



OVERLOAD RELAY 20...25 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 / 10 ms                  |
| Impulse voltage resistance / rated value                                   | kV  | 6                           |
| Active power loss / total / typical  | W   | 6.2                         |
| 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              | 25             |
| <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 | 11<br>15<br>22 |
| <b>Adjustable response current</b><br>• of the current-dependent overload release                                  | A              | 20 ... 25      |
| <b>Operating current / of the fuse link / rated value</b>  | A              | 63             |

|  |  |   |
|--|--|---|
| <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<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> )                       |
| • stranded   |    | 2x (1.0 ... 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

No

##### General Product Approval

For use in  
hazardous  
locations

##### Test Certificates



CQC



CSA

[ROSTEST](#)



UL

[DEKRA EXAM,](#)  
[DMT](#)

[Manufacturer](#)

##### Shipping Approval



ABS



DNV



GL



LRS



PRS



RINA

##### Shipping Approval

other



RMRS

[Manufacturer](#)

#### 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
- with high demand rate / according to SN 31920

%

50

%

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,...)

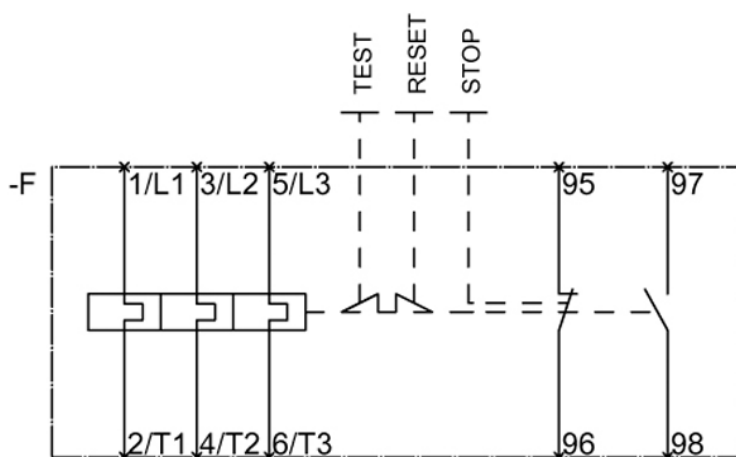
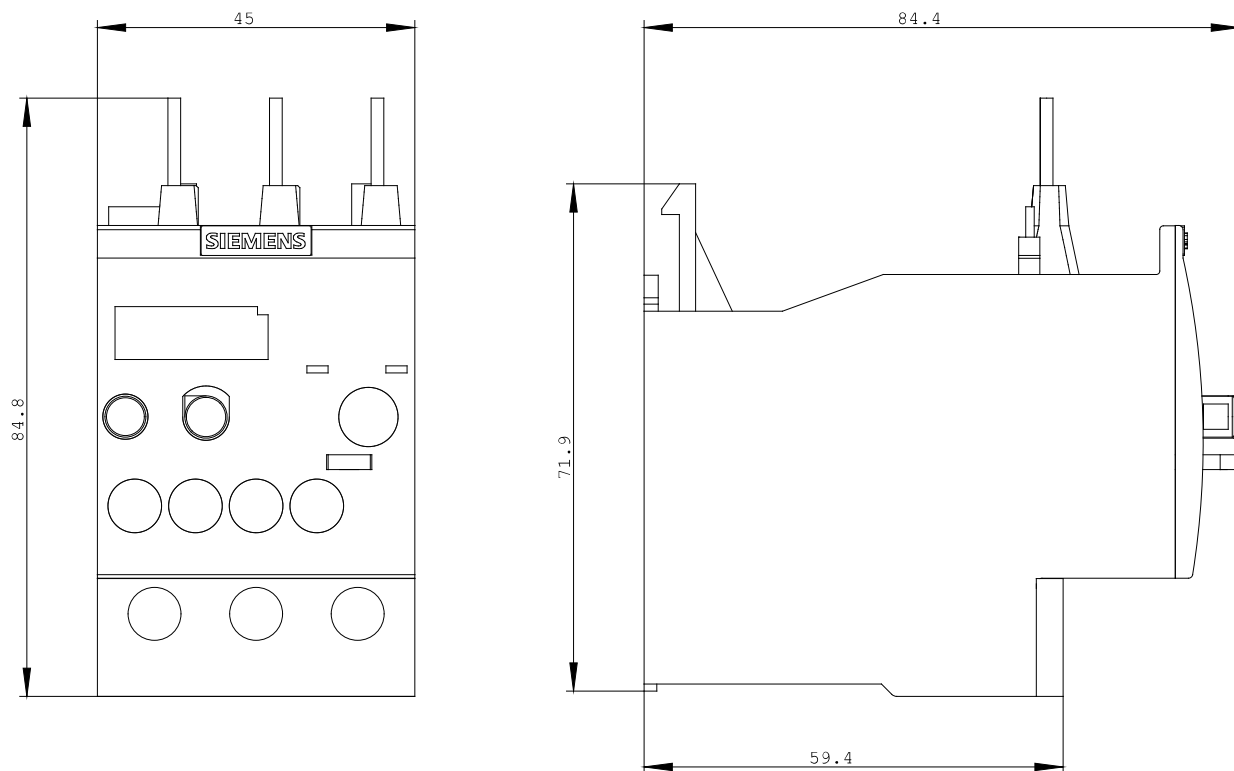
<http://www.siemens.com/industrial-controls/catalogs>

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

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

##### Cax online generator:

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



last change:

Oct 17, 2011