



Overload relay 2.2...3.2 A Thermal For motor protection Size S00, Class 10  
 Contactor mounting Main circuit: Spring-type terminal Auxiliary circuit: spring-type terminal 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 grounded star point |                        |
| • 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 according to IEC 60068-2-27                                               | 8g / 11 ms             |
| type of protection according to ATEX directive 2014/34/EU                                  | Ex II (2) GD           |
| certificate of suitability according to ATEX directive 2014/34/EU                          | DMT 98 ATEX G 001      |
| reference code according to IEC 81346-2                                                    | F                      |
| Substance Prohibitance (Date)                                                              | 10/01/2009             |
| <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>Main circuit</b>                                                                        |                        |
| 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                                                                            |                        |

|                                                                                                                                                                                                                                                                                                                                                                     |                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• at AC-3 <ul style="list-style-type: none"> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> </ul> </li> <li>• at AC-3e <ul style="list-style-type: none"> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> </ul> </li> </ul> | 1.1 kW<br>1.5 kW<br>2.2 kW<br><br>1.1 kW<br>1.5 kW<br>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>                                                                                                                                                                                                                                                                                                                                            | any                                                                |
| <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 <ul style="list-style-type: none"> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> <li>— finely stranded without core end processing</li> </ul>                                                                                                                                                                | 1x (0,5 ... 4 mm²)<br>1x (0.5 ... 2.5 mm²)<br>1x (0.5 ... 2.5 mm²) |
| • for AWG cables for main contacts                                                                                                                                                                                                                                                                                                                                  | 1x (20 ... 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> <li>— finely stranded without core end processing</li> </ul> </li> <li>• for AWG cables for auxiliary contacts</li> </ul> | 2x (0.5 ... 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 (0.5 ... 1.5 mm <sup>2</sup> )<br>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                                                     |                                                  |
|-------------------------------------------------------------------------|--------------------------------------------------|
| failure rate [FIT] with low demand rate according to SN 31920           | 50 FIT                                           |
| <b>MTTF with high demand rate</b>                                       | 2 280 a                                          |
| T1 value for proof test interval or service life according to IEC 61508 | 20 a                                             |
| <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 |

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

[Confirmation](#)



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



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



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



[Confirmation](#)

| other | Railway |
|-------|---------|
|-------|---------|



[Vibration and Shock](#)

| Further information |
|---------------------|
|---------------------|

Siemens has decided to exit the Russian market (see here).

<https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business>

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

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

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

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

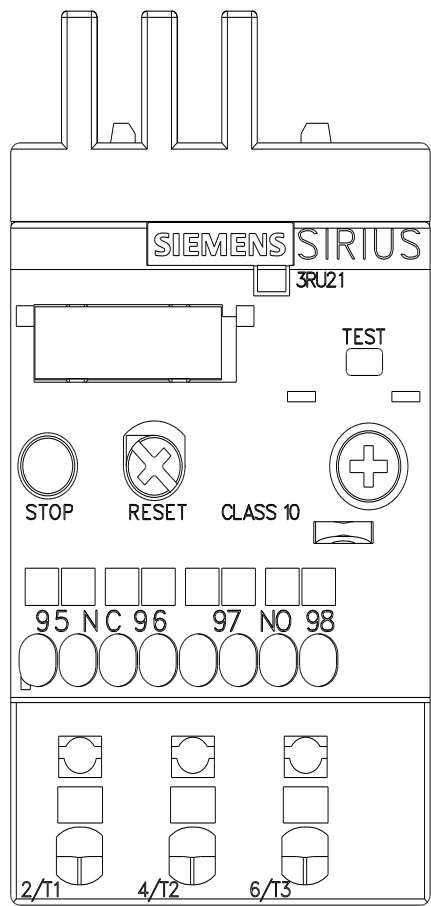
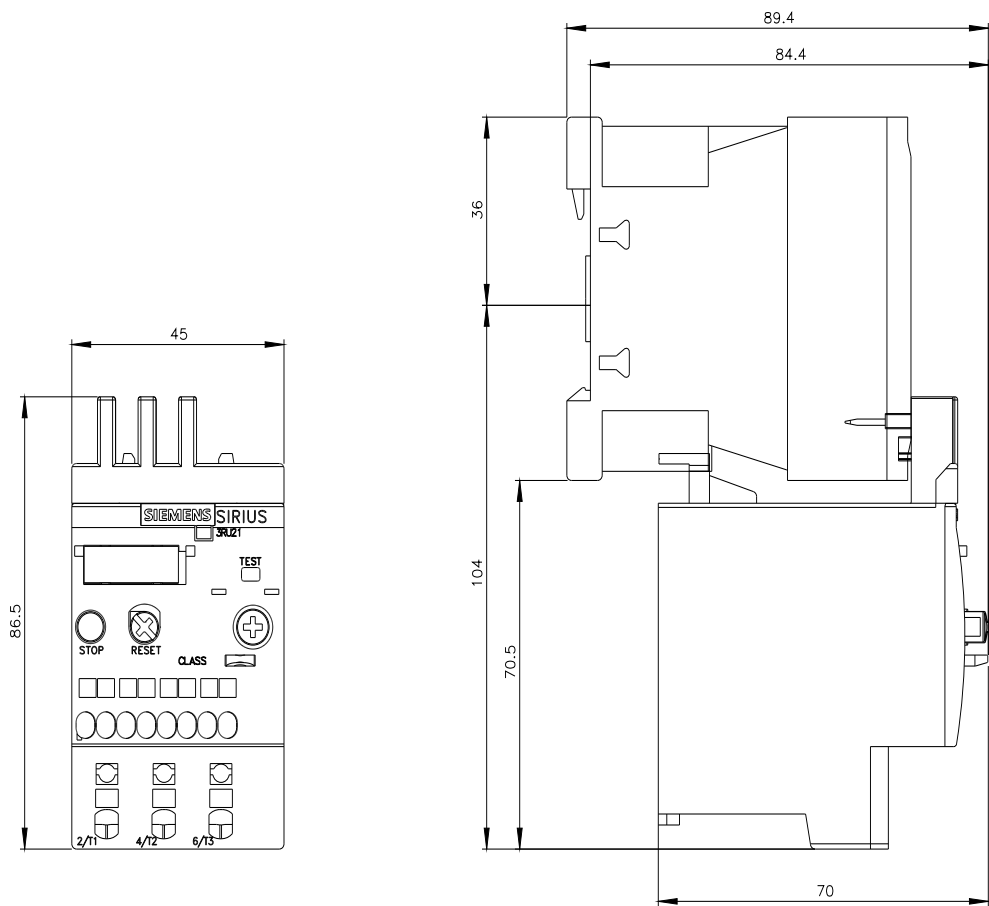
<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1DC0>

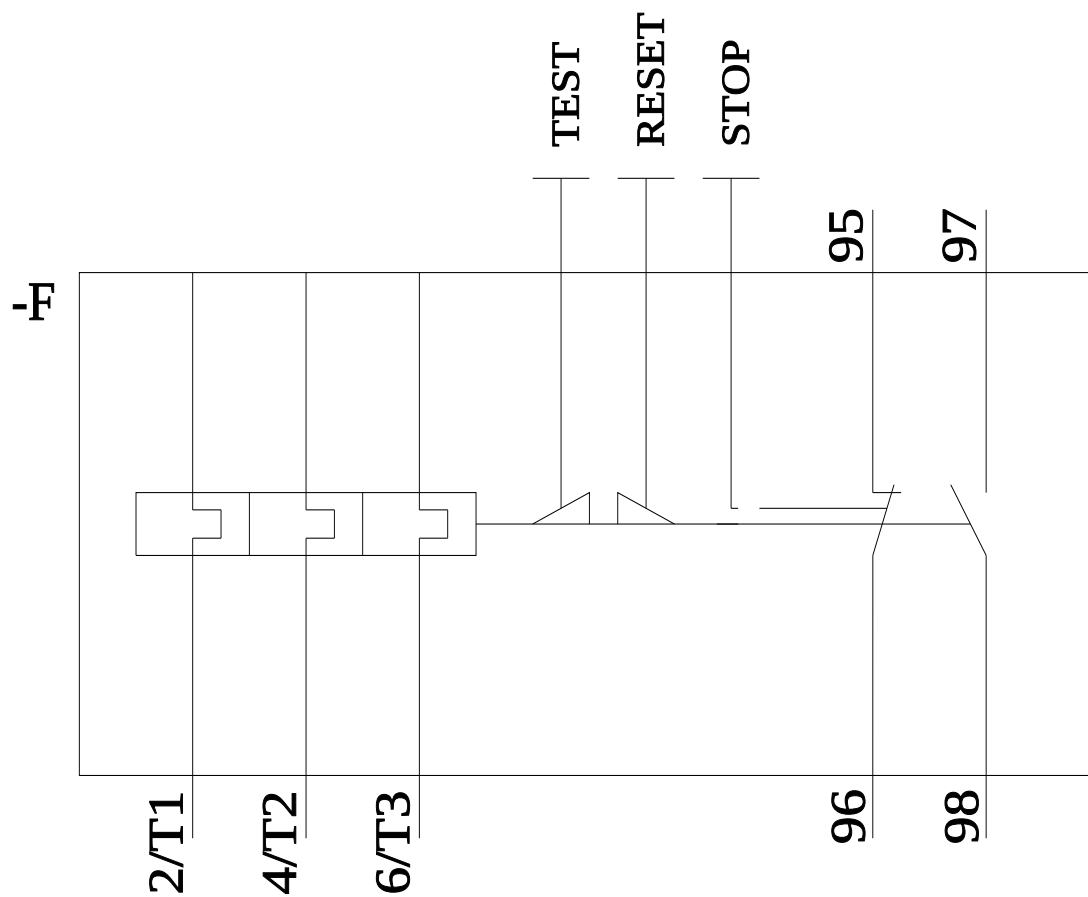
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

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





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3/8/2022 [↗](#)