



Overload relay 1.4...2.0 A Thermal For motor protection Size S00, Class 10
 Contactor mounting Main circuit: Spring-type terminal Auxiliary circuit:
 spring-type terminal Manual-Automatic-Reset

| | |
|--|------------------------|
| product brand name | SIRIUS |
| product designation | thermal overload relay |
| product type designation | 3RU2 |
| General technical data | |
| size of overload relay | S00 |
| size of contactor can be combined company-specific | S00 |
| power loss [W] for rated value of the current at AC in hot operating state | 5.7 W |
| • per pole | 1.9 W |
| insulation voltage with degree of pollution 3 at AC rated value | 690 V |
| surge voltage resistance rated value | 6 kV |
| maximum permissible voltage for safe isolation in networks with grounded star point | |
| • between auxiliary and auxiliary circuit | 440 V |
| • between auxiliary and auxiliary circuit | 440 V |
| • between main and auxiliary circuit | 440 V |
| • between main and auxiliary circuit | 440 V |
| shock resistance according to IEC 60068-2-27 | 8g / 11 ms |
| type of protection according to ATEX directive 2014/34/EU | Ex II (2) GD |
| certificate of suitability according to ATEX directive 2014/34/EU | DMT 98 ATEX G 001 |
| reference code according to IEC 81346-2 | F |
| Substance Prohibitance (Date) | 10/01/2009 |
| Ambient conditions | |
| installation altitude at height above sea level maximum | 2 000 m |
| ambient temperature | |
| • during operation | -40 ... +70 °C |
| • during storage | -55 ... +80 °C |
| • during transport | -55 ... +80 °C |
| temperature compensation | -40 ... +60 °C |
| relative humidity during operation | 10 ... 95 % |
| Main circuit | |
| number of poles for main current circuit | 3 |
| adjustable current response value current of the current-dependent overload release | 1.4 ... 2 A |
| operating voltage | |
| • rated value | 690 V |
| • at AC-3e rated value maximum | 690 V |
| operating frequency rated value | 50 ... 60 Hz |

| | |
|---|---------------------------------|
| operational current rated value | 2 A |
| operational current at AC-3e at 400 V rated value | 2 A |
| operating power | |
| • at AC-3 | |
| — at 400 V rated value | 0.75 kW |
| — at 500 V rated value | 0.75 kW |
| — at 690 V rated value | 1.1 kW |
| • at AC-3e | |
| — at 400 V rated value | 0.75 kW |
| — at 500 V rated value | 0.75 kW |
| — at 690 V rated value | 1.1 kW |
| Auxiliary circuit | |
| design of the auxiliary switch | integrated |
| number of NC contacts for auxiliary contacts | 1 |
| • note | for contactor disconnection |
| number of NO contacts for auxiliary contacts | 1 |
| • note | for message "Tripped" |
| number of CO contacts for auxiliary contacts | 0 |
| operational current of auxiliary contacts at AC-15 | |
| • at 24 V | 3 A |
| • at 110 V | 3 A |
| • at 120 V | 3 A |
| • at 125 V | 3 A |
| • at 230 V | 2 A |
| • at 400 V | 1 A |
| operational current of auxiliary contacts at DC-13 | |
| • at 24 V | 2 A |
| • at 60 V | 0.3 A |
| • at 110 V | 0.22 A |
| • at 125 V | 0.22 A |
| • at 220 V | 0.11 A |
| contact rating of auxiliary contacts according to UL | B600 / R300 |
| Protective and monitoring functions | |
| trip class | CLASS 10 |
| design of the overload release | thermal |
| UL/CSA ratings | |
| full-load current (FLA) for 3-phase AC motor | |
| • at 480 V rated value | 2 A |
| • at 600 V rated value | 2 A |
| Short-circuit protection | |
| design of the fuse link | |
| • for short-circuit protection of the auxiliary switch required | fuse gG: 6 A, quick: 10 A |
| Installation/ mounting/ dimensions | |
| mounting position | any |
| fastening method | Contactormounting |
| height | 87 mm |
| width | 45 mm |
| depth | 70 mm |
| Connections/ Terminals | |
| product component removable terminal for auxiliary and control circuit | No |
| type of electrical connection | |
| • for main current circuit | spring-loaded terminals |
| • for auxiliary and control circuit | spring-loaded terminals |
| arrangement of electrical connectors for main current circuit | Top and bottom |
| type of connectable conductor cross-sections | |
| • for main contacts | |
| — solid or stranded | 1x (0,5 ... 4 mm ²) |

| | |
|---|---|
| — finely stranded with core end processing | 1x (0.5 ... 2.5 mm ²) |
| — finely stranded without core end processing | 1x (0.5 ... 2.5 mm ²) |
| • at AWG cables for main contacts | 1x (20 ... 12) |
| type of connectable conductor cross-sections | |
| • for auxiliary contacts | |
| — solid or stranded | 2x (0.5 ... 2.5 mm ²) |
| — finely stranded with core end processing | 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) |
| — finely stranded without core end processing | 2x (0.5 ... 1.5 mm ²) |
| • at AWG cables for auxiliary contacts | 2x (20 ... 14) |
| design of screwdriver shaft | Diameter 3 mm |
| size of the screwdriver tip | 3,0 x 0,5 mm |

| Safety related data | |
|---|--|
| failure rate [FIT] with low demand rate according to SN 31920 | 50 FIT |
| MTTF with high demand rate | 2 280 y |
| T1 value for proof test interval or service life according to IEC 61508 | 20 y |
| protection class IP on the front according to IEC 60529 | IP20 |
| touch protection on the front according to IEC 60529 | finger-safe, for vertical contact from the front |

| Display | |
|--------------------------------------|--------------|
| display version for switching status | Slide switch |

| Certificates/ approvals | |
|--------------------------|--------------------------------|
| General Product Approval | For use in hazardous locations |



[Confirmation](#)



| For use in hazardous locations | Declaration of Conformity | Test Certificates | Marine / Shipping |
|--------------------------------|---------------------------|--|--|
| | | | |
| IECEX | UKCA | EG-Konf. | ABS |
| | | Special Test Certificate | Type Test Certificates/Test Report |

| Marine / Shipping | | | | | |
|-------------------|-----|-----|-----|------|------|
| | | | | | |
| BUREAU VERITAS | DNV | LRS | PRS | RINA | RMRS |

| other | Railway |
|------------------------------|-------------------------------------|
| Confirmation | Vibration and Shock |

| Further information |
|---|
| Information- and Downloadcenter (Catalogs, Brochures,...) https://www.siemens.com/ic10 |
| Industry Mall (Online ordering system) https://mall.industry.siemens.com/mall/en/en/Catalog/product?mfb=3RU2116-1BC0 |

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2116-1BC0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1BC0>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2116-1BC0&lang=en

Characteristic: Tripping characteristics, I_t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1BC0/char>

Further characteristics (e.g. electrical endurance, switching frequency)

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2116-1BC0&objecttype=14&gridview=view1>

last modified:

3/8/2022 