

Overload relay 70...80 A for motor protection Size S2, Class 10A  
Stand-alone installation Main circuit: Screw Auxiliary circuit: Screw  
Manual-Automatic-Reset



|                                                                                |                        |
|--------------------------------------------------------------------------------|------------------------|
| Product brand name                                                             | SIRIUS                 |
| Product designation                                                            | thermal overload relay |
| Product type designation                                                       | 3RU2                   |
| General technical data                                                         |                        |
| Size of overload relay                                                         | S2                     |
| Size of contactor can be combined company-specific                             | S2                     |
| Power loss [W] total typical                                                   | 14 W                   |
| Insulation voltage with degree of pollution 3 rated value                      | 690 V                  |
| Surge voltage resistance rated value                                           | 6 kV                   |
| maximum permissible voltage for safe isolation                                 |                        |
| • in networks with grounded star point between auxiliary and auxiliary circuit | 415 V                  |
| • in networks with grounded star point between auxiliary and auxiliary circuit | 415 V                  |
| • in networks with grounded star point between main and auxiliary circuit      | 690 V                  |
| • in networks with grounded star point between main and auxiliary circuit      | 690 V                  |
| Protection class IP                                                            |                        |

|                                                                                                                                                                                                        |                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• on the front</li> <li>• of the terminal</li> </ul>                                                                                                            | IP20<br>IP00                                                     |
| <b>Shock resistance</b>                                                                                                                                                                                |                                                                  |
| <ul style="list-style-type: none"> <li>• acc. to IEC 60068-2-27</li> </ul>                                                                                                                             | 8g / 11 ms                                                       |
| <b>Recovery time</b>                                                                                                                                                                                   |                                                                  |
| <ul style="list-style-type: none"> <li>• after overload trip with automatic reset typical</li> <li>• after overload trip with remote-reset</li> <li>• after overload trip with manual reset</li> </ul> | 10 min<br>10 min<br>10 min                                       |
| <b>Type of protection</b>                                                                                                                                                                              | Ex e                                                             |
| Certificate of suitability relating to ATEX                                                                                                                                                            | DMT 98 ATEX G 001                                                |
| <b>Protection against electrical shock</b>                                                                                                                                                             | finger-safe when touched vertically from front acc. to IEC 60529 |
| <b>Reference code acc. to DIN EN 81346-2</b>                                                                                                                                                           | F                                                                |

#### Ambient conditions

|                                                                                                                            |                                                    |
|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| <b>Installation altitude at height above sea level</b>                                                                     |                                                    |
| <ul style="list-style-type: none"> <li>• maximum</li> </ul>                                                                | 2 000 m                                            |
| <b>Ambient temperature</b>                                                                                                 |                                                    |
| <ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> <li>• during transport</li> </ul> | -40 ... +70 °C<br>-55 ... +80 °C<br>-55 ... +80 °C |
| <b>Temperature compensation</b>                                                                                            | -40 ... +60 °C                                     |
| Relative humidity during operation                                                                                         | 0 ... 90 %                                         |

#### Main circuit

|                                                                                                        |                |
|--------------------------------------------------------------------------------------------------------|----------------|
| <b>Number of poles for main current circuit</b>                                                        | 3              |
| <b>Adjustable pick-up value current of the current-dependent overload release</b>                      | 70 ... 80 A    |
| <b>Operating voltage</b>                                                                               |                |
| <ul style="list-style-type: none"> <li>• rated value</li> <li>• at AC-3 rated value maximum</li> </ul> | 690 V<br>690 V |
| <b>Operating frequency rated value</b>                                                                 | 50 ... 60 Hz   |
| <b>Operating current rated value</b>                                                                   | 80 A           |

#### Auxiliary circuit

|                                                                                 |                             |
|---------------------------------------------------------------------------------|-----------------------------|
| <b>Design of the auxiliary switch</b>                                           | integrated                  |
| <b>Number of NC contacts for auxiliary contacts</b>                             | 1                           |
| <ul style="list-style-type: none"> <li>• Note</li> </ul>                        | for contactor disconnection |
| <b>Number of NO contacts for auxiliary contacts</b>                             | 1                           |
| <ul style="list-style-type: none"> <li>• Note</li> </ul>                        | for message "Tripped"       |
| <b>Number of CO contacts</b>                                                    |                             |
| <ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>      | 0                           |
| <b>Operating current of auxiliary contacts at AC-15</b>                         |                             |
| <ul style="list-style-type: none"> <li>• at 24 V</li> <li>• at 110 V</li> </ul> | 3 A<br>3 A                  |

|                                                                                                                                                                                                    |                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• at 120 V</li> <li>• at 125 V</li> <li>• at 230 V</li> <li>• at 400 V</li> </ul>                                                                           | 3 A<br>3 A<br>2 A<br>1 A                                      |
| <b>Operating current of auxiliary contacts at DC-13</b> <ul style="list-style-type: none"> <li>• at 24 V</li> <li>• at 60 V</li> <li>• at 110 V</li> <li>• at 125 V</li> <li>• at 220 V</li> </ul> | 2 A<br>0.3 A<br>0.22 A<br>0.22 A<br>0.11 A                    |
| <b>Design of the miniature circuit breaker</b> <ul style="list-style-type: none"> <li>• for short-circuit protection of the auxiliary switch required</li> </ul>                                   | 6A (SCC less than equal to 0.5 kA; U less than equal to 260V) |
| <b>Contact rating of auxiliary contacts according to UL</b>                                                                                                                                        | B600 / R300                                                   |

#### Protective and monitoring functions

|                                       |           |
|---------------------------------------|-----------|
| <b>Trip class</b>                     | CLASS 10A |
| <b>Design of the overload release</b> | thermal   |

#### UL/CSA ratings

|                                                                                                                                                                  |              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>Full-load current (FLA) for three-phase AC motor</b> <ul style="list-style-type: none"> <li>• at 480 V rated value</li> <li>• at 600 V rated value</li> </ul> | 80 A<br>80 A |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|

#### Short-circuit protection

|                                                                                                                                                  |                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| <b>Design of the fuse link</b> <ul style="list-style-type: none"> <li>• for short-circuit protection of the auxiliary switch required</li> </ul> | fuse gG: 6 A, quick: 10 A |
|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|

#### Installation/ mounting/ dimensions

|                                                                                                                                                                                                                                                                                                                                                                           |                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| <b>Mounting position</b>                                                                                                                                                                                                                                                                                                                                                  | any                                                           |
| <b>Mounting type</b>                                                                                                                                                                                                                                                                                                                                                      | stand-alone installation                                      |
| <b>Height</b>                                                                                                                                                                                                                                                                                                                                                             | 105 mm                                                        |
| <b>Width</b>                                                                                                                                                                                                                                                                                                                                                              | 55 mm                                                         |
| <b>Depth</b>                                                                                                                                                                                                                                                                                                                                                              | 117 mm                                                        |
| <b>Required spacing</b> <ul style="list-style-type: none"> <li>• with side-by-side mounting <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> </ul> </li> </ul> | 10 mm<br>0 mm<br>10 mm<br>10 mm<br>10 mm<br><br>10 mm<br>0 mm |

|                  |       |
|------------------|-------|
| — upwards        | 10 mm |
| — at the side    | 10 mm |
| — downwards      | 10 mm |
| • for live parts |       |
| — forwards       | 10 mm |
| — Backwards      | 0 mm  |
| — upwards        | 10 mm |
| — downwards      | 10 mm |
| — at the side    | 10 mm |

## Connections/Terminals

|                                                                      |                                                                       |
|----------------------------------------------------------------------|-----------------------------------------------------------------------|
| <b>Product function</b>                                              |                                                                       |
| • removable terminal for auxiliary and control circuit               | No                                                                    |
| <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>Type of connectable conductor cross-sections</b>                  |                                                                       |
| • for main contacts                                                  |                                                                       |
| — single or multi-stranded                                           | 2x (1 ... 35 mm <sup>2</sup> ), 1x (1 ... 50 mm <sup>2</sup> )        |
| — finely stranded with core end processing                           | 2x (1 ... 25 mm <sup>2</sup> ), 1x (1 ... 35 mm <sup>2</sup> )        |
| • at AWG conductors for main contacts                                | 2x (18 ... 2), 1x (18 ... 1)                                          |
| <b>Type of connectable conductor cross-sections</b>                  |                                                                       |
| • 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> ) |
| • at AWG conductors for auxiliary contacts                           | 2x (20 ... 16), 2x (18 ... 14)                                        |
| <b>Tightening torque</b>                                             |                                                                       |
| • for main contacts with screw-type terminals                        | 3 ... 4.5 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                                                  | M6                                                                    |
| • of the auxiliary and control contacts                              | M3                                                                    |

## Safety related data

|                                                                           |      |
|---------------------------------------------------------------------------|------|
| <b>T1 value for proof test interval or service life acc. to IEC 61508</b> | 20 y |
|---------------------------------------------------------------------------|------|

## Display

|                        |  |
|------------------------|--|
| <b>Display version</b> |  |
|------------------------|--|

- for switching status

Slide switch

## Certificates/approvals

| General Product Approval                                                                      |                                                                                           |                                                                                             | For use in hazardous locations                                                           |                                                                                             |                                                                                              |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| <br>CCC      | <br>CSA  | <br>UL     | <br>EAC | <br>ATEX | <br>IECEX |
| Declaration of Conformity                                                                     | Test Certificates                                                                         |                                                                                             | Marine / Shipping                                                                        |                                                                                             |                                                                                              |
| <br>EG-Konf. | <a href="#">Type Test Certificates/Test Report</a>                                        | <a href="#">Special Test Certificate</a>                                                    | <br>ABS | <br>LRS  | <br>PRS   |
| Marine / Shipping                                                                             |                                                                                           |                                                                                             | other                                                                                    |                                                                                             |                                                                                              |
| <br>RINA     | <br>RMRS | <br>DNV-GL | <a href="#">Confirmation</a>                                                             |                                                                                             |                                                                                              |

## Further information

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

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

### Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RU2136-4RB1>

### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2136-4RB1>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2136-4RB1>

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

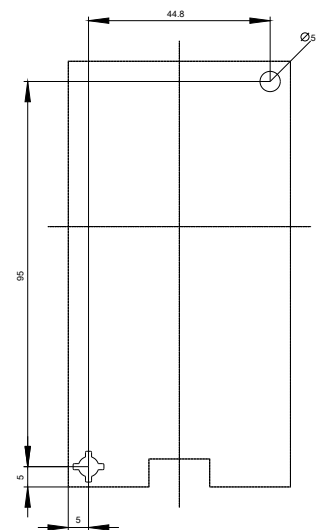
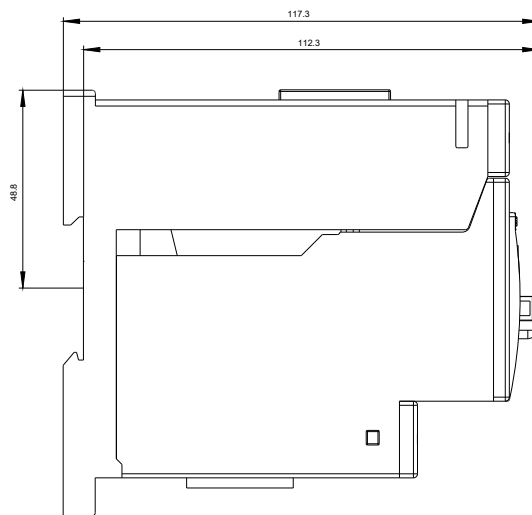
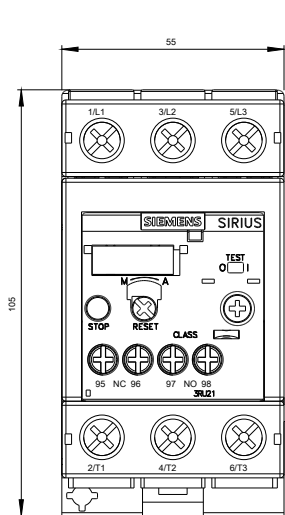
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RU2136-4RB1&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2136-4RB1&lang=en)

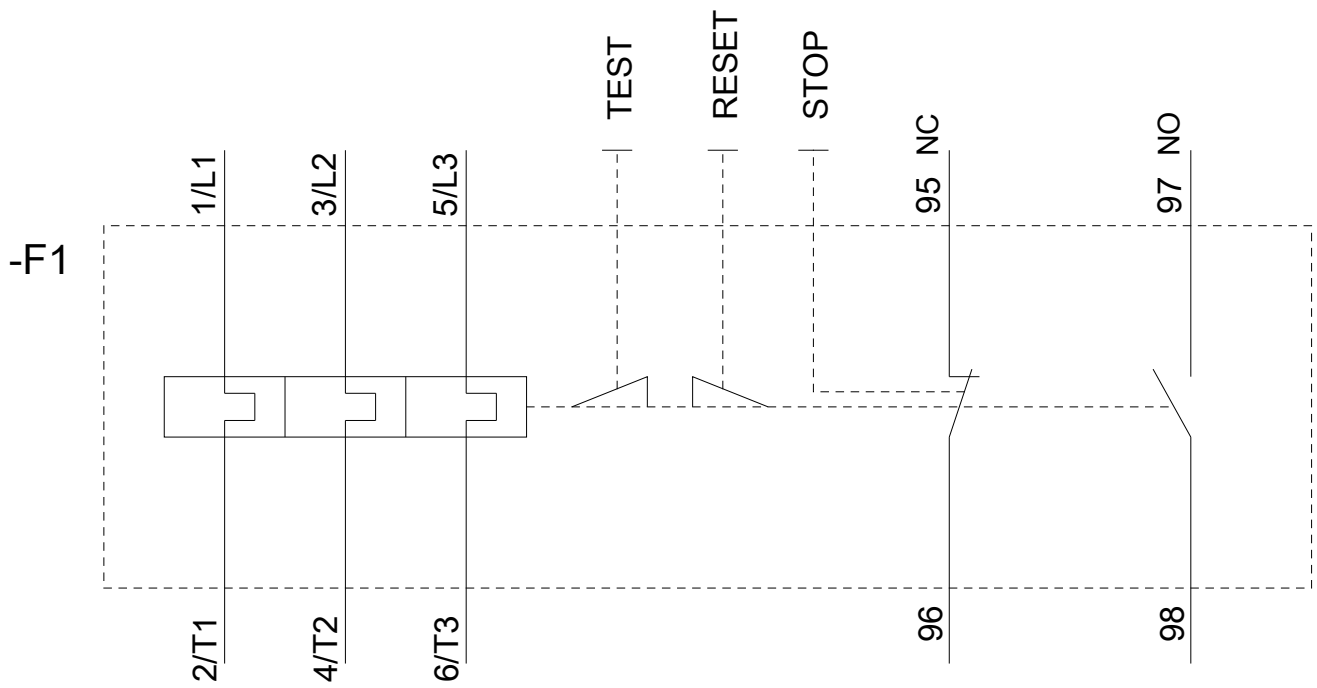
### Characteristic: Tripping characteristics, I<sub>t</sub>, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2136-4RB1/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2136-4RB1&objecttype=14&gridview=view1>





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