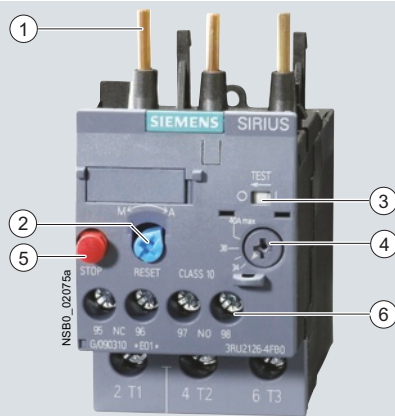


# Overload Relays

## SIRIUS 3RU2 Thermal Overload Relays

### General data

### Overview



- ① Connection for mounting onto contactors:  
Optimally adapted in electrical, mechanical and design terms to the contactors. The overload relay can be connected directly to these contactor using these pins. Stand-alone installation is possible as an alternative (in conjunction with a terminal bracket for stand-alone installation).
- ② Selector switch for manual/automatic RESET and RESET button:  
With this switch you can choose between manual and automatic RESET. A device set to manual RESET can be reset locally by pressing the RESET button. A remote RESET is possible using the RESET modules (accessories), which are independent of size.
- ③ Switch position indicator and TEST function of the wiring:  
Indicates a trip and enables the wiring test.
- ④ Motor current setting:  
Setting the device to the rated motor current is easy with the large rotary knob.
- ⑤ STOP button:  
If the STOP button is pressed, the NC contact is opened. This switches off the contactor downstream. The NC contact is closed again when the button is released.
- ⑥ Supply terminals:  
Depending on the device version, the terminals for screw, spring-type or ring lug terminal connection are configured for the main and auxiliary circuit.

A sealable transparent cover can be optionally mounted (accessory). It secures the motor current setting against adjustment.

3RU21 26-4FB00 thermal overload relays

The 3RU21 thermal overload relays up to 40 A have been designed for current-dependent protection of loads with normal starting (for "Function" see note on [Technical Information on page 5/1](#)) against excessive temperature rises due to overload or phase failure.

An overload or phase failure results in an increase of the motor current beyond the set rated motor current. Via heating elements, this current rise heats up the bimetal strips inside the device which then bend and as a result trigger the auxiliary contacts by means of a tripping mechanism. The auxiliary contacts then switch off the load by means of a contactor. The switch-off time depends on the ratio between the tripping current and set current  $I_e$  and is stored in the form of a long-term stable tripping characteristic (for "Characteristic Curves" see the note on [Technical Information on page 5/1](#)).

The "tripped" status is signaled by means of a switch position indicator. Resetting takes place either manually or automatically after a recovery time has elapsed (for "Function" see note on [Technical Information on page 5/1](#)).

The devices are manufactured in accordance with environmental guidelines and contain environmentally friendly and reusable materials.

They comply with all important worldwide standards and approvals.

**"Increased safety" type of protection EEx e according to ATEX directive 94/9/EC**

The 3RU21 thermal overload relays are suitable for the overload protection of explosion-proof motors with "increased safety" type of protection EEx e. The relays meet the requirements of EN 60079-7 (Electrical apparatus for areas subject to explosion hazards – Increased safety "e"); see [Chapter 9 "Appendix" --> "Standards and approvals" --> "Type overview of approved devices for explosion-protected areas \(ATEX Explosion Protection\)"](#).

EC type test certificate for Category (2) G/D has been submitted. More details on request.

### Benefits

The most important features and benefits of the 3RU21 thermal overload relays are listed in the overview table (see ["General data" on page 5/34](#)).

# Overload Relays

## SIRIUS 3RU2 Thermal Overload Relays

### General data

#### Application

##### Industries

The 3RU21 thermal overload relays are suitable for customers from all industries who want to guarantee optimum current-dependent protection of their electrical loads (e. g. motors) under normal starting conditions (CLASS 10).

##### Application

The 3RU21 thermal overload relays have been designed for the protection of three-phase and single-phase AC and DC motors.

If single-phase AC or DC loads are to be protected by the 3RU21 thermal overload relays, all three bimetal strips must be heated. For this purpose, all main current paths of the relay must be connected in series.

##### Ambient conditions

The 3RU21 thermal overload relays have temperature compensation in accordance with IEC 60947-4-1 for the temperature range of -40 to +60 °C. For temperatures from +60 to +80 °C the upper set value of the setting range must be reduced by the factor listed in the table below.

| Ambient temperature<br>°C | Derating factor for the upper set value |             |
|---------------------------|-----------------------------------------|-------------|
|                           | Current ranges<br>0.11 ... 20 A         | 17 ... 40 A |
| +60                       | 1.0                                     | 1.0         |
| +65                       | 0.94                                    | 0.97        |
| +70                       | 0.87                                    | 0.94        |
| +75                       | 0.81                                    | 0.90        |
| +80                       | 0.73                                    | 0.86        |

#### Accessories

The following optional accessories are available for the 3RU21 thermal overload relays:

- Terminal bracket for stand-alone installation with screw or spring-type terminals for each size
- Mechanical RESET for all sizes
- Cable release for resetting devices which are difficult to access for all sizes
- Electrical remote RESET module in three voltage variants for all sizes
- Sealable cover for all sizes
- Terminal covers for devices with ring lug terminal connection

#### More information

##### Order No. scheme

| Digit of the Order No.                    | 1st - 3rd | 4th | 5th | 6th | 7th |   | 8th | 9th | 10th | 11th |
|-------------------------------------------|-----------|-----|-----|-----|-----|---|-----|-----|------|------|
|                                           | □□□       | □   | □   | □   | □   | – | □   | □   | □    | □    |
| Thermal overload relays                   | 3 R U     |     |     |     |     |   |     |     |      |      |
| SIRIUS 2nd generation                     |           | 2   |     |     |     |   |     |     |      |      |
| Device series                             |           |     | □   |     |     |   |     |     |      |      |
| Size, rated operational current and power |           |     |     | □   | □   |   |     |     |      |      |
| Setting range of the overload release     |           |     |     |     |     |   | □   | □   |      |      |
| Connection method                         |           |     |     |     |     |   |     |     | □    |      |
| Installation type                         |           |     |     |     |     |   |     |     |      | □    |
| Example                                   | 3 R U     | 2   | 1   | 1   | 6   | – | 0   | A   | B    | 0    |

##### Note:

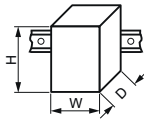
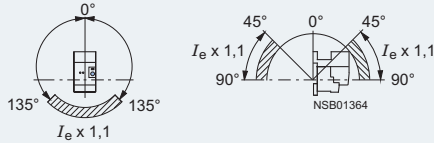
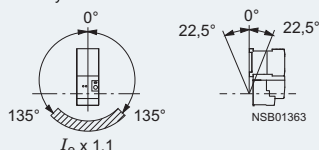
The Order No. scheme is presented here merely for information purposes and for better understanding of the logic behind the order numbers.

For your orders, please use the order numbers quote in the catalog under the Selection and ordering data section.

# Overload Relays

## SIRIUS 3RU2 Thermal Overload Relays

### General data

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Type</b><br>Size<br>Dimensions (W x H x D)<br>(overload relay with stand-alone installation support) <ul style="list-style-type: none"><li>• Screw terminals</li><li>• Spring-type terminals</li></ul>                                                                                                                                                                                                                                                                                                                                         |  | <b>3RU21 16</b><br>S00                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>3RU21 26</b><br>S0                                                                                                                                                                                                                                                                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | mm                                                                                | 45 x 89 x 79                                                                                                                                                                                                                                                                                                                                                                                                                                                | 45 x 97 x 95                                                                                                                                                                                                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | mm                                                                                | 45 x 102 x 80                                                                                                                                                                                                                                                                                                                                                                                                                                               | 45 x 114 x 97                                                                                                                                                                                                                                                                                    |
| <b>General technical specifications</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                  |
| <b>Trips in the event of</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                   | Overload and phase failure                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                  |
| <b>Trip class</b> acc. to IEC 60947-4-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                   | CLASS                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 10                                                                                                                                                                                                                                                                                               |
| <b>Phase failure sensitivity</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                   | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                  |
| <b>Overload warning</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                   | No                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                  |
| <b>Reset and recovery</b> <ul style="list-style-type: none"><li>• Reset options after tripping</li><li>• Recovery time<ul style="list-style-type: none"><li>- For automatic RESET</li><li>- For manual RESET</li><li>- For remote RESET</li></ul></li></ul>                                                                                                                                                                                                                                                                                       |                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Manual, automatic and remote RESET <sup>1)</sup><br><br>Depends on the strength of the tripping current and characteristic<br>Depends on the strength of the tripping current and characteristic<br>Depends on the strength of the tripping current and characteristic                           |
| <b>Features</b> <ul style="list-style-type: none"><li>• Display of operating state on device</li><li>• TEST function</li><li>• RESET button</li><li>• STOP button</li></ul>                                                                                                                                                                                                                                                                                                                                                                       |                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Yes, by means of TEST function/switch position indicator slide<br>Yes<br>Yes<br>Yes                                                                                                                                                                                                              |
| <b>Safe operation of motors with "increased safety" type of protection</b><br>EC type test certificate number acc. to directive 94/9/EC (ATEX)                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                   | On request                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                  |
| <b>Ambient temperature</b> <ul style="list-style-type: none"><li>• Storage/transport</li><li>• Operation</li><li>• Temperature compensation</li><li>• Permissible rated current at<ul style="list-style-type: none"><li>- Temperature inside control cabinet 60 °C</li><li>- Temperature inside control cabinet 70 °C</li></ul></li></ul>                                                                                                                                                                                                         |                                                                                   | °C<br>°C<br>°C<br>%                                                                                                                                                                                                                                                                                                                                                                                                                                         | -55 ... +80<br>-40 ... +70<br>Up to 60<br>100 (over +60 °C current reduction is not required)<br>87                                                                                                                                                                                              |
| <b>Repeat terminals</b> <ul style="list-style-type: none"><li>• Coil repeat terminals</li><li>• Auxiliary contact repeat terminal</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                   | Yes<br>Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Not required<br>Not required                                                                                                                                                                                                                                                                     |
| <b>Degree of protection</b> acc. to IEC 60529                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                   | IP20                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                  |
| <b>Touch protection</b> acc. to IEC 61140                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                   | Screw and spring-type terminals: Finger-safe<br>Ring lug terminal connection: Finger-safe only with optional terminal covers                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                  |
| <b>Shock resistance with sine</b> acc. to IEC 60068-2-27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                   | g/ms                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 15/11 <sup>2)</sup>                                                                                                                                                                                                                                                                              |
| <b>Electromagnetic compatibility (EMC) – Interference immunity</b> <ul style="list-style-type: none"><li>• Conductor-related interference<ul style="list-style-type: none"><li>- Burst acc. to IEC 61000-4-4 (corresponds to degree of severity 3)</li><li>- Surge acc. to IEC 61000-4-5 (corresponds to degree of severity 3)</li></ul></li><li>• Electrostatic discharge acc. to IEC 61000-4-2 (corresponds to degree of severity 3)</li><li>• Field-related interference acc. to IEC 61000-4-3 (corresponds to degree of severity 3)</li></ul> |                                                                                   | kV<br>kV<br>kV<br>V/m                                                                                                                                                                                                                                                                                                                                                                                                                                       | EMC interference immunity is not relevant for thermal overload relays<br>EMC interference immunity is not relevant for thermal overload relays<br>EMC interference immunity is not relevant for thermal overload relays<br>EMC interference immunity is not relevant for thermal overload relays |
| <b>Electromagnetic compatibility (EMC) – Emitted interference</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                   | EMC interference immunity is not relevant for thermal overload relays                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                  |
| <b>Resistance to extreme climates – Air humidity</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                   | %                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 90                                                                                                                                                                                                                                                                                               |
| <b>Dimensions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                   | For "Dimensional drawings" see the note on Technical Information on page 5/1.                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                  |
| <b>Installation altitude above sea level</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                   | m                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Up to 2000; above this, please enquire                                                                                                                                                                                                                                                           |
| <b>Mounting position</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                   | <p>The diagrams show the permissible mounting positions for mounting onto contactors and stand-alone installation. For installation in the shaded area, a setting correction of 10 % must be implemented.</p> <p>Stand-alone installation:</p>  <p>Contactor + overload relay:</p>  |                                                                                                                                                                                                                                                                                                  |
| <b>Type of mounting</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                   | Mounting onto contactor/stand-alone installation with terminal bracket <sup>3)</sup>                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                  |

<sup>1)</sup> Remote RESET in combination with the appropriate accessories.

<sup>2)</sup> Auxiliary contacts 95/96 and 97/98: 8 g/11 ms.

<sup>3)</sup> For screw and snap-on mounting on TH 35 standard mounting rail.

For the technical specifications of the terminal brackets see the note on Technical Information on page 5/1.

# Overload Relays

## SIRIUS 3RU2 Thermal Overload Relays

### General data

|                                                                                                                                                                                                                                                                                                                                        |                                                                                     |                                                                                                                                                                      |                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| <b>Type</b>                                                                                                                                                                                                                                                                                                                            |                                                                                     | <b>3RU21 16</b>                                                                                                                                                      | <b>3RU21 26</b>                                                                   |
| Size                                                                                                                                                                                                                                                                                                                                   |                                                                                     | S00                                                                                                                                                                  | S0                                                                                |
| Width                                                                                                                                                                                                                                                                                                                                  |                                                                                     | 45 mm                                                                                                                                                                | 45 mm                                                                             |
| <b>Main circuit</b>                                                                                                                                                                                                                                                                                                                    |                                                                                     |                                                                                                                                                                      |                                                                                   |
| <b>Rated insulation voltage <math>U_i</math></b><br>(pollution degree 3)                                                                                                                                                                                                                                                               | V                                                                                   | 690                                                                                                                                                                  |                                                                                   |
| <b>Rated impulse withstand voltage <math>U_{imp}</math></b>                                                                                                                                                                                                                                                                            | kV                                                                                  | 6                                                                                                                                                                    |                                                                                   |
| <b>Rated operational voltage <math>U_e</math></b>                                                                                                                                                                                                                                                                                      | V                                                                                   | 690                                                                                                                                                                  |                                                                                   |
| <b>Type of current</b>                                                                                                                                                                                                                                                                                                                 |                                                                                     |                                                                                                                                                                      |                                                                                   |
| • Direct current                                                                                                                                                                                                                                                                                                                       |                                                                                     | Yes                                                                                                                                                                  |                                                                                   |
| • Alternating current                                                                                                                                                                                                                                                                                                                  |                                                                                     | Yes, frequency range up to 400 Hz                                                                                                                                    |                                                                                   |
| <b>Current setting</b>                                                                                                                                                                                                                                                                                                                 | A                                                                                   | 0.11 ... 0.16                                                                                                                                                        | 1.8 ... 2.5                                                                       |
|                                                                                                                                                                                                                                                                                                                                        | A                                                                                   | to 11 ... 16                                                                                                                                                         | to 34 ... 40                                                                      |
| <b>Power loss per unit (max.)</b>                                                                                                                                                                                                                                                                                                      | W                                                                                   | 3.9 ... 6.6                                                                                                                                                          | 3.9 ... 6                                                                         |
| <b>Short-circuit protection</b>                                                                                                                                                                                                                                                                                                        |                                                                                     |                                                                                                                                                                      |                                                                                   |
| • With fuse without contactor                                                                                                                                                                                                                                                                                                          |                                                                                     | See "Selection and ordering data"                                                                                                                                    |                                                                                   |
| • With fuse and contactor                                                                                                                                                                                                                                                                                                              |                                                                                     | See "Technical specifications" --> "Short-circuit protection with fuses/motor starter protectors for motor starters", see note on Technical Information on page 5/1. |                                                                                   |
| <b>Protective separation between main and auxiliary conducting path</b><br>acc. to IEC 60947-1                                                                                                                                                                                                                                         | V                                                                                   | ≥ 440                                                                                                                                                                |                                                                                   |
| <b>Conductor cross-sections of main circuit</b>                                                                                                                                                                                                                                                                                        |                                                                                     |                                                                                                                                                                      |                                                                                   |
| <b>Connection type screw terminals</b>                                                                                                                                                                                                                                                                                                 |                                                                                     |  <b>Screw terminals</b>                                                             |                                                                                   |
| <b>Terminal screw</b>                                                                                                                                                                                                                                                                                                                  |                                                                                     | M3, Pozidriv size 2                                                                                                                                                  | M4, Pozidriv size 2                                                               |
| <b>Operating devices</b>                                                                                                                                                                                                                                                                                                               | mm                                                                                  | ∅ 5 ... 6                                                                                                                                                            | ∅ 5 ... 6                                                                         |
| <b>Prescribed tightening torque</b>                                                                                                                                                                                                                                                                                                    | Nm                                                                                  | 0.8 ... 1.2                                                                                                                                                          | 2 ... 2.5                                                                         |
| <b>Conductor cross-sections (min./max.),</b><br>1 or 2 conductors can be connected                                                                                                                                                                                                                                                     |                                                                                     |                                                                                                                                                                      |                                                                                   |
| • Solid                                                                                                                                                                                                                                                                                                                                | mm <sup>2</sup>                                                                     | 2 x (0.5 ... 1.5) <sup>1)</sup> ,<br>2 x (0.75 ... 2.5) <sup>1)</sup> ,<br>2 x (0.5 ... 4) <sup>1)</sup>                                                             | 2 x (1 ... 2.5) <sup>1)</sup> ,<br>2 x (2.5 ... 10) <sup>1)</sup>                 |
| • Finely stranded with end sleeves<br>(DIN 46228 T1)                                                                                                                                                                                                                                                                                   | mm <sup>2</sup>                                                                     | 2 x (0.5 ... 1.5) <sup>1)</sup> ,<br>2 x (0.75 ... 2.5) <sup>1)</sup>                                                                                                | 2 x (1 ... 2.5) <sup>1)</sup> ,<br>2 x (2.5 ... 6) <sup>1)</sup> ,<br>max. 1 x 10 |
| • AWG cables, solid or stranded                                                                                                                                                                                                                                                                                                        | AWG                                                                                 | 2 x (20 ... 16) <sup>1)</sup> ,<br>2 x (18 ... 14) <sup>1)</sup> ,<br>2 x 12                                                                                         | 2 x (16 ... 12) <sup>1)</sup> ,<br>2 x (14 ... 8) <sup>1)</sup>                   |
| <b>Connection type spring-type terminals</b>                                                                                                                                                                                                                                                                                           |                                                                                     |  <b>Spring-type terminals</b>                                                     |                                                                                   |
| <b>Operating devices</b>                                                                                                                                                                                                                                                                                                               | mm                                                                                  | 3.0 x 0.5 and 3.5 x 0.5                                                                                                                                              |                                                                                   |
| <b>Conductor cross-sections (min./max.)</b>                                                                                                                                                                                                                                                                                            |                                                                                     |                                                                                                                                                                      |                                                                                   |
| • Solid                                                                                                                                                                                                                                                                                                                                | mm <sup>2</sup>                                                                     | 1 x (0.5 ... 4)                                                                                                                                                      | 1 x (1 ... 10)                                                                    |
| • Finely stranded without end sleeve                                                                                                                                                                                                                                                                                                   | mm <sup>2</sup>                                                                     | 1 x (0.5 ... 2.5)                                                                                                                                                    | 1 x (1 ... 6)                                                                     |
| • Finely stranded with end sleeves<br>(DIN 46228 T1)                                                                                                                                                                                                                                                                                   | mm <sup>2</sup>                                                                     | 1 x (0.5 ... 2.5)                                                                                                                                                    | 1 x (1 ... 6)                                                                     |
| • AWG cables, solid or stranded                                                                                                                                                                                                                                                                                                        | AWG                                                                                 | 1 x (20 ... 12)                                                                                                                                                      | 1 x (18 ... 8)                                                                    |
| <b>Connection type ring lug terminals</b>                                                                                                                                                                                                                                                                                              |                                                                                     |  <b>Ring lug terminal connection</b>                                              |                                                                                   |
| <b>Terminal screw</b>                                                                                                                                                                                                                                                                                                                  |                                                                                     | M3, Pozidriv size 2                                                                                                                                                  | M4, Pozidriv size 2                                                               |
| <b>Operating devices</b>                                                                                                                                                                                                                                                                                                               | mm                                                                                  | ∅ 5 ... 6                                                                                                                                                            | ∅ 5 ... 6                                                                         |
| <b>Prescribed tightening torque</b>                                                                                                                                                                                                                                                                                                    | Nm                                                                                  | 0.8 ... 1.2                                                                                                                                                          | 2 ... 2.5                                                                         |
| <b>Usable ring lug terminals</b>                                                                                                                                                                                                                                                                                                       | mm                                                                                  | d <sub>2</sub> = min. 3.2,<br>d <sub>3</sub> = max. 7.5                                                                                                              | d <sub>2</sub> = min. 4.3,<br>d <sub>3</sub> = max. 12.2                          |
| <ul style="list-style-type: none"> <li>DIN 46234 without insulation sleeve</li> <li>DIN 46225 without insulation sleeve</li> <li>DIN 46237 with insulation sleeve</li> <li>JIS C2805 Type R without insulation sleeve</li> <li>JIS C2805 Type RAV with insulation sleeve</li> <li>JIS C2805 Type RAP with insulation sleeve</li> </ul> |  |                                                                                                                                                                      |                                                                                   |

<sup>1)</sup> If two different conductor cross-sections are connected to one clamping point, both cross-sections must lie in the range specified. If identical cross-sections are used, this restriction does not apply.

# Overload Relays

## SIRIUS 3RU2 Thermal Overload Relays

### General data

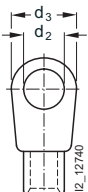
| Type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |    | 3RU21 16                                                               | 3RU21 26 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|------------------------------------------------------------------------|----------|
| Size                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |    | S00                                                                    | S0       |
| Width                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |    | 45 mm                                                                  | 45 mm    |
| <b>Auxiliary circuit</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |    |                                                                        |          |
| Number of NO contacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |    | 1                                                                      |          |
| Number of NC contacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |    | 1                                                                      |          |
| Auxiliary contacts – Assignment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |    | 1 NO for the signal "tripped",<br>1 NC for disconnecting the contactor |          |
| Rated insulation voltage $U_i$<br>(pollution degree 3)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | V  | 690                                                                    |          |
| Rated impulse withstand voltage $U_{imp}$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | kV | 6                                                                      |          |
| <b>Contact rating of the auxiliary contacts</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |    |                                                                        |          |
| <ul style="list-style-type: none"> <li>NC contact with alternating current AC-14/AC-15, rated operational current <math>I_e</math> at <math>U_e</math>: <ul style="list-style-type: none"> <li>- 24 V A 4</li> <li>- 120 V A 4</li> <li>- 125 V A 4</li> <li>- 230 V A 3</li> <li>- 400 V A 2</li> <li>- 600 V A 0.75</li> <li>- 690 V A 0.75</li> </ul> </li> <li>NO contact with alternating current AC-14/AC-15, rated operational current <math>I_e</math> at <math>U_e</math>: <ul style="list-style-type: none"> <li>- 24 V A 3</li> <li>- 120 V A 3</li> <li>- 125 V A 3</li> <li>- 230 V A 2</li> <li>- 400 V A 1</li> <li>- 600 V A 0.75</li> <li>- 690 V A 0.75</li> </ul> </li> <li>NC contact, NO contact with direct current DC-13, rated operational current <math>I_e</math> at <math>U_e</math>: <ul style="list-style-type: none"> <li>- 24 V A 1</li> <li>- 60 V A On request</li> <li>- 110 V A 0.22</li> <li>- 125 V A 0.22</li> <li>- 220 V A 0.11</li> </ul> </li> <li>Conventional thermal current <math>I_{th}</math> A 6</li> <li>Contact reliability (suitability for PLC control; 17 V, 5 mA) Yes</li> </ul> |    |                                                                        |          |
| <b>Short-circuit protection</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |    |                                                                        |          |
| <ul style="list-style-type: none"> <li>With fuse <ul style="list-style-type: none"> <li>- Operational class gG A 6</li> <li>- Quick A 10</li> </ul> </li> <li>With miniature circuit breaker (C characteristic) A 6<sup>1)</sup></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |    |                                                                        |          |
| Protective separation between main and auxiliary conducting path<br>acc. to IEC 60947-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | V  | ≥ 440                                                                  |          |
| <b>CSA, UL, UR rated data</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                        |          |
| Auxiliary circuit – Switching capacity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |    | B600, R300                                                             |          |

<sup>1)</sup> Up to  $I_k \leq 0.5$  kA;  $\leq 260$  V.

# Overload Relays

## SIRIUS 3RU2 Thermal Overload Relays

### General data

|                                                                                    |                 |                                                                                                                       |                 |
|------------------------------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------|-----------------|
| <b>Type</b>                                                                        |                 | <b>3RU21 16</b>                                                                                                       | <b>3RU21 26</b> |
| Size                                                                               |                 | S00                                                                                                                   | S0              |
| Width                                                                              |                 | 45 mm                                                                                                                 | 45 mm           |
| <b>Conductor cross-sections for auxiliary circuit</b>                              |                 |                                                                                                                       |                 |
| <b>Connection type screw terminals</b>                                             |                 |  <b>Screw terminals</b>              |                 |
| <b>Terminal screw</b>                                                              |                 | M3, Pozidriv size 2                                                                                                   |                 |
| <b>Operating devices</b>                                                           | mm              | ø 5 ... 6                                                                                                             |                 |
| <b>Prescribed tightening torque</b>                                                | Nm              | 0.8 ... 1.2                                                                                                           |                 |
| <b>Conductor cross-sections (min./max.),</b><br>1 or 2 conductors can be connected |                 |                                                                                                                       |                 |
| • Solid                                                                            | mm <sup>2</sup> | 2 x (0.5 ... 1.5) <sup>1)</sup> , 2 x (0.75 ... 2.5) <sup>1)</sup>                                                    |                 |
| • Finely stranded with end sleeves (DIN 46228 T1)                                  | mm <sup>2</sup> | 2 x (0.5 ... 1.5) <sup>1)</sup> , 2 x (0.75 ... 2.5) <sup>1)</sup>                                                    |                 |
| • AWG cables, solid or stranded                                                    | AWG             | 2 x (20 ... 16) <sup>1)</sup> , 2 x (18 ... 14) <sup>1)</sup>                                                         |                 |
| <b>Connection type spring-type terminals</b>                                       |                 |  <b>Spring-type terminals</b>        |                 |
| <b>Operating devices</b>                                                           | mm              | 3.0 x 0.5 and 3.5 x 0.5                                                                                               |                 |
| <b>Conductor cross-sections (min./max.)</b>                                        |                 |                                                                                                                       |                 |
| • Solid                                                                            | mm <sup>2</sup> | 2 x (0.5 ... 2.5)                                                                                                     |                 |
| • Finely stranded without end sleeve                                               | mm <sup>2</sup> | 2 x (0.5 ... 1.5)                                                                                                     |                 |
| • Finely stranded with end sleeves (DIN 46228 T1)                                  | mm <sup>2</sup> | 2 x (0.5 ... 1.5)                                                                                                     |                 |
| • AWG cables, solid or stranded                                                    | AWG             | 2 x (20 ... 14)                                                                                                       |                 |
| <b>Connection type ring terminal end</b>                                           |                 |  <b>Ring lug terminal connection</b> |                 |
| <b>Terminal screw</b>                                                              |                 | M3, Pozidriv size 2                                                                                                   |                 |
| <b>Operating devices</b>                                                           | mm              | ø 5 ... 6                                                                                                             |                 |
| <b>Prescribed tightening torque</b>                                                | Nm              | 0.8 ... 1.2                                                                                                           |                 |
| <b>Usable ring lug terminals</b>                                                   | mm              |                                     |                 |
| • DIN 46234 without insulation sleeve                                              |                 | d <sub>2</sub> = min. 3.2,<br>d <sub>3</sub> = max. 7.5                                                               |                 |
| • DIN 46225 without insulation sleeve                                              |                 |                                                                                                                       |                 |
| • DIN 46237 with insulation sleeve                                                 |                 |                                                                                                                       |                 |
| • JIS C2805 Type R without insulation sleeve                                       |                 |                                                                                                                       |                 |
| • JIS C2805 Type RAV with insulation sleeve                                        |                 |                                                                                                                       |                 |
| • JIS C2805 Type RAP with insulation sleeve                                        |                 |                                                                                                                       |                 |

<sup>1)</sup> If two different conductor cross-sections are connected to one clamping point, both cross-sections must lie in the range specified. If identical cross-sections are used, this restriction does not apply.

# Overload Relays

## SIRIUS 3RU2 Thermal Overload Relays

3RU2 up to 40 A  
for standard applications

### Selection and ordering data

#### 3RU21 thermal overload relays for mounting onto contactor<sup>1)</sup>, CLASS 10

Features and technical specifications:

- Screw, spring-type or ring lug terminal connection<sup>2)</sup>
- Overload and phase failure protection
- Auxiliary contacts 1 NO + 1 NC
- Manual and automatic RESET
- Switch position indicators
- TEST function
- STOP button
- Sealable covers (optional accessory)
- Terminal covers for devices with ring lug terminal connection (optional accessory)



3RU21 16-4AB0



3RU21 16-4AC0



3RU21 26-4FB0



3RU21 26-4AC0

| Size contactor <sup>3)</sup> | Current setting value of the current-dependent overload release | Screw terminals |  | Weight approx. | Spring-type terminals |  | Weight approx. |
|------------------------------|-----------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------|----------------|-----------------------|-------------------------------------------------------------------------------------|----------------|
|                              |                                                                 | Order No.       |                                                                                   | kg             | Order No.             |                                                                                     | kg             |
| A                            |                                                                 |                 |                                                                                   | kg             |                       |                                                                                     | kg             |
| Size S00                     |                                                                 |                 |                                                                                   |                |                       |                                                                                     |                |
| S00                          | 0.11 ... 0.16                                                   | 3RU21 16-0AB0   |                                                                                   | 0.130          | 3RU21 16-0AC0         |                                                                                     | 0.150          |
|                              | 0.14 ... 0.2                                                    | 3RU21 16-0BB0   |                                                                                   | 0.130          | 3RU21 16-0BC0         |                                                                                     | 0.150          |
|                              | 0.18 ... 0.25                                                   | 3RU21 16-0CB0   |                                                                                   | 0.130          | 3RU21 16-0CC0         |                                                                                     | 0.150          |
|                              | 0.22 ... 0.32                                                   | 3RU21 16-0DB0   |                                                                                   | 0.130          | 3RU21 16-0DC0         |                                                                                     | 0.150          |
|                              | 0.28 ... 0.4                                                    | 3RU21 16-0EB0   |                                                                                   | 0.130          | 3RU21 16-0EC0         |                                                                                     | 0.150          |
|                              | 0.35 ... 0.5                                                    | 3RU21 16-0FB0   |                                                                                   | 0.130          | 3RU21 16-0FC0         |                                                                                     | 0.150          |
|                              | 0.45 ... 0.63                                                   | 3RU21 16-0GB0   |                                                                                   | 0.130          | 3RU21 16-0GC0         |                                                                                     | 0.150          |
|                              | 0.55 ... 0.8                                                    | 3RU21 16-0HB0   |                                                                                   | 0.130          | 3RU21 16-0HC0         |                                                                                     | 0.150          |
|                              | 0.7 ... 1                                                       | 3RU21 16-0JB0   |                                                                                   | 0.130          | 3RU21 16-0JC0         |                                                                                     | 0.150          |
|                              | 0.9 ... 1.25                                                    | 3RU21 16-0KB0   |                                                                                   | 0.130          | 3RU21 16-0KC0         |                                                                                     | 0.150          |
|                              | 1.1 ... 1.6                                                     | 3RU21 16-1AB0   |                                                                                   | 0.130          | 3RU21 16-1AC0         |                                                                                     | 0.150          |
|                              | 1.4 ... 2                                                       | 3RU21 16-1BB0   |                                                                                   | 0.130          | 3RU21 16-1BC0         |                                                                                     | 0.150          |
|                              | 1.8 ... 2.5                                                     | 3RU21 16-1CB0   |                                                                                   | 0.130          | 3RU21 16-1CC0         |                                                                                     | 0.150          |
|                              | 2.2 ... 3.2                                                     | 3RU21 16-1DB0   |                                                                                   | 0.130          | 3RU21 16-1DC0         |                                                                                     | 0.150          |
|                              | 2.8 ... 4                                                       | 3RU21 16-1EB0   |                                                                                   | 0.130          | 3RU21 16-1EC0         |                                                                                     | 0.150          |
|                              | 3.5 ... 5                                                       | 3RU21 16-1FB0   |                                                                                   | 0.130          | 3RU21 16-1FC0         |                                                                                     | 0.150          |
|                              | 4.5 ... 6.3                                                     | 3RU21 16-1GB0   |                                                                                   | 0.130          | 3RU21 16-1GC0         |                                                                                     | 0.150          |
|                              | 5.5 ... 8                                                       | 3RU21 16-1HB0   |                                                                                   | 0.130          | 3RU21 16-1HC0         |                                                                                     | 0.150          |
|                              | 7 ... 10                                                        | 3RU21 16-1JB0   |                                                                                   | 0.130          | 3RU21 16-1JC0         |                                                                                     | 0.150          |
|                              | 9 ... 12.5                                                      | 3RU21 16-1KB0   |                                                                                   | 0.130          | 3RU21 16-1KC0         |                                                                                     | 0.150          |
|                              | 11 ... 16                                                       | 3RU21 16-4AB0   |                                                                                   | 0.130          | 3RU21 16-4AC0         |                                                                                     | 0.150          |
| Size S0                      |                                                                 |                 |                                                                                   |                |                       |                                                                                     |                |
| S0                           | 1.8 ... 2.5                                                     | 3RU21 26-1CB0   |                                                                                   | 0.160          | 3RU21 26-1CC0         |                                                                                     | 0.220          |
|                              | 2.2 ... 3.2                                                     | 3RU21 26-1DB0   |                                                                                   | 0.160          | 3RU21 26-1DC0         |                                                                                     | 0.220          |
|                              | 2.8 ... 4                                                       | 3RU21 26-1EB0   |                                                                                   | 0.160          | 3RU21 26-1EC0         |                                                                                     | 0.220          |
|                              | 3.5 ... 5                                                       | 3RU21 26-1FB0   |                                                                                   | 0.160          | 3RU21 26-1FC0         |                                                                                     | 0.220          |
|                              | 4.5 ... 6.3                                                     | 3RU21 26-1GB0   |                                                                                   | 0.160          | 3RU21 26-1GC0         |                                                                                     | 0.220          |
|                              | 5.5 ... 8                                                       | 3RU21 26-1HB0   |                                                                                   | 0.160          | 3RU21 26-1HC0         |                                                                                     | 0.220          |
|                              | 7 ... 10                                                        | 3RU21 26-1JB0   |                                                                                   | 0.160          | 3RU21 26-1JC0         |                                                                                     | 0.220          |
|                              | 9 ... 12.5                                                      | 3RU21 26-1KB0   |                                                                                   | 0.160          | 3RU21 26-1KC0         |                                                                                     | 0.220          |
|                              | 11 ... 16                                                       | 3RU21 26-4AB0   |                                                                                   | 0.160          | 3RU21 26-4AC0         |                                                                                     | 0.220          |
|                              | 14 ... 20                                                       | 3RU21 26-4BB0   |                                                                                   | 0.160          | 3RU21 26-4BC0         |                                                                                     | 0.220          |
|                              | 17 ... 22                                                       | 3RU21 26-4CB0   |                                                                                   | 0.160          | 3RU21 26-4CC0         |                                                                                     | 0.220          |
|                              | 20 ... 25                                                       | 3RU21 26-4DB0   |                                                                                   | 0.160          | 3RU21 26-4DC0         |                                                                                     | 0.220          |
|                              | 23 ... 28                                                       | 3RU21 26-4NB0   |                                                                                   | 0.160          | 3RU21 26-4NC0         |                                                                                     | 0.220          |
|                              | 27 ... 32                                                       | 3RU21 26-4EB0   |                                                                                   | 0.160          | 3RU21 26-4EC0         |                                                                                     | 0.220          |
|                              | 30 ... 36                                                       | 3RU21 26-4PB0   |                                                                                   | 0.160          | 3RU21 26-4PC0         |                                                                                     | 0.220          |
|                              | 34 ... 40                                                       | 3RU21 26-4FB0   |                                                                                   | 0.160          | 3RU21 26-4FC0         |                                                                                     | 0.220          |

<sup>1)</sup> For matching terminal brackets see "Accessories" on page 5/45.

<sup>2)</sup> The 3RU21 overload relays are also available with ring lug terminal connection. The Order No. must be changed in the 10th position to "J":  
e. g. 3RU21 16-0AJ0.

<sup>3)</sup> Observe maximum rated operational current of the devices.

# Overload Relays

## SIRIUS 3RU2 Thermal Overload Relays

3RU2 up to 40 A  
for standard applications

**3RU21 thermal overload relays for stand-alone installation<sup>1)</sup>, CLASS 10**

Features and technical specifications:

- Screw or spring-type terminals
- Overload and phase failure protection
- Auxiliary contacts 1 NO + 1 NC
- Manual and automatic RESET
- Switch position indicators
- TEST function
- STOP button
- Sealable covers (optional accessory)



3RU21 16-4AB1



3RU21 16-4AC1



3RU21 26-4FB1



3RU21 26-4FC1

| Size contactor <sup>2)</sup> | Current setting value of the current-dependent overload release | Screw terminals  | Weight approx. | Spring-type terminals  | Weight approx. |
|------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------------|----------------|-----------------------------------------------------------------------------------------------------------|----------------|
|                              | A                                                               | Order No.                                                                                         | kg             | Order No.                                                                                                 | kg             |
| <b>Size S00</b>              |                                                                 |                                                                                                   |                |                                                                                                           |                |
| S00                          | 0.11 ... 0.16                                                   | 3RU21 16-0AB1                                                                                     | 0.170          | 3RU21 16-0AC1                                                                                             | 0.190          |
|                              | 0.14 ... 0.2                                                    | 3RU21 16-0BB1                                                                                     | 0.170          | 3RU21 16-0BC1                                                                                             | 0.190          |
|                              | 0.18 ... 0.25                                                   | 3RU21 16-0CB1                                                                                     | 0.170          | 3RU21 16-0CC1                                                                                             | 0.190          |
|                              | 0.22 ... 0.32                                                   | 3RU21 16-0DB1                                                                                     | 0.170          | 3RU21 16-0DC1                                                                                             | 0.190          |
|                              | 0.28 ... 0.4                                                    | 3RU21 16-0EB1                                                                                     | 0.170          | 3RU21 16-0EC1                                                                                             | 0.190          |
|                              | 0.35 ... 0.5                                                    | 3RU21 16-0FB1                                                                                     | 0.170          | 3RU21 16-0FC1                                                                                             | 0.190          |
|                              | 0.45 ... 0.63                                                   | 3RU21 16-0GB1                                                                                     | 0.170          | 3RU21 16-0GC1                                                                                             | 0.190          |
|                              | 0.55 ... 0.8                                                    | 3RU21 16-0HB1                                                                                     | 0.170          | 3RU21 16-0HC1                                                                                             | 0.190          |
|                              | 0.7 ... 1                                                       | 3RU21 16-0JB1                                                                                     | 0.170          | 3RU21 16-0JC1                                                                                             | 0.190          |
|                              | 0.9 ... 1.25                                                    | 3RU21 16-0KB1                                                                                     | 0.170          | 3RU21 16-0KC1                                                                                             | 0.190          |
|                              | 1.1 ... 1.6                                                     | 3RU21 16-1AB1                                                                                     | 0.170          | 3RU21 16-1AC1                                                                                             | 0.190          |
|                              | 1.4 ... 2                                                       | 3RU21 16-1BB1                                                                                     | 0.170          | 3RU21 16-1BC1                                                                                             | 0.190          |
|                              | 1.8 ... 2.5                                                     | 3RU21 16-1CB1                                                                                     | 0.170          | 3RU21 16-1CC1                                                                                             | 0.190          |
|                              | 2.2 ... 3.2                                                     | 3RU21 16-1DB1                                                                                     | 0.170          | 3RU21 16-1DC1                                                                                             | 0.190          |
|                              | 2.8 ... 4                                                       | 3RU21 16-1EB1                                                                                     | 0.170          | 3RU21 16-1EC1                                                                                             | 0.190          |
|                              | 3.5 ... 5                                                       | 3RU21 16-1FB1                                                                                     | 0.170          | 3RU21 16-1FC1                                                                                             | 0.190          |
|                              | 4.5 ... 6.3                                                     | 3RU21 16-1GB1                                                                                     | 0.170          | 3RU21 16-1GC1                                                                                             | 0.190          |
|                              | 5.5 ... 8                                                       | 3RU21 16-1HB1                                                                                     | 0.170          | 3RU21 16-1HC1                                                                                             | 0.190          |
|                              | 7 ... 10                                                        | 3RU21 16-1JB1                                                                                     | 0.170          | 3RU21 16-1JC1                                                                                             | 0.190          |
|                              | 9 ... 12.5                                                      | 3RU21 16-1KB1                                                                                     | 0.170          | 3RU21 16-1KC1                                                                                             | 0.190          |
|                              | 11 ... 16                                                       | 3RU21 16-4AB1                                                                                     | 0.170          | 3RU21 16-4AC1                                                                                             | 0.280          |
| <b>Size S0</b>               |                                                                 |                                                                                                   |                |                                                                                                           |                |
| S0                           | 14 ... 20                                                       | 3RU21 26-4BB1                                                                                     | 0.200          | 3RU21 26-4BC1                                                                                             | 0.280          |
|                              | 17 ... 22                                                       | 3RU21 26-4CB1                                                                                     | 0.200          | 3RU21 26-4CC1                                                                                             | 0.280          |
|                              | 20 ... 25                                                       | 3RU21 26-4DB1                                                                                     | 0.200          | 3RU21 26-4DC1                                                                                             | 0.280          |
|                              | 23 ... 28                                                       | 3RU21 26-4NB1                                                                                     | 0.200          | 3RU21 26-4NC1                                                                                             | 0.280          |
|                              | 27 ... 32                                                       | 3RU21 26-4EB1                                                                                     | 0.200          | 3RU21 26-4EC1                                                                                             | 0.280          |
|                              | 30 ... 36                                                       | 3RU21 26-4PB1                                                                                     | 0.200          | 3RU21 26-4PC1                                                                                             | 0.280          |
|                              | 34 ... 40                                                       | 3RU21 26-4FB1                                                                                     | 0.200          | 3RU21 26-4FC1                                                                                             | 0.280          |
|                              |                                                                 |                                                                                                   |                |                                                                                                           |                |
|                              |                                                                 |                                                                                                   |                |                                                                                                           |                |
|                              |                                                                 |                                                                                                   |                |                                                                                                           |                |
|                              |                                                                 |                                                                                                   |                |                                                                                                           |                |
|                              |                                                                 |                                                                                                   |                |                                                                                                           |                |

<sup>1)</sup> Screw and snap-on mounting onto TH 35 standard mounting rail

<sup>2)</sup> Observe maximum rated operational current of the devices.

# Overload Relays

## SIRIUS 3RU2 Thermal Overload Relays

### Accessories

#### Overview

##### Overload relays for standard applications

The following optional accessories are available for the 3RU21 thermal overload relays:

- Terminal bracket for stand-alone installation with screw or spring-type terminals for each size
- Mechanical RESET for all sizes
- Cable release for resetting devices which are difficult to access for all sizes
- Electrical remote RESET module in three voltage variants for all sizes
- Sealable cover for all sizes
- Terminal covers for devices with ring lug terminal connection

#### Selection and ordering data

| Version                                                                                             | Size                                                                                                                                                                            | Order No. | Weight approx.<br>kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------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| Terminal brackets for stand-alone installation <sup>1)</sup>                                        |                                                                                                                                                                                 |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <br>3RU29 16-3AA01 | <b>Terminal brackets for overload relays with screw terminals</b><br>For separate mounting of the overload relays; screw and snap-on mounting onto TH 35 standard mounting rail | S00<br>S0 | <b>Screw terminals</b><br><br><b>3RU29 16-3AA01</b><br><b>3RU29 26-3AA01</b><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br>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<sup>1)</sup> The accessories are identical to those of the 3RB30/3RB31 solid-state overload relays.

