



Overload relay 4.5...6.3 A Thermal For motor protection Size S00, Class 10 Stand-alone installation Main circuit: Screw Auxiliary circuit: Screw Manual-Automatic-Reset

|  |                        |
|--|------------------------|
| <b>product brand name</b>  | SIRIUS                 |
| <b>product designation</b>   | thermal overload relay |
| <b>product type designation</b>  | 3RU2                   |
| <b>General technical data</b>  |                        |
| <b>size of overload relay</b>  | S00                    |
| <b>size of contactor can be combined company-specific</b>                        | 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                  |
| <b>surge voltage resistance rated value</b>                                      | 6 kV                   |
| <b>maximum permissible voltage for protective separation</b>                     |                        |
| • 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                  |
| <b>shock resistance according to IEC 60068-2-27</b>                              | 8g / 11 ms             |
| <b>reference code according to IEC 81346-2</b>                                   | F                      |
| <b>Substance Prohibitance (Date)</b>   | 10/01/2009             |
| <b>SVHC substance name</b>   | Lead - 7439-92-1       |
| <b>Weight</b>  | 0.193 kg               |
| <b>Ambient conditions</b>  |                        |
| installation altitude at height above sea level maximum                          | 2 000 m                |
| <b>ambient temperature</b>   |                        |
| • during operation   | -40 ... +70 °C         |
| • during storage   | -55 ... +80 °C         |
| • during transport   | -55 ... +80 °C         |
| <b>temperature compensation</b>  | -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                           | 0.978 kg               |
| global warming potential [CO2 eq] during sales                                   | 0.043 kg               |
| global warming potential [CO2 eq] during operation                               | 39 kg                  |
| global warming potential [CO2 eq] after end of life                              | -0.045 kg              |
| <b>Main circuit</b>  |                        |
| <b>number of poles for main current circuit</b>                                  | 3                      |

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| <b>adjustable current response value current of the current-dependent overload release</b> | 4.5 ... 6.3 A   |
| <b>operating voltage</b>   |   |
| • rated value  | 690 V   |
| • at AC-3e rated value maximum   | 690 V   |
| <b>operating frequency rated value</b>   | 50 ... 60 Hz  |
| <b>operational current rated value</b>   | 6.3 A   |
| operational current at AC-3e at 400 V rated value  | 6.3 A   |
| <b>operating power</b>   |   |
| • at AC-3  |   |
| — at 400 V rated value   | 2.2 kW  |
| — at 500 V rated value   | 3 kW  |
| — at 690 V rated value   | 4 kW  |
| • at AC-3e   |   |
| — at 400 V rated value   | 2.2 kW  |
| — at 500 V rated value   | 3 kW  |
| — at 690 V rated value   | 4 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   | 6.3 A   |
| • at 600 V rated value   | 6.3 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>   | stand-alone installation: with a vertical mounting plane +/-135° rotatable and +/-45° tiltable; for more details see manual |
| <b>fastening method</b>  | stand-alone installation  |
| <b>height</b>  | 89 mm   |
| <b>width</b>   | 45 mm   |
| <b>depth</b>   | 80 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   | screw-type terminals  |

|  |   |
|--|---|
| <ul style="list-style-type: none"> <li>for auxiliary and control circuit</li> </ul>  | screw-type 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> </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 |
| <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> </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)                              |
| <b>tightening torque</b> <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  |
| <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> <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

|  |         |
|--|---------|
| <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    |

### 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 |

### Display

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

### Approvals Certificates

#### General Product Approval



#### For use in hazardous locations



[Miscellaneous](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



#### Maritime application



#### other

Railway

Environment



## 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=3RU2116-1GB1>

## Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2116-1GB1>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1GB1>

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

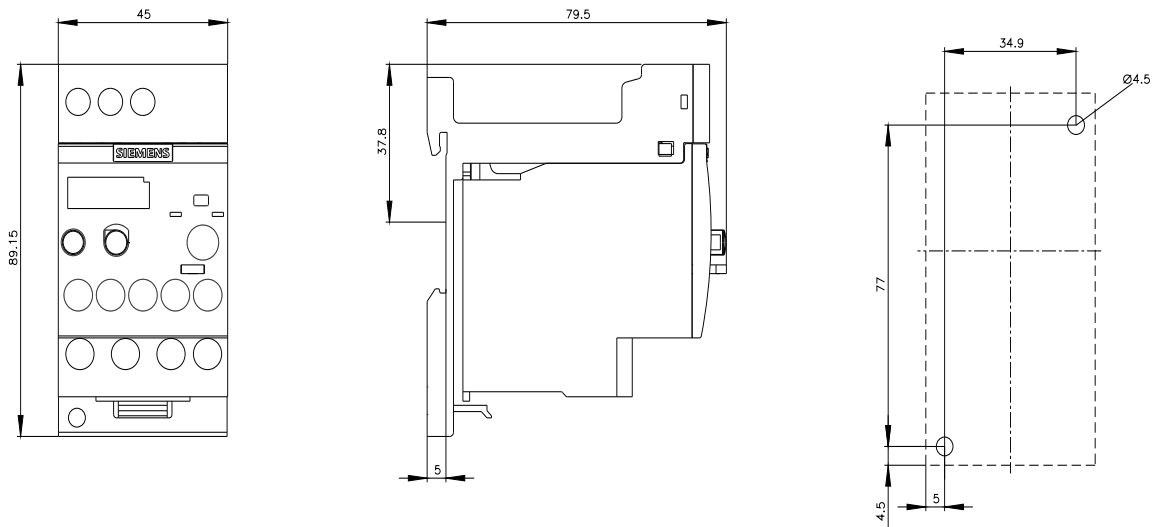
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RU2116-1GB1&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2116-1GB1&lang=en)

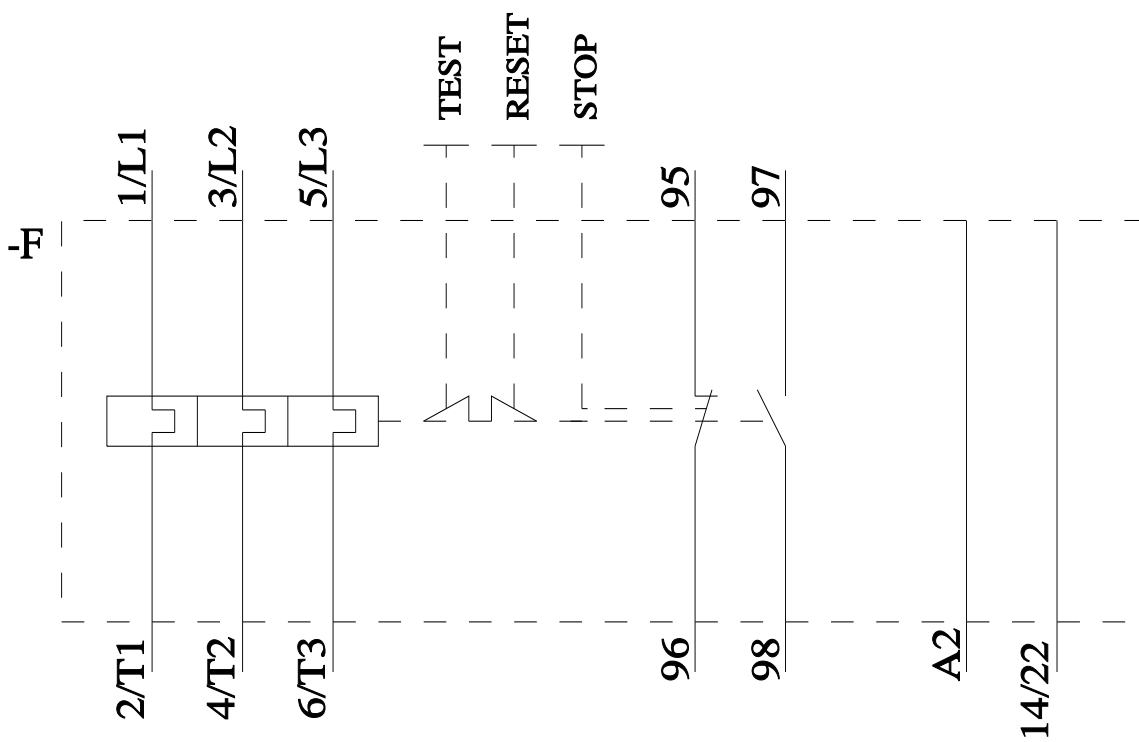
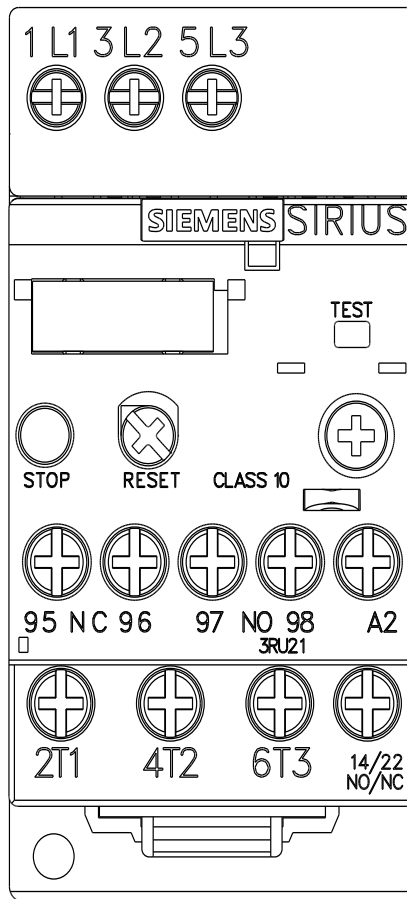
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1GB1/char>

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

<https://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2116-1GB1&objecttype=14&gridview=view1>





last modified:

6/1/2025