













overload relay 40... 50 A thermal for motor protection frame size S2, Class 10
stand-alone installation main circuit: screw auxiliary circuit: spring-loaded terminal
manual-automatic RESET

| | |
|--|------------------------|
| product brand name | SIRIUS |
| product designation | thermal overload relay |
| product type designation | 3RU2 |
| General technical data | |
| size of overload relay | S2 |
| size of contactor can be combined company-specific | S2 |
| power loss [W] for rated value of the current at AC in hot operating state | 15.6 W |
| • per pole | 5.2 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 protective separation | |
| • in networks with ungrounded star point between auxiliary and auxiliary circuit | 415 V |
| • in networks with grounded star point between auxiliary and auxiliary circuit | 415 V |
| • in networks with ungrounded star point between main and auxiliary circuit | 690 V |
| • in networks with grounded star point between main and auxiliary circuit | 690 V |
| shock resistance according to IEC 60068-2-27 | 8g / 11 ms |
| recovery time after overload trip | |
| • with automatic reset typical | 10 min |
| • with remote-reset | 10 min |
| • with manual reset | 10 min |
| reference code according to IEC 81346-2 | F |
| Substance Prohibition (Date) | 10/15/2014 |
| SVHC substance name | Lead - 7439-92-1 |
| Weight | 0.478 kg |
| 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 % |
| Environmental footprint | |
| Environmental Product Declaration (EPD) | Yes |
| global warming potential [CO ₂ eq] total | 67.7 kg |
| global warming potential [CO ₂ eq] during manufacturing | 2.02 kg |
| global warming potential [CO ₂ eq] during sales | 0.076 kg |

| | |
|---|---|
| global warming potential [CO2 eq] during operation | 65.6 kg |
| global warming potential [CO2 eq] after end of life | -0.07 kg |
| Main circuit | |
| number of poles for main current circuit | 3 |
| adjustable current response value current of the current-dependent overload release | 40 ... 50 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 | 50 A |
| operational current at AC-3e at 400 V rated value | 50 A |
| operating power | |
| • at AC-3 | |
| — at 400 V rated value | 22 kW |
| — at 500 V rated value | 30 kW |
| — at 690 V rated value | 45 kW |
| • at AC-3e | |
| — at 400 V rated value | 22 kW |
| — at 500 V rated value | 30 kW |
| — at 690 V rated value | 45 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 |
| • at 690 V | 0.75 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 |
| design of the miniature circuit breaker for short-circuit protection of the auxiliary switch required | 6A (SCC less than equal to 0.5 kA; U less than equal to 260V) |
| 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 | 50 A |
| • at 600 V rated value | 50 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 | stand-alone installation: with a vertical mounting plane +/-135° rotatable and +/-45° tiltable; for more details see manual |
| fastening method | stand-alone installation |
| height | 105 mm |
| width | 55 mm |

| | | | | | |
|--|--|---|---|---|---|
| depth | 117 mm | | | | |
| Connections/ Terminals | | | | | |
| product component removable terminal for auxiliary and control circuit | No | | | | |
| type of electrical connection <ul style="list-style-type: none"> for main current circuit for auxiliary and control circuit | screw-type terminals spring-loaded terminals | | | | |
| arrangement of electrical connectors for main current circuit | Top and bottom | | | | |
| type of connectable conductor cross-sections <ul style="list-style-type: none"> for main contacts <ul style="list-style-type: none"> solid or stranded finely stranded with core end processing for AWG cables for main contacts | 2x (1 ... 35 mm ²), 1x (1 ... 50 mm ²) 2x (1 ... 25 mm ²), 1x (1 ... 35 mm ²) 2x (18 ... 2), 1x (18 ... 1) | | | | |
| type of connectable conductor cross-sections <ul style="list-style-type: none"> for auxiliary contacts <ul style="list-style-type: none"> solid or stranded finely stranded with core end processing finely stranded without core end processing for AWG cables for auxiliary contacts | 2x (0.5 ... 2.5 mm ²) 2x (0.5 ... 1.5 mm ²) 2x (0.5 ... 2.5 mm ²) 2x (20 ... 14) | | | | |
| tightening torque <ul style="list-style-type: none"> for main contacts with screw-type terminals | 3 ... 4.5 N·m | | | | |
| design of screwdriver shaft | Diameter 5 ... 6 mm | | | | |
| size of the screwdriver tip | Pozidriv PZ 2 | | | | |
| design of the thread of the connection screw <ul style="list-style-type: none"> for main contacts | M6 | | | | |
| IEC 61508 | | | | | |
| T1 value <ul style="list-style-type: none"> for proof test interval or service life according to IEC 61508 | 20 a | | | | |
| Electrical Safety | | | | | |
| 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 | | | | |
| Approvals Certificates | | | | | |
| General Product Approval | For use in hazardous locations | | | | |
|  |  |  |  |  |  |
| For use in hazardous locations | Test Certificates | Maritime application | | | |
|  | Miscellaneous | Special Test Certificate | Type Test Certificates/Test Report |  |  |
| Maritime application | other | | | | |
|  |  |  |  |  |  |
| other | Railway | Environment | | | |



Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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?mlfb=3RU2136-4HD1>

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2136-4HD1>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2136-4HD1>

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

https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2136-4HD1&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2136-4HD1/char>

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

<https://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2136-4HD1&objecttype=14&gridview=view1>

