

OVERLOAD RELAY 9.0...12.5 A FOR MOTOR PROTECTION BGR S00, CLASS 10 STAND-ALONE INSTALLATION MAIN CIRCUIT: SCREW TERMINAL AUXILIARY CIRCUIT:SCREW TERMINAL MANUAL-AUTOMATIC-RESET



|                                                           |                             |
|-----------------------------------------------------------|-----------------------------|
| product brand name                                        | SIRIUS                      |
| Product designation                                       | 3RU2 thermal overload relay |
| General technical data:                                   |                             |
| Size of overload relay                                    | S00                         |
| Size of contactor can be combined company-specific        | S00                         |
| Active power loss total typical                           | 5.1 W                       |
| Insulation voltage with degree of pollution 3 Rated value | 690 V                       |
| Surge voltage resistance Rated value                      | 6 kV                        |
| Protection class IP                                       |                             |
| • on the front                                            | IP20                        |
| • of the terminal                                         | IP20                        |
| Shock resistance                                          |                             |
| • acc. to IEC 60068-2-27                                  | 8g / 11 ms                  |
| Type of assignment                                        | 2                           |
| Type of protection                                        | Ex e                        |
| Certificate of suitability relating to ATEX               | DMT 98 ATEX G 001           |
| Protection against electrical shock                       | finger-safe                 |
| Equipment marking acc. to DIN EN 81346-2                  | F                           |

**Ambient conditions:**

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

**Main circuit:**

|                                                                                                                              |                                   |
|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| <b>Number of poles for main current circuit</b>                                                                              | 3                                 |
| <b>Adjustable response value current of the current-dependent overload release</b>                                           | 9 ... 12.5 A                      |
| <b>Operating voltage</b> <ul style="list-style-type: none"><li>• Rated value</li><li>• at AC-3 Rated value maximum</li></ul> | <div>690 V</div> <div>690 V</div> |
| <b>Operating frequency Rated value</b>                                                                                       | 50 ... 60 Hz                      |
| <b>Operating current Rated value</b>                                                                                         | 12.5 A                            |

**Auxiliary circuit:**

|                                                                                                                                                                                                                      |                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| <b>Design of the auxiliary switch</b>                                                                                                                                                                                | integrated                                                                                |
| <b>Number of NC contacts</b> <ul style="list-style-type: none"><li>• for auxiliary contacts</li><li>— Note</li></ul>                                                                                                 | <div>1</div> <div>for contactor disconnection</div>                                       |
| <b>Number of NO contacts</b> <ul style="list-style-type: none"><li>• for auxiliary contacts</li><li>— Note</li></ul>                                                                                                 | <div>1</div> <div>for message "Tripped"</div>                                             |
| <b>Number of CO contacts</b> <ul style="list-style-type: none"><li>• for auxiliary contacts</li></ul>                                                                                                                | 0                                                                                         |
| <b>Operating current of the auxiliary contacts at AC-15</b> <ul style="list-style-type: none"><li>• at 24 V</li><li>• at 110 V</li><li>• at 120 V</li><li>• at 125 V</li><li>• at 230 V</li><li>• at 400 V</li></ul> | <div>3 A</div> <div>3 A</div> <div>3 A</div> <div>3 A</div> <div>2 A</div> <div>1 A</div> |
| <b>Operating current of the auxiliary contacts at DC-13</b> <ul style="list-style-type: none"><li>• at 24 V</li><li>• at 110 V</li><li>• at 125 V</li><li>• at 220 V</li></ul>                                       | <div>2 A</div> <div>0.22 A</div> <div>0.22 A</div> <div>0.11 A</div>                      |

**Protective and monitoring functions:**

|                                                                      |                          |
|----------------------------------------------------------------------|--------------------------|
| <b>Trip class</b>                                                    | CLASS 10                 |
| <b>Design of the overload release</b>                                | thermal                  |
| <b>UL/CSA ratings:</b>                                               |                          |
| <b>Full-load current (FLA) for three-phase AC motor</b>              |                          |
| • at 480 V Rated value                                               | 12.5 A                   |
| • at 600 V Rated value                                               | 12.5 A                   |
| <b>Contact rating of the auxiliary contacts acc. to UL</b>           | B600 / R300              |
| <b>Installation/ mounting/ dimensions:</b>                           |                          |
| <b>mounting position</b>                                             | any                      |
| <b>Mounting type</b>                                                 | stand-alone installation |
| <b>Height</b>                                                        | 89 mm                    |
| <b>Width</b>                                                         | 45 mm                    |
| <b>Depth</b>                                                         | 80 mm                    |
| <b>Required spacing</b>                                              |                          |
| • with side-by-side mounting                                         |                          |
| — forwards                                                           | 0 mm                     |
| — Backwards                                                          | 0 mm                     |
| — upwards                                                            | 6 mm                     |
| — downwards                                                          | 6 mm                     |
| — at the side                                                        | 6 mm                     |
| • for grounded parts                                                 |                          |
| — forwards                                                           | 0 mm                     |
| — Backwards                                                          | 0 mm                     |
| — upwards                                                            | 6 mm                     |
| — at the side                                                        | 6 mm                     |
| — downwards                                                          | 6 mm                     |
| • for live parts                                                     |                          |
| — forwards                                                           | 0 mm                     |
| — Backwards                                                          | 0 mm                     |
| — upwards                                                            | 6 mm                     |
| — downwards                                                          | 6 mm                     |
| — at the side                                                        | 6 mm                     |
| <b>Connections/ Terminals:</b>                                       |                          |
| <b>Product function</b>                                              |                          |
| • removable terminal for auxiliary and control circuit               | No                       |
| <b>Type of electrical connection</b>                                 |                          |
| • for main current circuit                                           | screw-type terminals     |
| • for auxiliary and control current circuit                          | screw-type terminals     |
| <b>Arrangement of electrical connectors for main current circuit</b> | Top and bottom           |

|                                                                                                                                                                                                                                                                                                                      |                                                                                                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Type of connectable conductor cross-section</b> <ul style="list-style-type: none"> <li>• for main contacts <ul style="list-style-type: none"> <li>— single or multi-stranded</li> <li>— finely stranded with core end processing</li> </ul> </li> <li>• for AWG conductors for main contacts</li> </ul>           | 2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²), 2x 4 mm²<br>2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)<br>2x (20 ... 16), 2x (18 ... 14), 2x 12 |
| <b>Type of connectable conductor cross-section</b> <ul style="list-style-type: none"> <li>• for auxiliary contacts <ul style="list-style-type: none"> <li>— single or multi-stranded</li> <li>— finely stranded with core end processing</li> </ul> </li> <li>• for AWG conductors for auxiliary contacts</li> </ul> | 2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²)<br>2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)<br>2x (20 ... 16), 2x (18 ... 14)                  |
| <b>Tightening torque</b> <ul style="list-style-type: none"> <li>• for main contacts with screw-type terminals</li> <li>• for auxiliary contacts with screw-type terminals</li> </ul>                                                                                                                                 | 0.8 ... 1.2 N·m<br>0.8 ... 1.2 N·m                                                                                                            |
| <b>Design of screwdriver shaft</b>                                                                                                                                                                                                                                                                                   | 5 to 6 mm diameter                                                                                                                            |
| <b>Design of the thread of the connection screw</b> <ul style="list-style-type: none"> <li>• for main contacts</li> <li>• of the auxiliary and control contacts</li> </ul>                                                                                                                                           | M3<br>M3                                                                                                                                      |

#### Safety related data:

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

#### Display:

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

#### Certificates/ approvals:

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



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

[spezielle  
Prüfbescheinigung](#)

[Typprüfbescheinigung/  
Werkszeugnis](#)



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



[Umweltbestätigung](#)

#### Further information

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

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

**Industry Mall (Online ordering system)**

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

**Cax online generator**

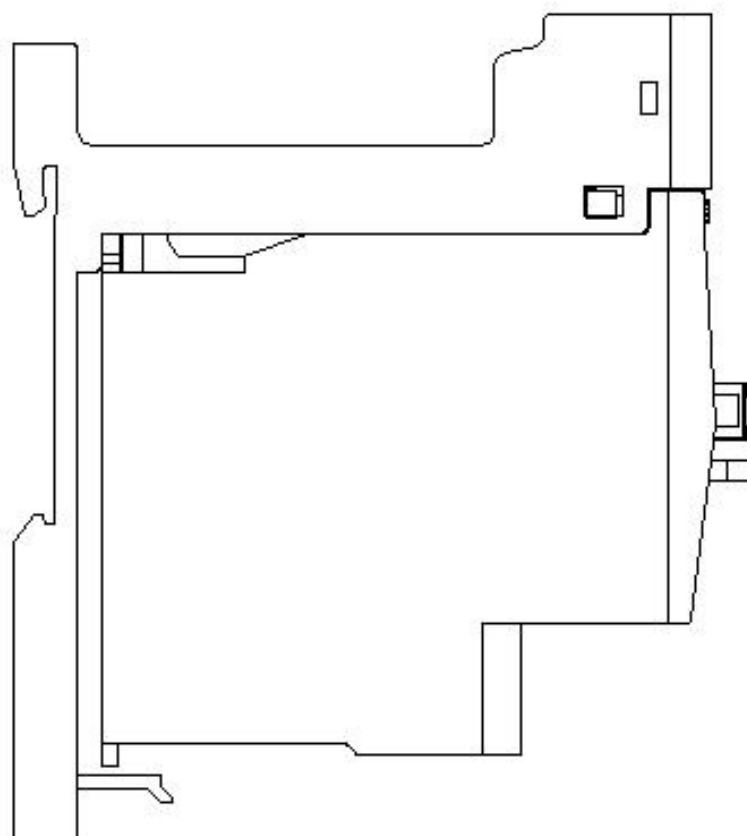
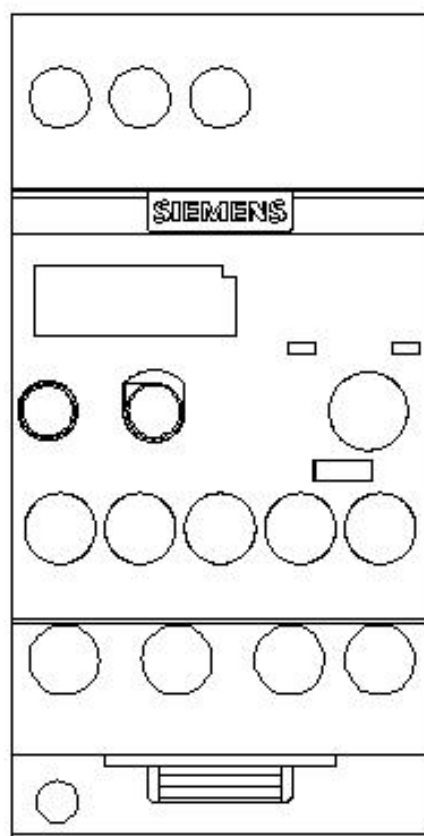
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU21161KB1>

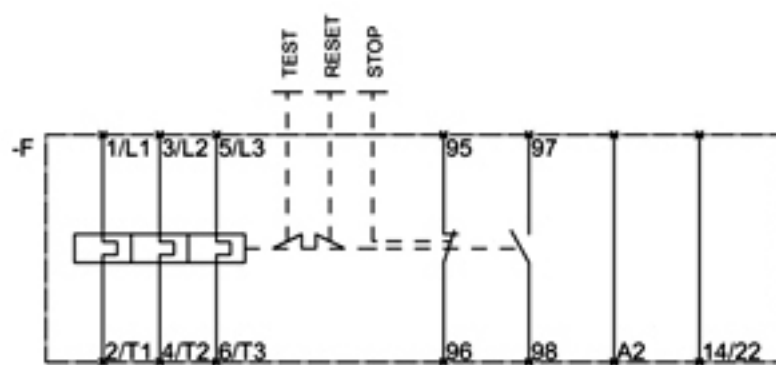
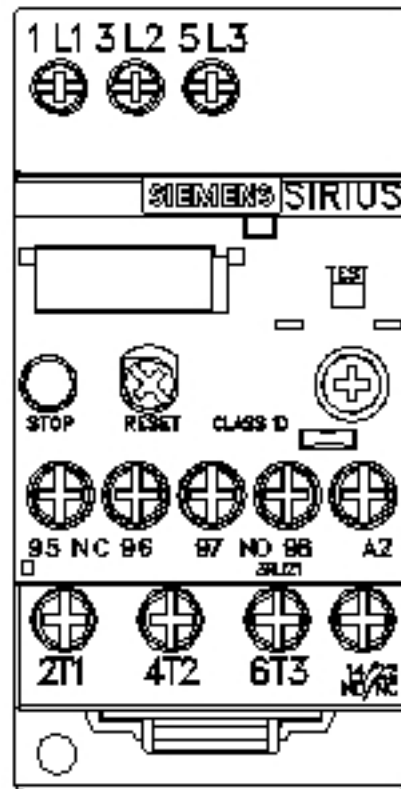
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<https://support.industry.siemens.com/cs/ww/en/ps/3RU21161KB1>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RU21161KB1&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU21161KB1&lang=en)





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