more details see manual |
| <b>fastening method</b>                                                                                                                                                                                                                                                                                                                                                                    | Contactor mounting                                                                                                                                                                                                             |
| <b>height</b>                                                                                                                                                                                                                                                                                                                                                                              | 76 mm                                                                                                                                                                                                                          |
| <b>width</b>                                                                                                                                                                                                                                                                                                                                                                               | 45 mm                                                                                                                                                                                                                          |
| <b>depth</b>                                                                                                                                                                                                                                                                                                                                                                               | 70 mm                                                                                                                                                                                                                          |
| <b>Connections/ Terminals</b>                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                |
| <b>product component removable terminal for auxiliary and control circuit</b>                                                                                                                                                                                                                                                                                                              | No                                                                                                                                                                                                                             |
| <b>type of electrical connection</b> <ul style="list-style-type: none"> <li>• for main current circuit</li> </ul>                                                                                                                                                                                                                                                                          | screw-type terminals                                                                                                                                                                                                           |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                             |
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| • for auxiliary and control circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | screw-type terminals                                                                        |
| <b>arrangement of electrical connectors for main current circuit</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Top and bottom                                                                              |
| <b>type of connectable conductor cross-sections</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                             |
| • for main contacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                             |
| — solid or stranded                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup> |
| — finely stranded with core end processing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> )                       |
| • for AWG cables for main contacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2x (20 ... 16), 2x (18 ... 14), 2x 12                                                       |
| <b>type of connectable conductor cross-sections</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                             |
| • for auxiliary contacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                             |
| — solid or stranded                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> )                       |
| — finely stranded with core end processing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> )                       |
| • for AWG cables for auxiliary contacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2x (20 ... 16), 2x (18 ... 14)                                                              |
| <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 ... 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>Safety related data</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                             |
| <b>failure rate [FIT] with low demand rate according to SN 31920</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 50 FIT                                                                                      |
| <b>MTTF with high demand rate</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2 280 a                                                                                     |
| IEC 61508                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                             |
| <b>T1 value</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                             |
| • for proof test interval or service life according to IEC 61508                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 20 a                                                                                        |
| Electrical Safety                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                             |
| <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>Display</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                             |
| display version for switching status                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Slide switch                                                                                |
| <b>Approvals Certificates</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                             |
| General Product Approval                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                             |
| For use in hazardous locations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                             |
|       |                                                                                             |
| For use in hazardous locations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                             |
| Test Certificates                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                             |
| Maritime application                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                             |
|  <a href="#">Miscellaneous</a> <a href="#">Special Test Certificate</a> <a href="#">Type Test Certificates/Test Report</a>                                                                                                                                     |                                                                                             |
| Maritime application                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                             |
| other                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                             |
|      <a href="#">Miscellaneous</a>                                                         |                                                                                             |
| other                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                             |
| Railway                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                             |
| Environment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                             |



[Confirmation](#)

[Special Test Certificate](#)



[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=3RU2116-1HB0>

##### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2116-1HB0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1HB0>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RU2116-1HB0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2116-1HB0&lang=en)

##### Characteristic: Tripping characteristics, I<sub>t</sub>, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1HB0/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2116-1HB0&objecttype=14&gridview=view1>



