



Overload relay 2.2...3.2 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       | 5.7 W                  |
| • per pole   | 1.9 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   | 0.157 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              |

| Main circuit  |  |
|---|--|
| number of poles for main current circuit  | 3  |
| adjustable current response value current of the current-dependent overload release | 2.2 ... 3.2 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   | 3.2 A  |
| operational current at AC-3e at 400 V rated value                                   | 3.2 A  |
| operating power   |  |
| • at AC-3   |  |
| — at 400 V rated value  | 1.1 kW   |
| — at 500 V rated value  | 1.5 kW   |
| — at 690 V rated value  | 2.2 kW   |
| • at AC-3e  |  |
| — at 400 V rated value  | 1.1 kW   |
| — at 500 V rated value  | 1.5 kW   |
| — at 690 V rated value  | 2.2 kW   |
| Auxiliary circuit   |  |
| design of the auxiliary switch  | integrated   |
| number of NC contacts for auxiliary contacts  | 1  |
| • note  | for contactor disconnection  |
| number of NO contacts for auxiliary contacts  | 1  |
| • note  | for message "Tripped"  |
| number of CO contacts for auxiliary contacts  | 0  |
| operational current of auxiliary contacts at AC-15                                  |  |
| • 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   |
| operational current of auxiliary contacts at DC-13                                  |  |
| • 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   |
| contact rating of auxiliary contacts according to UL                                | B600 / R300  |
| Protective and monitoring functions   |  |
| trip class  | CLASS 10   |
| design of the overload release  | thermal  |
| UL/CSA ratings  |  |
| full-load current (FLA) for 3-phase AC motor  |  |
| • at 480 V rated value  | 3.2 A  |
| • at 600 V rated value  | 3.2 A  |
| Short-circuit protection  |  |
| design of the fuse link   |  |
| • for short-circuit protection of the auxiliary switch required                     | fuse gG: 6 A, quick: 10 A  |
| Installation/ mounting/ dimensions  |  |
| mounting position   | 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 |
| fastening method  | Contactor mounting   |
| height  | 76 mm  |
| width   | 45 mm  |
| depth   | 70 mm  |

| Connections/ Terminals  |   |
|---|---|
| product component removable terminal for auxiliary and control circuit  | No  |
| type of electrical connection <ul style="list-style-type: none"> <li>for main current circuit</li> <li>for auxiliary and control circuit</li> </ul>   | screw-type terminals<br>screw-type terminals  |
| arrangement of electrical connectors for main current circuit   | Top and bottom  |
| type of connectable conductor cross-sections <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> </ul> </li> <li>for AWG cables for main contacts</li> </ul>           | 2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ), 2x 4 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 (20 ... 16), 2x (18 ... 14), 2x 12 |
| type of connectable conductor cross-sections <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> </ul> </li> <li>for AWG cables for auxiliary contacts</li> </ul> | 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> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )<br>2x (20 ... 16), 2x (18 ... 14)                              |
| tightening torque <ul style="list-style-type: none"> <li>for main contacts with screw-type terminals</li> <li>for auxiliary contacts with screw-type terminals</li> </ul>   | 0.8 ... 1.2 N·m<br>0.8 ... 1.2 N·m  |
| design of screwdriver shaft   | Diameter 5 ... 6 mm   |
| size of the screwdriver tip   | Pozidriv PZ 2   |
| design of the thread of the connection screw <ul style="list-style-type: none"> <li>for main contacts</li> <li>of the auxiliary and control contacts</li> </ul>   | M3<br>M3  |

| Safety related data   |         |
|---|---------|
| failure rate [FIT] with low demand rate according to SN 31920   | 50 FIT  |
| MTTF with high demand rate  | 2 280 a |
| IEC 61508   |         |
| T1 value <ul style="list-style-type: none"> <li>for proof test interval or service life according to IEC 61508</li> </ul> | 20 a    |

| Electrical Safety                                       |  |
|---|--|
| protection class IP on the front according to IEC 60529 | IP20   |
| touch protection on the front according to IEC 60529    | finger-safe, for vertical contact from the front |

| Display                              |              |
|--------------------------------------|--------------|
| display version for switching status | Slide switch |

| Approvals Certificates   |  |
|--------------------------|--|
| General Product Approval |  |



| For use in hazardous locations | Test Certificates | Maritime application                               |
|--------------------------------|-------------------|--|
| <br>IECEX                      | <br>ATEX          | <a href="#">Special Test Certificate</a>           |
|                                |                   | <a href="#">Type Test Certificates/Test Report</a> |
|                                |                   | <br>ABS  |
|                                |                   | <br>BUREAU VERITAS                                 |

| Maritime application | other                        |
|----------------------|------------------------------|
| <br>DNV              | <a href="#">Confirmation</a> |
| <br>LRS              |                              |
| <br>PRS              |                              |
| <br>RINA             |                              |
| <br>RMRS             |                              |

| other                         | Railway                                  | Environment   |
|-------------------------------|--|---|
| <a href="#">Miscellaneous</a> | <a href="#">Special Test Certificate</a> |  |
|                               |  | <a href="#">Environmental Confirmations</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=3RU2116-1DB0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1DB0>

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

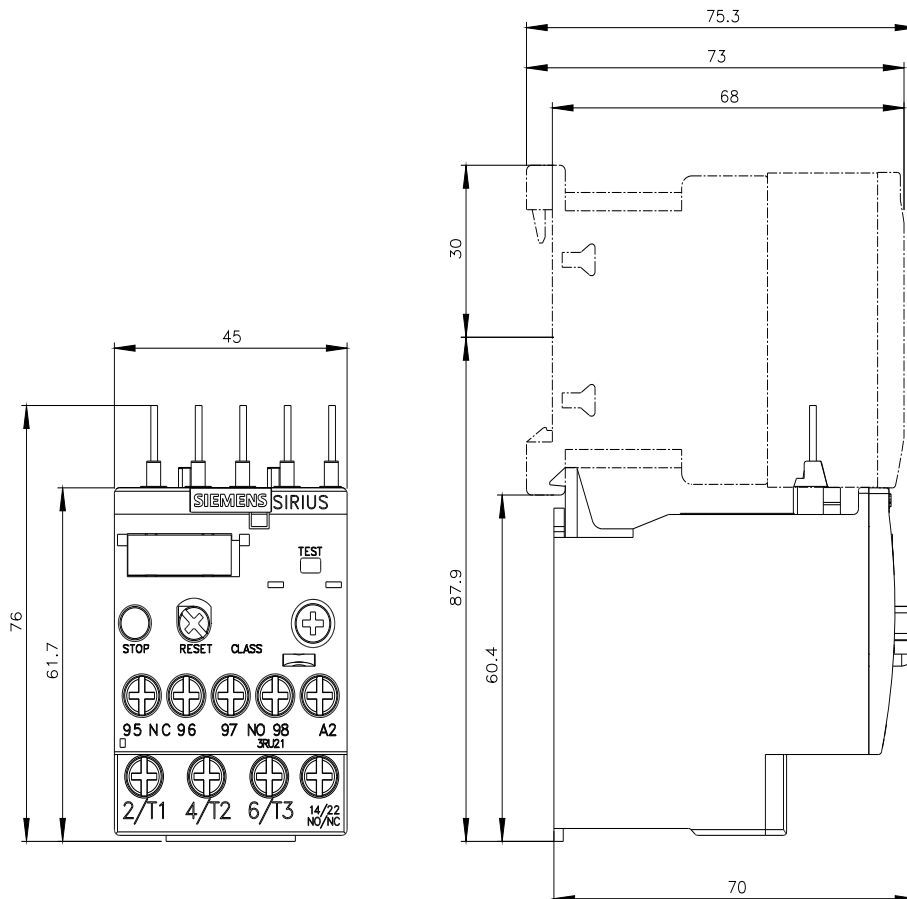
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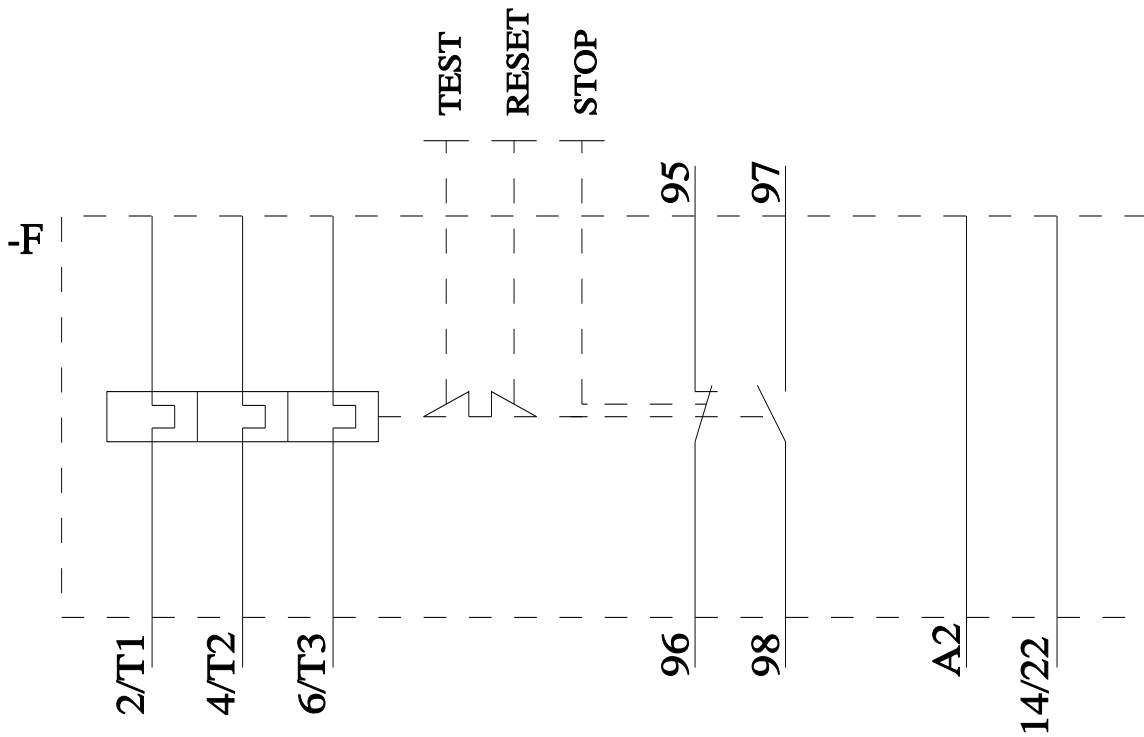
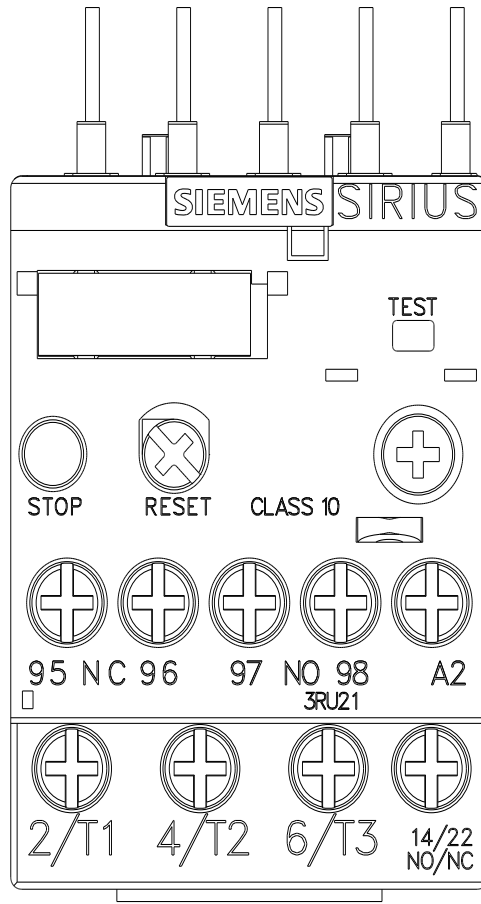
##### Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2116-1DB0>

##### Characteristic curves

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





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