

### THERM. OVERLOAD RELAY 1.8 - 2.5 A

#### General technical data:

|                                                                             |     |            |
|-----------------------------------------------------------------------------|-----|------------|
| <b>Product brand name</b>                                                   |     | SIRIUS     |
| <b>Protection class IP / frontal/front side</b>                             |     | IP20       |
| <b>Insulation voltage / with degree of pollution 3</b>                      |     |            |
| • rated value                                                               | V   | 690        |
| <b>Altitude of installation site / at a height over sea level / maximum</b> | m   | 2,000      |
| <b>Ambient temperature</b>                                                  |     |            |
| • during transport                                                          | °C  | -55 ... 80 |
| • during storage                                                            | °C  | -55 ... 80 |
| • during the operating phase                                                | °C  | -40 ... 70 |
| <b>Relative humidity</b>                                                    |     |            |
| • during the operating phase                                                | / % | 90         |
| <b>Resistance against shock</b>                                             |     | 8g / 10 ms |
| <b>Impulse voltage resistance / rated value</b>                             | kV  | 6          |
| <b>Real loss power / total / typical</b>                                    | W   | 3.9        |
| <b>Item designation</b>                                                     |     |            |
| • 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>                                               |     | S00        |
| <b>Size of the contactor / can be combined</b>                              |     |            |
| • company-specific                                                          |     | S00        |

#### Main circuit:

|                                                   |    |      |
|---------------------------------------------------|----|------|
| <b>Number of poles / for main current circuit</b> |    | 3    |
| <b>Operating voltage / at 3 AC / rated value</b>  |    |      |
| • maximum                                         | V  | 690  |
| <b>Operating current / at AC-3 / at 400 V</b>     |    |      |
| • rated value                                     | A  | 2.5  |
| <b>Service power / at AC-3</b>                    |    |      |
| • at 400 V / rated value                          | kW | 0.75 |

|                                                           |    |             |
|-----------------------------------------------------------|----|-------------|
| • at 500 V / rated value                                  | kW | 1.1         |
| • at 690 V / rated value                                  | W  | 1,500       |
| <b>Adjustable response current</b>                        |    |             |
| • of the current-dependent overload release               | A  | 1.8 ... 2.5 |
| <b>Operating current / of the fuse link / rated value</b> | A  | 10          |

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

| Short-circuit:                                                                                   |  |               |
|--------------------------------------------------------------------------------------------------|--|---------------|
| <b>Design of the fuse link / for short-circuit protection of the auxiliary switch / required</b> |  | fuse gG: 10 A |

| Installation/mounting/dimensions:                        |    |                 |
|----------------------------------------------------------|----|-----------------|
| <b>built in orientation</b>                              |    | vertical        |
| <b>Type of fixing/fixation</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 |

#### Connections:

|                                                                                |  |                                                                                                                        |
|--------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------|
| <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                                                            |  |                                                                                                                        |
| • unifilar                                                                     |  | 2 x (0.5 ... 1.5 mm <sup>2</sup> ), 2 x (0.75 ... 2.5 mm <sup>2</sup> ), 2 x (0.5 ... 4 mm <sup>2</sup> )              |
| • stranded wire                                                                |  | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ), 2x 0.5 mm <sup>2</sup> ... 2x 4 mm <sup>2</sup> |
| • stranded wire                                                                |  |                                                                                                                        |
| • with conductor end processing                                                |  | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )                                                  |
| • at AWG-conductors / for main contacts                                        |  | 2x (20 ... 16), 2x (18 ... 14)                                                                                         |
| • for auxiliary contacts                                                       |  |                                                                                                                        |
| • solid                                                                        |  | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )                                                  |
| • finely stranded                                                              |  |                                                                                                                        |
| • with wire end processing                                                     |  | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )                                                  |
| • for AWG conductors / for auxiliary contacts                                  |  | 2x (20 ... 16), 2x (18 ... 14)                                                                                         |

#### Certificates/approvals:

|                                    |  |               |
|------------------------------------|--|---------------|
| <b>verification of suitability</b> |  | CE / UL / CSA |
| • ATEX                             |  | No            |

#### Safety:

|                                                            |   |       |
|------------------------------------------------------------|---|-------|
| <b>Mean time to failure (MTTF) / with high demand rate</b> |   |       |
| • according to SN 31920                                    | a | 2,280 |
| <b>Proportion of dangerous failures</b>                    |   |       |

|                                                           |     |             |
|-----------------------------------------------------------|-----|-------------|
| • with low demand rate / according to SN 31920            | %   | 50          |
| • with high demand rate / according to SN 31920           | %   | 50          |
| <b>Failure rate (FIT value) / with low demand rate</b>    |     |             |
| • according to SN 31920                                   | FIT | 50          |
| <b>T1 value / for proof test interval or service life</b> |     |             |
| • according to IEC 61508                                  | a   | 20          |
| <b>Protection against electrical shock</b>                |     | finger-safe |

#### Further information:

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

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

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

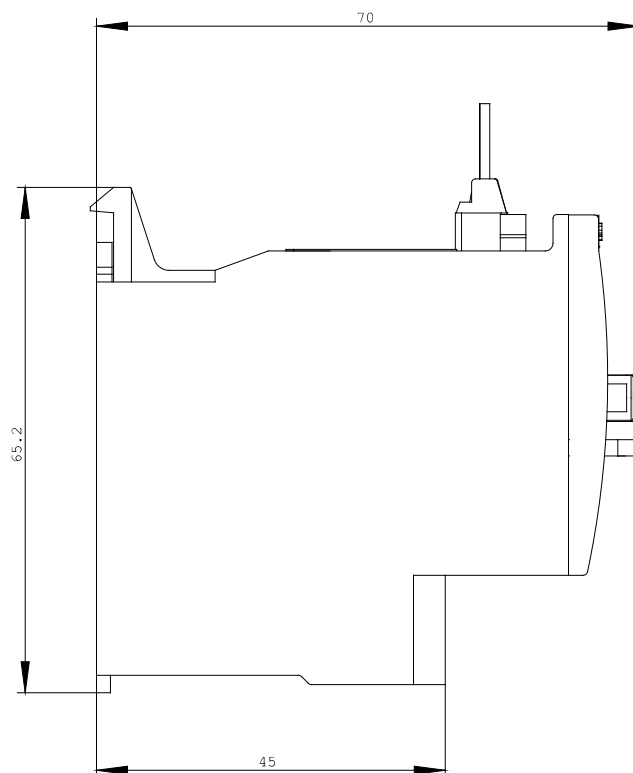
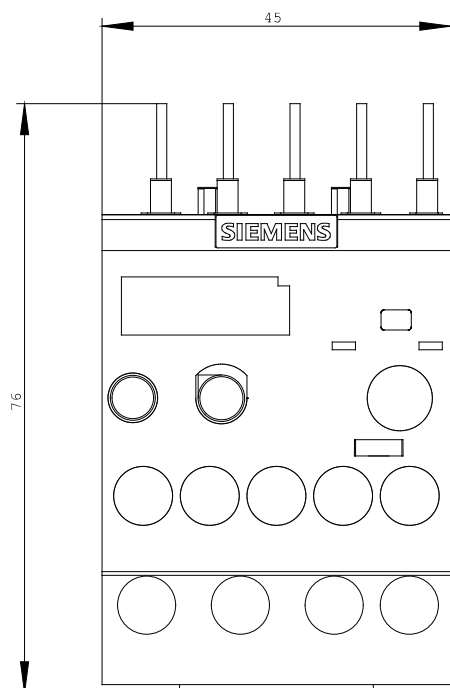
<http://www.siemens.com/industrial-controls/mall>

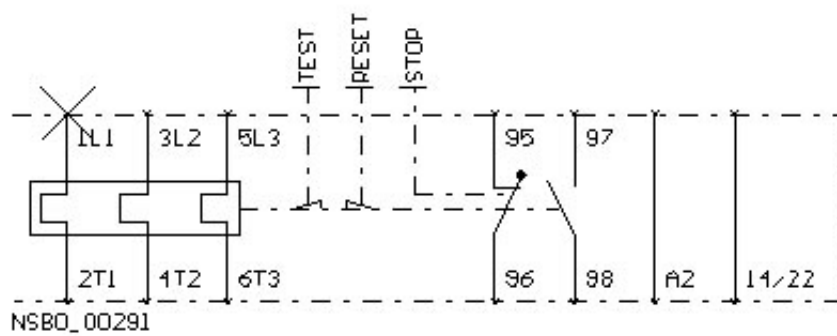
##### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3RU2116-1CB0/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RU2116-1CB0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RU2116-1CB0)





last change:

Apr 26, 2010