



Overload relay 9.0...12.5 A Thermal For motor protection Size S00, Class 10 Contactor mounting 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 safe isolation in networks with grounded star point</b> |                        |
| • between auxiliary and auxiliary circuit  | 440 V                  |
| • between auxiliary and auxiliary circuit  | 440 V                  |
| • between main and auxiliary circuit   | 440 V                  |
| • between main and auxiliary circuit   | 440 V                  |
| shock resistance acc. to IEC 60068-2-27  | 8g / 11 ms             |
| <b>type of protection according to ATEX directive 2014/34/EU</b>                           | Ex II (2) GD           |
| certificate of suitability according to ATEX directive 2014/34/EU                          | DMT 98 ATEX G 001      |
| <b>reference code acc. to IEC 81346-2</b>  | F                      |
| <b>Substance Prohibitance (Date)</b>   | 01.10.2009 00:00:00    |
| <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>Main circuit</b>  |                        |
| <b>number of poles for main current circuit</b>  | 3                      |
| <b>adjustable current response value current of the current-dependent overload release</b> | 9 ... 12.5 A           |
| <b>operating voltage</b>   |                        |
| • rated value  | 690 V                  |
| • at AC-3 rated value maximum  | 690 V                  |
| <b>operating frequency rated value</b>   | 50 ... 60 Hz           |

|   |   |
|---|---|
| <b>operational current rated value</b>  | 12.5 A  |
| operating power 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  |
| <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   |
| <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>  | any   |
| <b>fastening method</b>   | Contacteur 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>  |   |
| • for main current circuit  | screw-type terminals  |
| • 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> )                       |
| • at 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> )                       |

|   |                                    |
|---|------------------------------------|
| <ul style="list-style-type: none"> <li>at AWG cables for auxiliary contacts</li> </ul>  | 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   |  |
|---|--|
| failure rate [FIT] with low demand rate acc. to SN 31920                  | 50 FIT   |
| <b>MTTF with high demand rate</b>   | 2 280 y  |
| <b>T1 value for proof test interval or service life acc. to IEC 61508</b> | 20 y   |
| <b>protection class IP on the front acc. to IEC 60529</b>                 | IP20   |
| <b>touch protection on the front acc. to IEC 60529</b>                    | finger-safe, for vertical contact from the front |

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

| Certificates/ approvals  |                                |
|--------------------------|--------------------------------|
| General Product Approval | For use in hazardous locations |



| Declaration of Conformity | Test Certificates | Marine / Shipping |
|---------------------------|-------------------|-------------------|
|---------------------------|-------------------|-------------------|



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



| Marine / Shipping | other | Railway |
|-------------------|-------|---------|
|-------------------|-------|---------|



[Confirmation](#)

[Vibration and Shock](#)

### Further information

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=3RU2116-1KB0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2116-1KB0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1KB0>

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

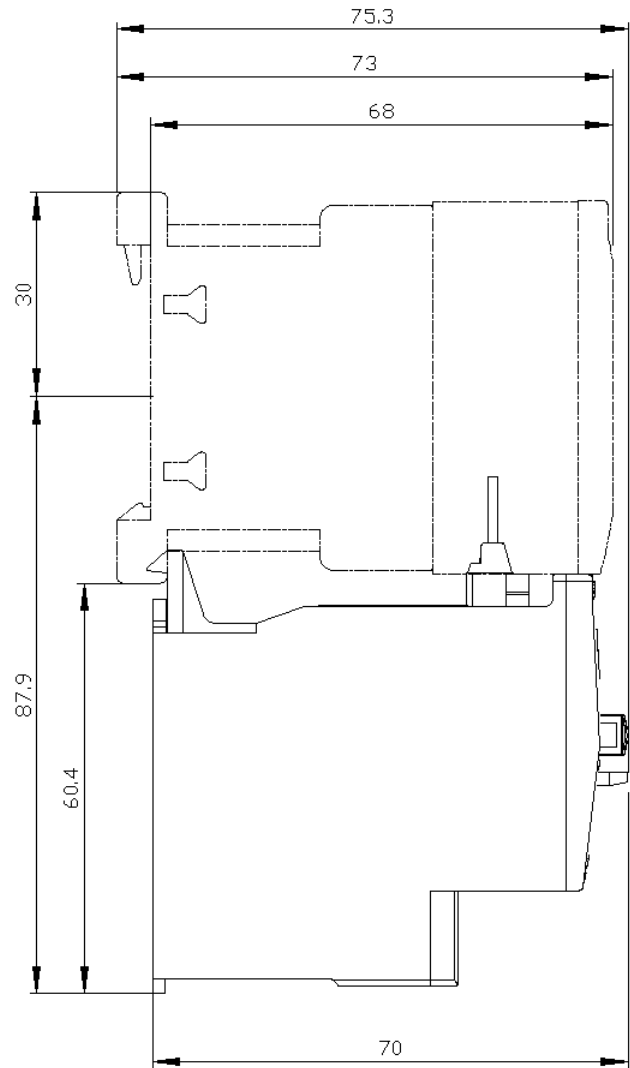
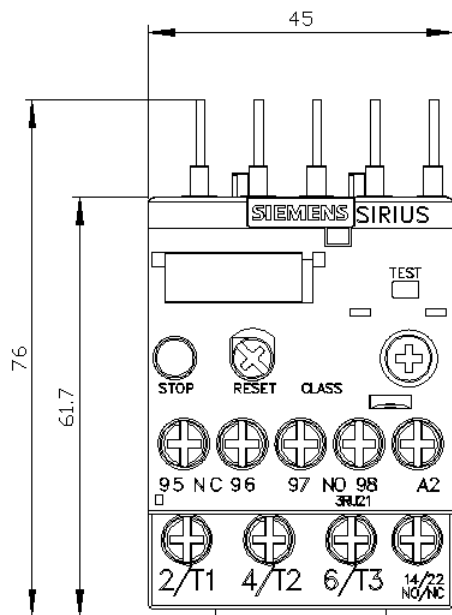
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RU2116-1KB0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2116-1KB0&lang=en)

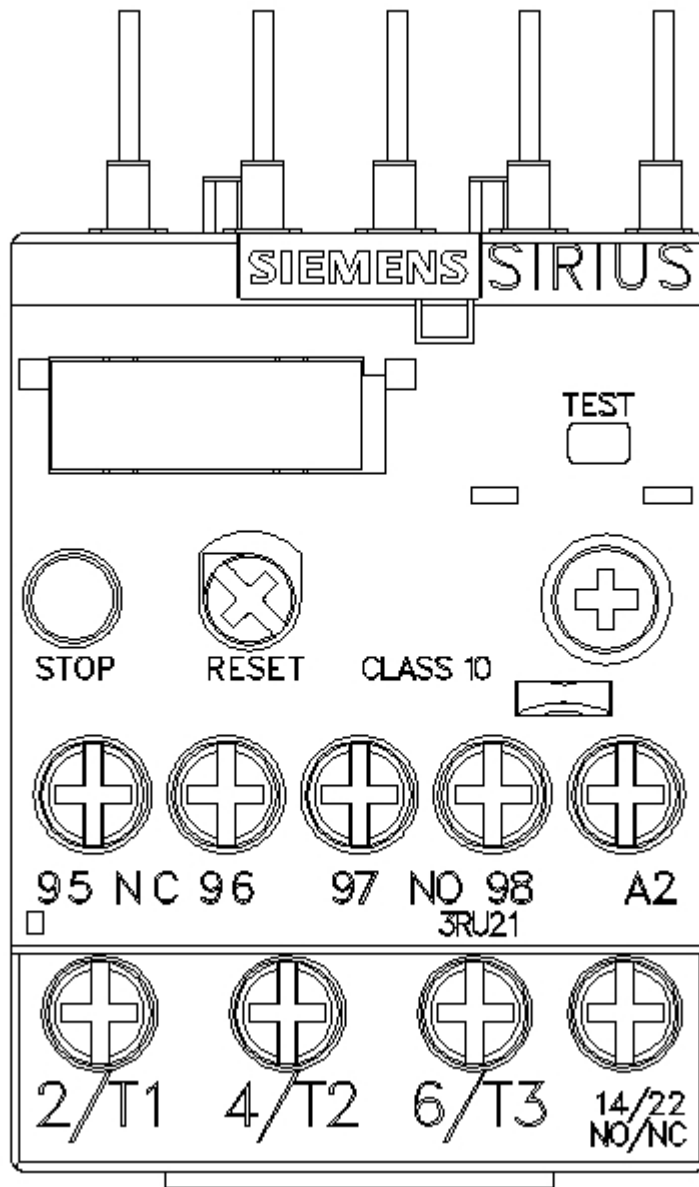
Characteristic: Tripping characteristics, I<sub>t</sub>, Let-through current

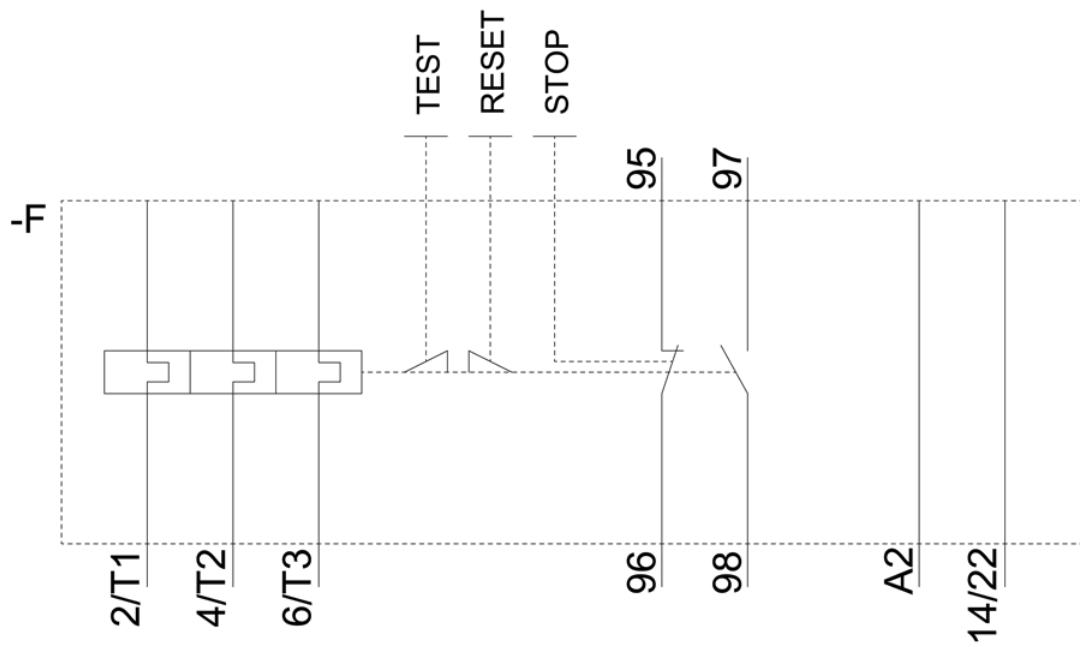
<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1KB0/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2116-1KB0&objecttype=14&gridview=view1>







last modified:

12/15/2020 