



OVERLOAD RELAY 0.28...0.40 A FOR MOTOR PROTECTION SZ S00, CLASS 10, F. MOUNTING ONTO CONTACTOR MAIN CIRCUIT: SCREW TERMINAL AUX. CIRCUIT: SCREW TERMINAL MANUAL-AUTOMATIC-RESET

|                     |                             |
|---------------------|-----------------------------|
| product brand name  | SIRIUS                      |
| Product designation | 3RU2 thermal overload relay |

**General technical data:**

|   |    |             |
|---|----|-------------|
| <b>Active power loss total typical</b>                    | W  | 4.2         |
| <b>Insulation voltage</b>                                 | V  | 690         |
| • with degree of pollution 3 Rated value                  |    |             |
| <b>Shock resistance</b>                                   |    | 8g / 11 ms  |
| • acc. to IEC 60068-2-27                                  |    |             |
| <b>Surge voltage resistance Rated value</b>               | kV | 6           |
| <b>Temperature compensation</b>                           | °C | -40 ... +60 |
| <b>Size of contactor can be combined company-specific</b> |    | S00         |
| <b>Type of assignment</b>                                 |    | 2           |
| <b>Protection class IP</b>                                |    | IP20        |
| • on the front  |    |             |
| • of the terminal   |    | IP20        |
| <b>Equipment marking</b>                                  |    | F           |
| • acc. to DIN EN 81346-2                                  |    |             |

**Main circuit:**

|  |    |              |
|--|----|--------------|
| <b>Number of poles for main current circuit</b>                                    |    | 3            |
| <b>Adjustable response value current of the current-dependent overload release</b> | A  | 0.28 ... 0.4 |
| <b>Operating voltage</b>   | V  | 690          |
| • Rated value  |    |              |
| • at AC-3 Rated value maximum  | V  | 690          |
| <b>Operating frequency Rated value</b>   | Hz | 50 ... 60    |

|                                      |   |     |
|--------------------------------------|---|-----|
| <b>Operating current Rated value</b> | A | 0.4 |
| <b>Operating current</b>             |   |     |
| • at AC-3                            |   |     |
| — at 400 V Rated value               | A | 0.4 |

#### Auxiliary circuit:

|   |   |                             |
|---|---|-----------------------------|
| <b>Number of NC contacts</b>                                |   |                             |
| • for auxiliary contacts                                    |   | 1                           |
| — Note  |   | for contactor disconnection |
| <b>Number of NO contacts</b>                                |   |                             |
| • for auxiliary contacts                                    |   | 1                           |
| — Note  |   | for message "Tripped"       |
| <b>Number of CO contacts</b>                                |   |                             |
| • for auxiliary contacts                                    |   | 0                           |
| <b>Design of the auxiliary switch</b>                       |   | integrated                  |
| <b>Operating current of the auxiliary contacts at AC-15</b> |   |                             |
| • at 24 V   | A | 3                           |
| • at 110 V  | A | 3                           |
| • at 120 V  | A | 3                           |
| • at 125 V  | A | 3                           |
| • at 230 V  | A | 2                           |
| • at 400 V  | A | 1                           |
| <b>Operating current of the auxiliary contacts at DC-13</b> |   |                             |
| • at 24 V   | A | 2                           |
| • at 110 V  | A | 0.22                        |
| • at 125 V  | A | 0.22                        |
| • at 220 V  | A | 0.11                        |

#### Protective and monitoring functions:

|   |  |          |
|---|--|----------|
| <b>Trip class</b>                             |  | CLASS 10 |
| <b>Design of the overload circuit breaker</b> |  | thermal  |

#### UL/CSA ratings:

|  |   |             |
|--|---|-------------|
| <b>Full-load current (FLA) for three-phase AC motor</b>    |   |             |
| • at 480 V Rated value                                     | A | 0.4         |
| • at 600 V Rated value                                     | A | 0.4         |
| <b>Contact rating of the auxiliary contacts acc. to UL</b> |   | B600 / R300 |

#### Installation/ mounting/ dimensions:

|                          |    |                 |
|--------------------------|----|-----------------|
| <b>mounting position</b> |    | any             |
| <b>Mounting type</b>     |    | direct mounting |
| <b>Height</b>            | mm | 76              |
| <b>Width</b>             | mm | 45              |
| <b>Depth</b>             | mm | 70              |
| <b>Required spacing</b>  |    |                 |

|                              |    |   |
|------------------------------|----|---|
| • with side-by-side mounting |    |   |
| — forwards                   | mm | 0 |
| — Backwards                  | mm | 0 |
| — upwards                    | mm | 6 |
| — downwards                  | mm | 6 |
| — at the side                | mm | 6 |
| • for grounded parts         |    |   |
| — forwards                   | mm | 0 |
| — Backwards                  | mm | 0 |
| — upwards                    | mm | 6 |
| — at the side                | mm | 6 |
| — downwards                  | mm | 6 |
| • for live parts             |    |   |
| — forwards                   | mm | 0 |
| — Backwards                  | mm | 0 |
| — upwards                    | mm | 6 |
| — downwards                  | mm | 6 |
| — at the side                | mm | 6 |

#### Connections/ Terminals:

|  |     |   |
|--|-----|---|
| <b>Type of electrical connection</b>                                 |     |   |
| • for main current circuit   |     | screw-type terminals  |
| • for auxiliary and control current circuit                          |     | screw-type terminals  |
| <b>Arrangement of electrical connectors for main current circuit</b> |     | Top and bottom  |
| <b>Product function</b>  |     |   |
| • removable terminal for auxiliary and control circuit               |     | No  |
| <b>Type of connectable conductor cross-section</b>                   |     |   |
| • for main contacts  |     |   |
| — single or multi-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 conductors for main contacts                               |     | 2x (20 ... 16), 2x (20 ... 18), 2x 12   |
| • for auxiliary contacts   |     |   |
| — single or multi-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> )                       |
| • for AWG conductors for auxiliary contacts                          |     | 2x (20 ... 16), 2x (18 ... 14)  |
| <b>Tightening torque</b>   |     |   |
| • for main contacts with screw-type terminals                        | N·m | 0.8 ... 1.2   |
| <b>Design of screwdriver shaft</b>                                   |     | 5 to 6 mm diameter  |
| <b>Design of the thread of the connection screw</b>                  |     |   |
| • for main contacts  |     | M3  |

- of the auxiliary and control contacts

M3

#### Safety related data:

|  |     |             |
|--|-----|-------------|
| <b>Proportion of dangerous failures</b>  |     |             |
| <ul style="list-style-type: none"> <li>• with low demand rate acc. to SN 31920</li> </ul>  | %   | 50          |
| <ul style="list-style-type: none"> <li>• with high demand rate acc. to SN 31920</li> </ul> | %   | 50          |
| Failure rate [FIT] with low demand rate acc. to SN 31920                                   | FIT | 50          |
| <b>MTTF with high demand rate</b>  | y   | 2 280       |
| <b>T1 value for proof test interval or service life acc. to IEC 61508</b>                  | y   | 20          |
| <b>Protection against electrical shock</b>   |     | finger-safe |

#### Mechanical data:

|                               |  |     |
|-------------------------------|--|-----|
| <b>Size of overload relay</b> |  | S00 |
|-------------------------------|--|-----|

#### Ambient conditions:

|  |    |             |
|--|----|-------------|
| <b>Installation altitude at height above sea level maximum</b>       | m  | 2 000       |
| <b>Ambient temperature</b>   |    |             |
| <ul style="list-style-type: none"> <li>• during operation</li> </ul> | °C | -40 ... +70 |
| <ul style="list-style-type: none"> <li>• during storage</li> </ul>   | °C | -55 ... +80 |
| <ul style="list-style-type: none"> <li>• during transport</li> </ul> | °C | -55 ... +80 |
| <b>Relative humidity during operation</b>                            | %  | 0 ... 90    |

#### Display:

|  |  |              |
|--|--|--------------|
| <b>Display version</b>   |  |              |
| <ul style="list-style-type: none"> <li>• for switching status</li> </ul> |  | Slide switch |

#### Certificates/ approvals:

|                          |                                |                           |
|--------------------------|--------------------------------|---------------------------|
| General Product Approval | For use in hazardous locations | Declaration of Conformity |
|--------------------------|--------------------------------|---------------------------|



CCC



CSA



UL



ATEX



EG-Konf.

|                   |                   |
|-------------------|-------------------|
| Test Certificates | Shipping Approval |
|-------------------|-------------------|

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



ABS



BUREAU VERITAS



DNV



GL

|                   |       |
|-------------------|-------|
| Shipping Approval | other |
|-------------------|-------|



LRS



PRS



RINA



RMRS

[Environmental Confirmations](#)

#### Further information

##### Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/industrial-controls/catalogs>

##### Industry Mall (Online ordering system)

<http://www.siemens.com/industrymall>

##### Cax online generator

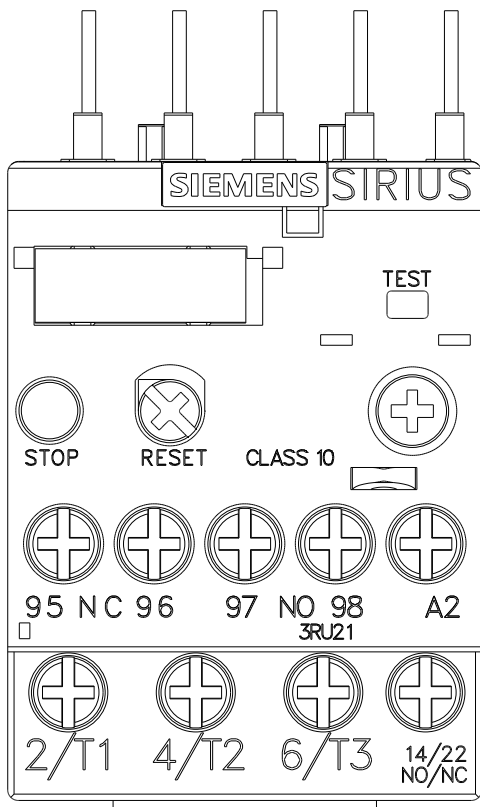
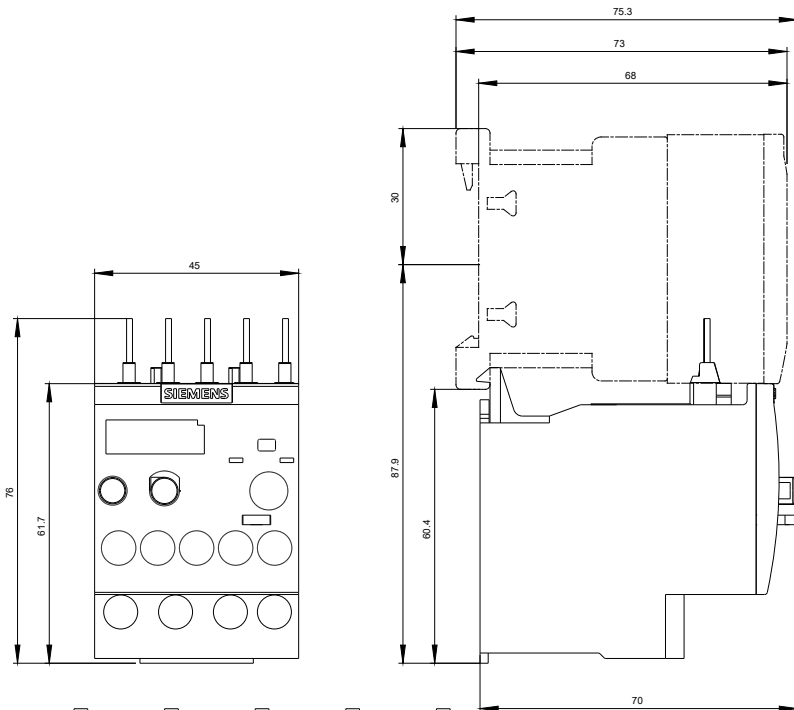
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RU21160EB0>

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

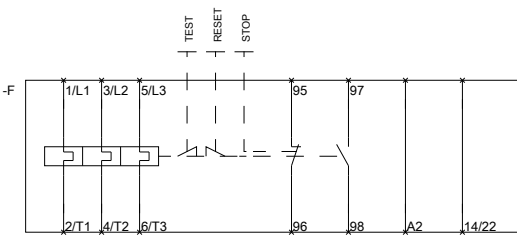
<http://support.automation.siemens.com/WW/view/en/3RU21160EB0/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mfb=3RU21160EB0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3RU21160EB0&lang=en)



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last modified:

11.03.2015

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