



OVERLOAD RELAY 27...32 A FOR MOTOR PROTECTION  
SZ S0,  
CLASS 10,  
F. MOUNTING ONTO CONTACTOR MAIN CIRCUIT:  
SCREW TERMINAL AUX. CIRCUIT: SCREW TERMINAL  
MANUAL-AUTOMATIC-RESET

### General technical data:

|                                                                            |     |                             |
|----------------------------------------------------------------------------|-----|-----------------------------|
| product brand name                                                         |     | SIRIUS                      |
| product designation                                                        |     | 3RU2 thermal overload relay |
| Protection class IP / on the front                                         |     | IP20                        |
| Insulation voltage / with degree of pollution 3                            |     |                             |
| • rated value                                                              | V   | 690                         |
| Installation altitude / at a height over sea level / maximum               | m   | 2,000                       |
| Ambient temperature                                                        |     |                             |
| • during transport                                                         | °C  | -55 ... +80                 |
| • during storage                                                           | °C  | -55 ... +80                 |
| • during operating                                                         | °C  | -40 ... +70                 |
| Relative humidity                                                          |     |                             |
| • during operating phase                                                   | / % | 90                          |
| Resistance against shock                                                   |     | 8g / 11 ms                  |
| Impulse voltage resistance / rated value                                   | kV  | 6                           |
| Active power loss / total / typical                                        | W   | 6.9                         |
| Item designation                                                           |     |                             |
| • according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 |     | F                           |
| • according to DIN EN 61346-2                                              |     | F                           |

|                                                                      |  |          |
|----------------------------------------------------------------------|--|----------|
| <b>Trip class</b>                                                    |  | CLASS 10 |
| <b>Type of assignment</b>                                            |  | 2        |
| <b>Size of overload relay</b>                                        |  | S0       |
| <b>Size of the contactor / can be combined</b><br>• company-specific |  | S0       |

|                                                                                                                    |                |                  |
|--------------------------------------------------------------------------------------------------------------------|----------------|------------------|
| <b>Main circuit:</b>                                                                                               |                |                  |
| <b>Number of poles / for main current circuit</b>                                                                  |                | 3                |
| <b>Operating voltage / at AC-3 / rated value</b><br>• maximum                                                      | V              | 690              |
| <b>Operating current / at AC-3 / at 400 V</b><br>• rated value                                                     | A              | 32               |
| <b>Service power / at AC-3</b><br>• at 400 V / rated value<br>• at 500 V / rated value<br>• at 690 V / rated value | kW<br>kW<br>kW | 15<br>18.5<br>30 |
| <b>Adjustable response current</b><br>• of the current-dependent overload release                                  | A              | 27 ... 32        |
| <b>Operating current / of the fuse link / rated value</b>                                                          | A              | 80               |

|                                                                                                                                                                                                                            |                                                               |                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------|
| <b>Auxiliary circuit:</b>                                                                                                                                                                                                  |                                                               |                                                             |
| <b>Contact reliability / of the auxiliary contacts</b>                                                                                                                                                                     |                                                               | < 1 error per 100 million operating cycles                  |
| <b>Number of NC contacts / for auxiliary contacts</b>                                                                                                                                                                      |                                                               | 1                                                           |
| <b>Number of NO contacts / for auxiliary contacts</b>                                                                                                                                                                      |                                                               | 1                                                           |
| <b>Number of change-over switches / for auxiliary contacts</b>                                                                                                                                                             |                                                               | 0                                                           |
| <b>Operating current / of the auxiliary contacts</b><br>• at AC-15<br>• at 24 V<br>• at 110 V<br>• at 120 V<br>• at 125 V<br>• at 230 V<br>• at 400 V<br>• at DC-13<br>• at 24 V<br>• at 110 V<br>• at 125 V<br>• at 220 V | A<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A | 3<br>3<br>3<br>3<br>2<br>1<br><br>1<br>0.22<br>0.22<br>0.11 |

|                       |  |  |
|-----------------------|--|--|
| <b>Short-circuit:</b> |  |  |
|-----------------------|--|--|

|                                                                                                  |    |                                                                                         |
|--------------------------------------------------------------------------------------------------|----|-----------------------------------------------------------------------------------------|
| <b>Design of the fuse link / for short-circuit protection of the auxiliary switch / required</b> |    | fuse gG: 10 A                                                                           |
| <b>Installation/mounting/dimensions:</b>                                                         |    |                                                                                         |
| <b>Built in orientation</b>                                                                      |    | vertical                                                                                |
| <b>Type of mounting</b>                                                                          |    | direct mounting                                                                         |
| <b>Width</b>                                                                                     | mm | 45                                                                                      |
| <b>Height</b>                                                                                    | mm | 87                                                                                      |
| <b>Depth</b>                                                                                     | mm | 73                                                                                      |
| <b>Distance, to be maintained, to the ranks assembly</b>                                         |    |                                                                                         |
| • forwards                                                                                       | mm | 0                                                                                       |
| • backwards                                                                                      | mm | 0                                                                                       |
| • upwards                                                                                        | mm | 6                                                                                       |
| • downwards                                                                                      | mm | 6                                                                                       |
| • sideways                                                                                       | mm | 6                                                                                       |
| <b>Distance, to be maintained, to earthed part</b>                                               |    |                                                                                         |
| • forwards                                                                                       | mm | 0                                                                                       |
| • backwards                                                                                      | mm | 0                                                                                       |
| • upwards                                                                                        | mm | 6                                                                                       |
| • downwards                                                                                      | mm | 6                                                                                       |
| • sideways                                                                                       | mm | 6                                                                                       |
| <b>Distance, to be maintained, conductive elements</b>                                           |    |                                                                                         |
| • forwards                                                                                       | mm | 0                                                                                       |
| • backwards                                                                                      | mm | 0                                                                                       |
| • upwards                                                                                        | mm | 6                                                                                       |
| • downwards                                                                                      | mm | 6                                                                                       |
| • sideways                                                                                       | mm | 6                                                                                       |
| <b>Connections:</b>                                                                              |    |                                                                                         |
| <b>Design of the electrical connection</b>                                                       |    |                                                                                         |
| • for main current circuit                                                                       |    | screw-type terminals                                                                    |
| • for auxiliary and control current circuit                                                      |    | screw-type terminals                                                                    |
| <b>Product function / removable terminal for auxiliary and control circuit</b>                   |    | No                                                                                      |
| <b>Type of the connectable conductor cross-section</b>                                           |    |                                                                                         |
| • for main contacts                                                                              |    |                                                                                         |
| • solid                                                                                          |    | 2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 10 mm <sup>2</sup> )                       |
| • finely stranded                                                                                |    |                                                                                         |
| • with conductor end processing                                                                  |    | 2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup> |
| • for AWG conductors / for main contacts                                                         |    | 2x (16 ... 12), 2x (14 ... 8)                                                           |
| • for auxiliary contacts                                                                         |    |                                                                                         |

- solid
- finely stranded
  - with conductor end processing
- for AWG conductors / for auxiliary contacts

2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>)

2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>)

2x (20 ... 16), 2x (18 ... 14)

## Certificates/approvals:

### Verification of suitability

- ATEX

CE / UL / CSA

Yes

### General Product Approval

### For use in hazardous locations



CCC



CSA



GOST



UL



ATEX

### Test Certificates

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

### Shipping Approval



ABS



DNV



GL



LRS



PRS



RINA

### Shipping Approval

other



RMRS

[Declaration of Conformity](#)

## UL/CSA ratings:

Contact rating designation / for auxiliary contacts / according to UL

B600 / R300

## Reliability figures:

Mean time to failure (MTTF) / with high demand rate

a

2,280

Proportion of dangerous failures

- with low demand rate / according to SN 31920

%

50

- with high demand rate / according to SN 31920

%

50

Failure rate (FIT value) / with low demand rate

- according to SN 31920

FIT

50

T1 value / for proof test interval or service life

- according to IEC 61508

a

20

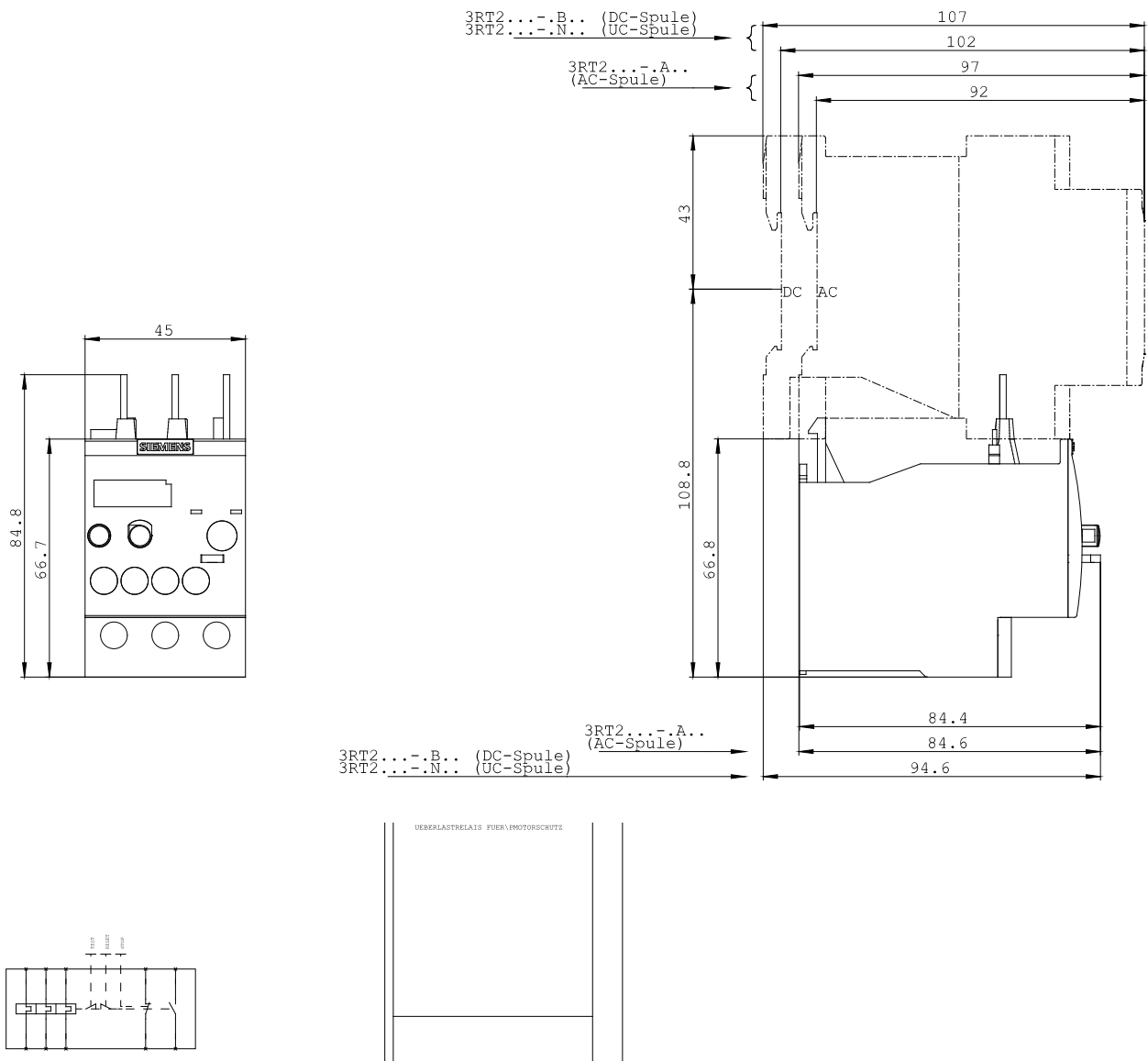
Protection against electrical shock

finger-safe

## Further information:

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

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



last change:

Mar 27, 2012