



overload relay 2.2...3.2 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

|  |                        |
|--|------------------------|
| <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       | 5.7 W                  |
| • per pole   | 1.9 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>  | 0.172 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  | 40 kg                  |
| global warming potential [CO2 eq] during manufacturing                           | 1.01 kg                |
| global warming potential [CO2 eq] during sales                                   | 0.044 kg               |
| global warming potential [CO2 eq] during operation                               | 39 kg                  |
| global warming potential [CO2 eq] after end of life                              | 0.022 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> | 2.2 ... 3.2 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>   | 3.2 A  |
| operational current at AC-3e at 400 V rated value  | 3.2 A  |
| <b>operating power</b>   |  |
| • 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   |
| <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   | 3.2 A  |
| • at 600 V rated value   | 3.2 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>                  |   |
| • for main contacts  |   |
| — solid or stranded  | 1x (0,5 ... 4 mm <sup>2</sup> )                                       |
| — finely stranded with core end processing                           | 1x (0.5 ... 2.5 mm <sup>2</sup> )                                     |
| — finely stranded without core end processing                        | 1x (0.5 ... 2.5 mm <sup>2</sup> )                                     |
| • for AWG cables for main contacts                                   | 1x (20 ... 12)  |
| <b>type of connectable conductor cross-sections</b>                  |   |
| • for auxiliary contacts   |   |
| — solid or stranded  | 2x (0.5 ... 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> ) |
| — finely stranded without core end processing                        | 2x (0.5 ... 1.5 mm <sup>2</sup> )                                     |
| • for AWG cables for auxiliary contacts                              | 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  |

**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>  |         |
| • 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 |

**Display**

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

**Approvals Certificates**

**General Product Approval**



**For use in hazardous locations**      **Test Certificates**      **Maritime application**



[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



**Maritime application**



**other**      **Railway**      **Environment**

[Miscellaneous](#)



[Confirmation](#)

[Special Test Certificate](#)



[Environmental Confirmations](#)

**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=3RU2116-1DC0>

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2116-1DC0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1DC0>

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

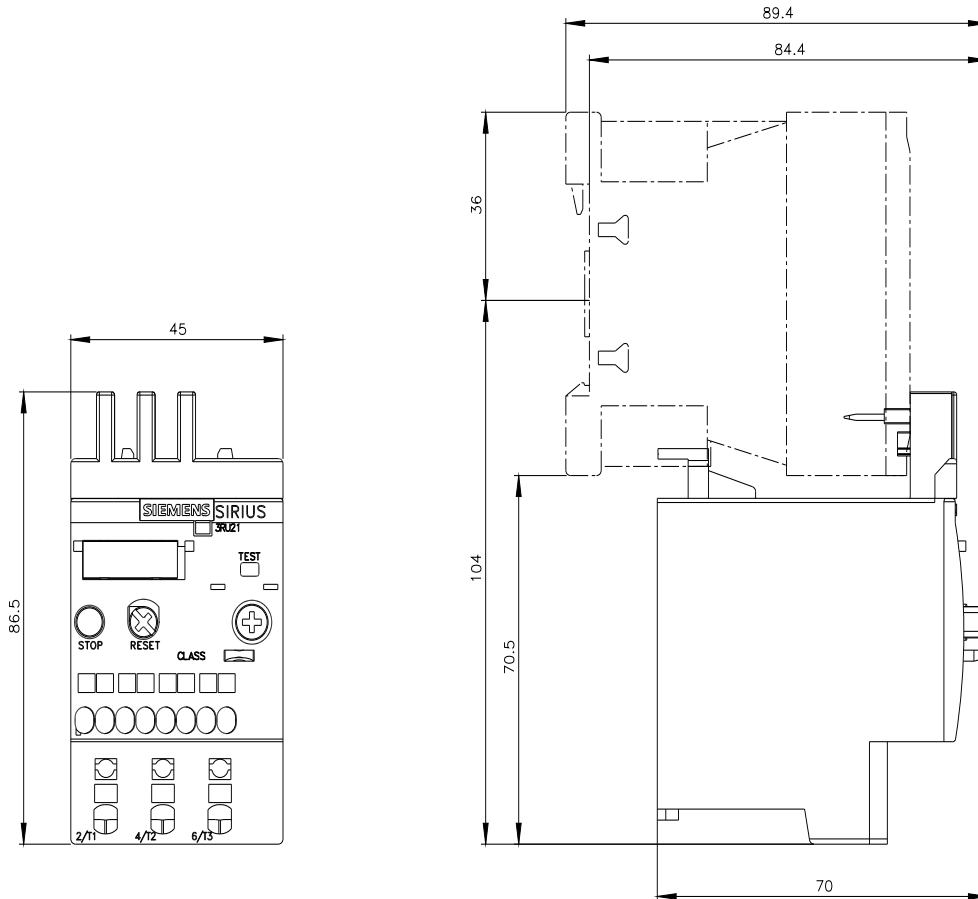
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RU2116-1DC0&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2116-1DC0&lang=en)

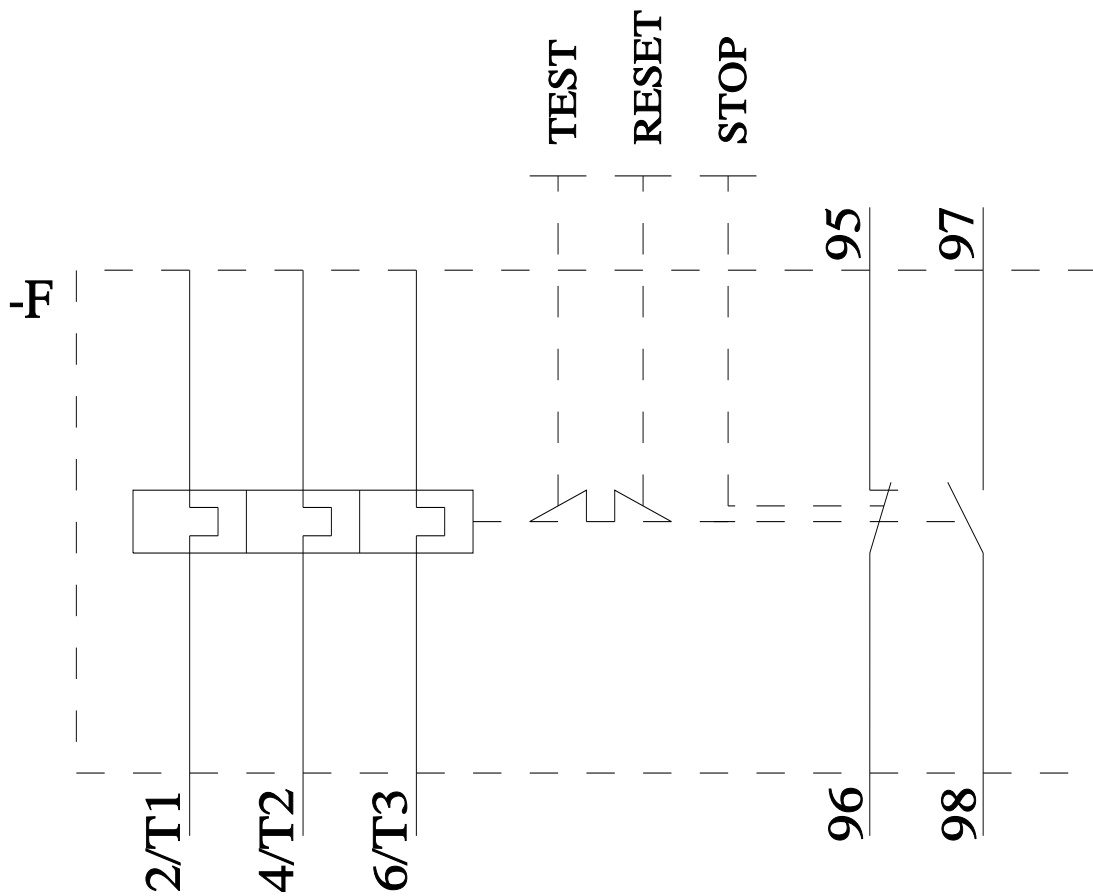
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1DC0/char>

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

<https://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2116-1DC0&objecttype=14&gridview=view1>





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