

Overload relay 2.2...3.2 A Thermal For motor protection Size S00, Class 10  
 Contactor mounting Main circuit: Screw Auxiliary circuit: Screw Manual-Automatic-  
 Reset Reusable packaging Pack = 64 units

|                                                                                            |                        |
|--------------------------------------------------------------------------------------------|------------------------|
| <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                  |
| <b>type of calculation of power loss current-dependent</b>                                 | quadratic              |
| 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 (day/month/year)</b>                                             | 10/01/2009             |
| <b>SVHC substance name</b>                                                                 | Lead CAS-No. 7439-92-1 |
| <b>Net Weight</b>                                                                          | 0.13 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>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> | 2.2 ... 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 |

#### Auxiliary circuit

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

#### Protective and monitoring functions

|                                       |          |
|---------------------------------------|----------|
| <b>trip class</b>                     | CLASS 10 |
| <b>design of the overload release</b> | thermal  |

#### UL/CSA ratings

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

#### Short-circuit protection

|                                                                 |                           |
|-----------------------------------------------------------------|---------------------------|
| <b>design of the fuse link</b>                                  |                           |
| • for short-circuit protection of the auxiliary switch required | fuse gG: 6 A, quick: 10 A |

#### Installation/ mounting/ dimensions

|                          |                                                                                                                                                                                                                                |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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>            | 76 mm                                                                                                                                                                                                                          |
| <b>width</b>             | 45 mm                                                                                                                                                                                                                          |
| <b>depth</b>             | 70 mm                                                                                                                                                                                                                          |

#### Connections/ Terminals

|                                                                               |                                                                                             |
|-------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| <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> )                       |
| • for 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>for 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> </ul>      | 0.8 ... 1.2 N·m                |
| <ul style="list-style-type: none"> <li>for auxiliary contacts with screw-type terminals</li> </ul> | 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> </ul>                                | M3                             |
| <ul style="list-style-type: none"> <li>of the auxiliary and control contacts</li> </ul>            | 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

|                    |                                 |                                       |
|--------------------|---------------------------------|---------------------------------------|
| <b>Environment</b> | <b>General Product Approval</b> | <b>For use in hazardous locations</b> |
|--------------------|---------------------------------|---------------------------------------|

[Environmental Confirmations](#)



|                                       |                          |                             |              |
|---------------------------------------|--------------------------|-----------------------------|--------------|
| <b>For use in hazardous locations</b> | <b>Test Certificates</b> | <b>Maritime application</b> | <b>other</b> |
|---------------------------------------|--------------------------|-----------------------------|--------------|



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



[Confirmation](#)

|              |                |
|--------------|----------------|
| <b>other</b> | <b>Railway</b> |
|--------------|----------------|

[Miscellaneous](#)



[Special Test Certificate](#)

#### 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=3RU2116-1DB0-Z X95>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1DB0-Z X95>

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

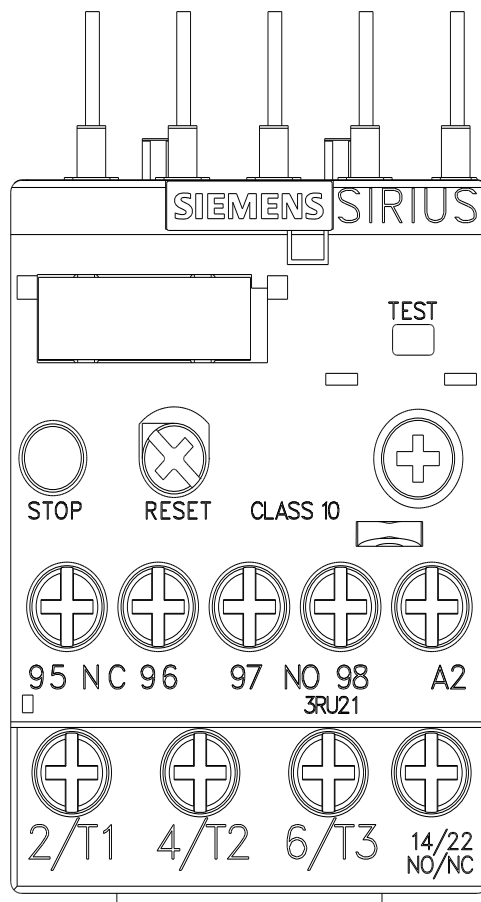
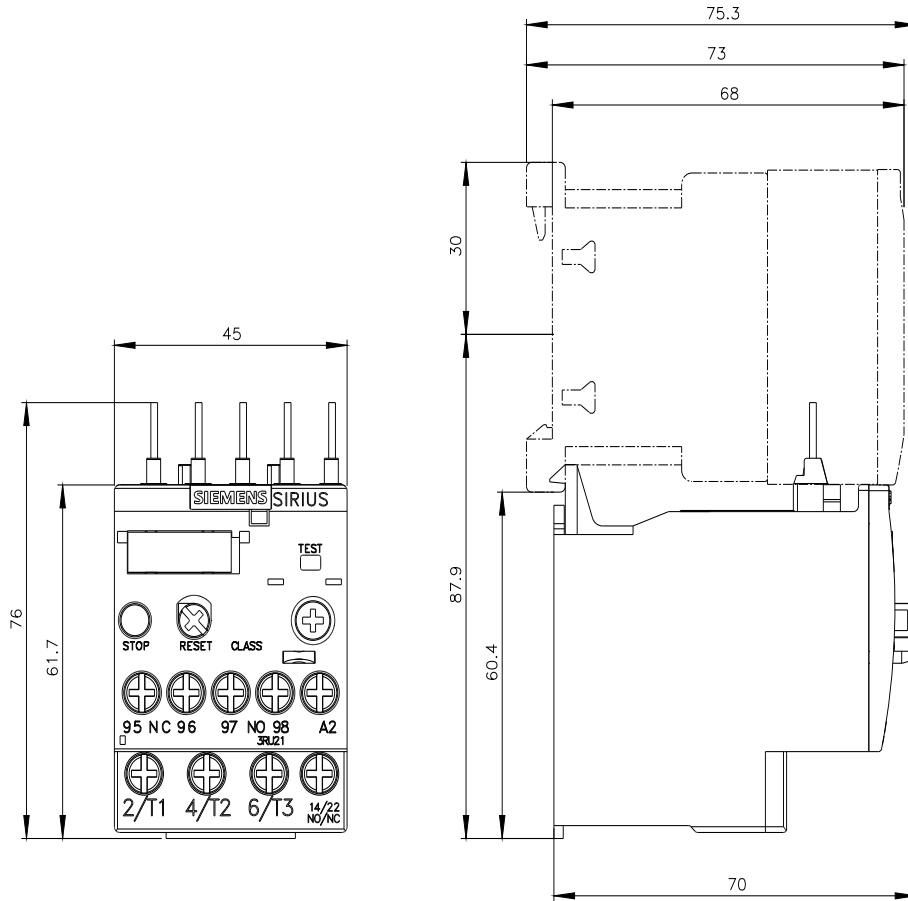
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RU2116-1DB0-Z X95&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2116-1DB0-Z X95&lang=en)

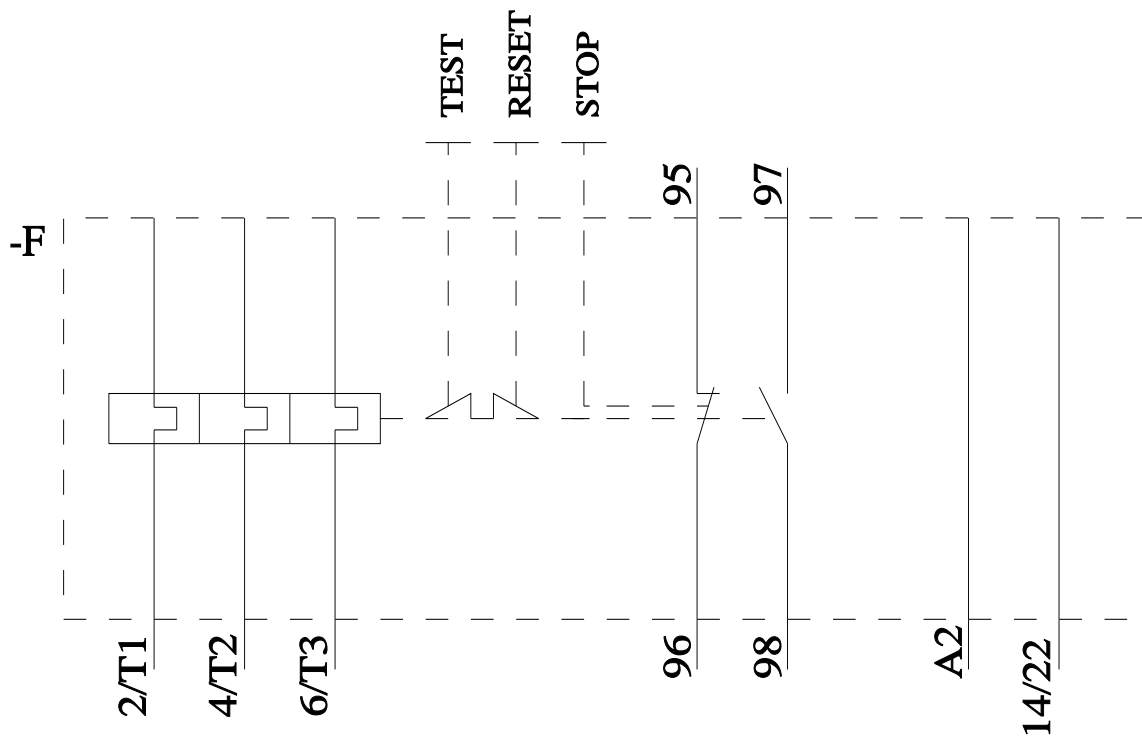
##### Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2116-1DB0-Z X95>

##### Characteristic curves

[https://curves.simaris.siemens.com/curves/<mmp\\_prod\\_noCOMP="HAUPT"></mmp\\_prod\\_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP=)





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