



Overload relay 2.8...4.0 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                 | 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 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> | 2.8 ... 4 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>                                        | 4 A                                                   |
| operating power at AC-3                                                       |                                                       |
| • at 400 V rated value                                                        | 1.5 kW                                                |
| • at 500 V rated value                                                        | 2.2 kW                                                |
| • at 690 V rated value                                                        | 3 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                                                        | 4 A                                                   |
| • at 600 V rated value                                                        | 4 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>                                                       | 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                                  |
| • 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 mm²), 2x (0,75 ... 2,5 mm²), 2x 4 mm² |
| — finely stranded with core end processing                                    | 2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²)           |
| • 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 mm²), 2x (0,75 ... 2,5 mm²)           |
| — finely stranded with core end processing                                    | 2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²)           |

|                                                     |                                |
|-----------------------------------------------------|--------------------------------|
| • at AWG cables for auxiliary contacts              | 2x (20 ... 16), 2x (18 ... 14) |
| <b>tightening torque</b>                            |                                |
| • for main contacts with screw-type terminals       | 0.8 ... 1.2 N·m                |
| • for auxiliary contacts with screw-type terminals  | 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> |                                |
| • for main contacts                                 | M3                             |
| • of the auxiliary and control contacts             | 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=3RU2116-1EB1>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2116-1EB1>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1EB1>

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

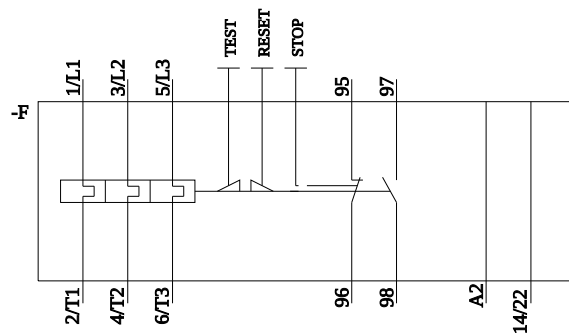
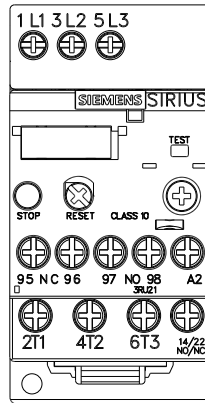
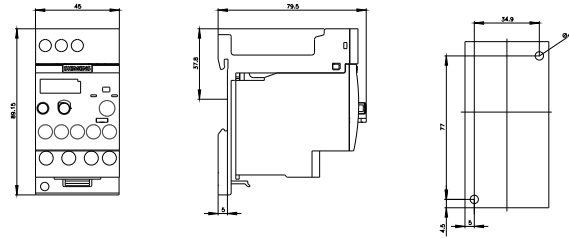
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RU2116-1EB1&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2116-1EB1&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1EB1/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2116-1EB1&objecttype=14&gridview=view1>



last modified:

10/27/2021 