



overload relay 9.0...12.5 A thermal for motor protection frame size S00, Class 10  
for mounting on contactors main circuit: spring-loaded terminal auxiliary circuit:  
spring-loaded terminal 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       |
| Net Weight                                                                          | 172 g                  |
| <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>Main circuit</b>                                                                 |                        |
| number of poles for main current circuit                                            | 3                      |
| adjustable current response value current of the current-dependent overload release | 9 ... 12.5 A           |
| operating voltage                                                                   |                        |
| • rated value                                                                       | 690 V                  |
| • at AC-3e rated value maximum                                                      | 690 V                  |
| operating frequency rated value                                                     | 50 ... 60 Hz           |

|                                                                               |                                                                                                                                                                                                                                |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>operational current rated value</b>                                        | 12.5 A                                                                                                                                                                                                                         |
| operational current at AC-3e at 400 V rated value                             | 12.5 A                                                                                                                                                                                                                         |
| <b>operating power</b>                                                        |                                                                                                                                                                                                                                |
| • at AC-3                                                                     |                                                                                                                                                                                                                                |
| — at 400 V rated value                                                        | 5.5 kW                                                                                                                                                                                                                         |
| — at 500 V rated value                                                        | 7.5 kW                                                                                                                                                                                                                         |
| — at 690 V rated value                                                        | 7.5 kW                                                                                                                                                                                                                         |
| • at AC-3e                                                                    |                                                                                                                                                                                                                                |
| — at 400 V rated value                                                        | 5.5 kW                                                                                                                                                                                                                         |
| — at 500 V rated value                                                        | 7.5 kW                                                                                                                                                                                                                         |
| — at 690 V rated value                                                        | 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                                                                     | 3 A                                                                                                                                                                                                                            |
| • at 110 V                                                                    | 3 A                                                                                                                                                                                                                            |
| • at 120 V                                                                    | 3 A                                                                                                                                                                                                                            |
| • at 125 V                                                                    | 3 A                                                                                                                                                                                                                            |
| • at 230 V                                                                    | 2 A                                                                                                                                                                                                                            |
| • at 400 V                                                                    | 1 A                                                                                                                                                                                                                            |
| • at 690 V                                                                    | 0.75 A                                                                                                                                                                                                                         |
| <b>operational current of auxiliary contacts at DC-13</b>                     |                                                                                                                                                                                                                                |
| • at 24 V                                                                     | 2 A                                                                                                                                                                                                                            |
| • at 60 V                                                                     | 0.3 A                                                                                                                                                                                                                          |
| • at 110 V                                                                    | 0.22 A                                                                                                                                                                                                                         |
| • at 125 V                                                                    | 0.22 A                                                                                                                                                                                                                         |
| • at 220 V                                                                    | 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>                           |                                                                                                                                                                                                                                |
| • at 480 V rated value                                                        | 12.5 A                                                                                                                                                                                                                         |
| • at 600 V rated value                                                        | 12.5 A                                                                                                                                                                                                                         |
| <b>Short-circuit protection</b>                                               |                                                                                                                                                                                                                                |
| <b>design of the fuse link</b>                                                |                                                                                                                                                                                                                                |
| • for short-circuit protection of the auxiliary switch required               | 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>                                                                 | 87 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>                                          |                                                                                                                                                                                                                                |
| • for main current circuit                                                    | spring-loaded terminals                                                                                                                                                                                                        |
| • 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>                           |                                                                                                                                                                                                                                |

|                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• for main contacts <ul style="list-style-type: none"> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> <li>— finely stranded without core end processing</li> </ul> </li> <li>• for AWG cables for main contacts</li> </ul>                                                               | 1x (0,5 ... 4 mm <sup>2</sup> )<br>1x (0.5 ... 2.5 mm <sup>2</sup> )<br>1x (0.5 ... 2.5 mm <sup>2</sup> )<br>1x (20 ... 12)                                       |
| <b>type of connectable conductor cross-sections</b> <ul style="list-style-type: none"> <li>• for auxiliary contacts <ul style="list-style-type: none"> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> <li>— finely stranded without core end processing</li> </ul> </li> <li>• for AWG cables for auxiliary contacts</li> </ul> | 2x (0.5 ... 2.5 mm <sup>2</sup> )<br>2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )<br>2x (0.5 ... 1.5 mm <sup>2</sup> )<br>2x (20 ... 14) |
| <b>design of screwdriver shaft</b>                                                                                                                                                                                                                                                                                                                                | Diameter 3 mm                                                                                                                                                     |
| <b>size of the screwdriver tip</b>                                                                                                                                                                                                                                                                                                                                | 3,0 x 0,5 mm                                                                                                                                                      |
| <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> <ul style="list-style-type: none"> <li>• for proof test interval or service life according to IEC 61508</li> </ul>                                                                                                                                                                                                                                | 20 a                                                                                                                                                              |
| <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>Display</b>                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                   |
| display version for switching status                                                                                                                                                                                                                                                                                                                              | Slide switch                                                                                                                                                      |
| <b>Approvals Certificates</b>                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                   |
| <b>Environmental Product Declaration</b>                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                   |
| <ul style="list-style-type: none"> <li>• global warming potential [CO2 eq] / during manufacturing</li> <li>• global warming potential [CO2 eq] / during sales</li> <li>• global warming potential [CO2 eq] / during operation</li> <li>• global warming potential [CO2 eq] / after end of life</li> <li>• global warming potential [CO2 eq] / total</li> </ul>    | 1.01 kg<br>0.0438 kg<br>39 kg<br>0.0216 kg<br>40 kg                                                                                                               |
| <b>Environment</b>                                                                                                                                                                                                                                                                                                                                                | <b>General Product Approval</b>                                                                                                                                   |

[Environmental Confirmations](#)



|                                 |                                                    |                                          |
|---------------------------------|----------------------------------------------------|------------------------------------------|
| <b>General Product Approval</b> | <b>For use in hazardous locations</b>              | <b>Test Certificates</b>                 |
|                                 | <a href="#">Type Test Certificates/Test Report</a> | <a href="#">Special Test Certificate</a> |

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

|                             |                               |                                                                       |
|-----------------------------|-------------------------------|-----------------------------------------------------------------------|
| <b>Maritime application</b> | <b>other</b>                  | <b>Railway</b>                                                        |
|                             | <a href="#">Miscellaneous</a> | <a href="#">Confirmation</a> <a href="#">Special Test Certificate</a> |

## 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=3RU2116-1KC0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1KC0>

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

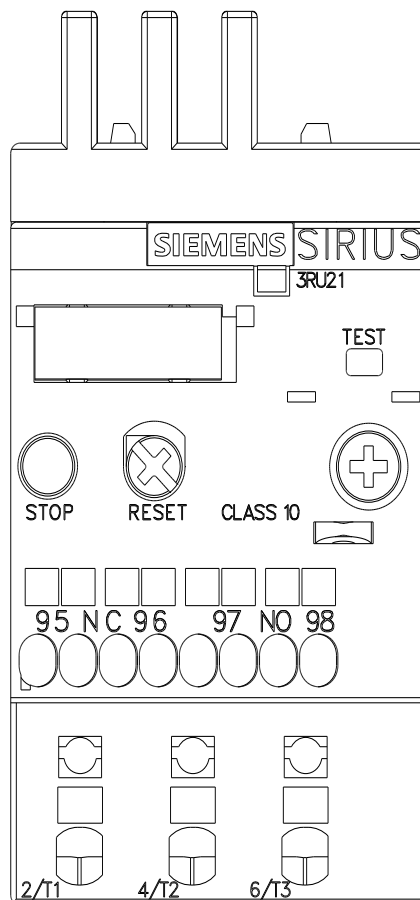
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RU2116-1KC0&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2116-1KC0&lang=en)

### Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2116-1KC0>

### 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>)



last modified:

6/1/2025