



Overload relay 9.0...12.5 A Thermal For motor protection Size S00, Class 10
 Contactor mounting Main circuit: Screw Auxiliary circuit: Screw Manual-Automatic-Reset

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| 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 | 6.6 W |
| • per pole | 2.2 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 | 440 V |
| • in networks with grounded star point between auxiliary and auxiliary circuit | 440 V |
| • in networks with ungrounded star point between main and auxiliary circuit | 440 V |
| • in networks with grounded star point between main and auxiliary circuit | 440 V |
| shock resistance according to IEC 60068-2-27 | 8g / 11 ms |
| reference code according to IEC 81346-2 | F |
| Substance Prohibitance (Date) | 10/01/2009 |
| SVHC substance name | Lead - 7439-92-1 |
| Weight | 0.154 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 % |
| Main circuit | |
| number of poles for main current circuit | 3 |
| adjustable current response value current of the current-dependent overload release | 9 ... 12.5 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 | 12.5 A |

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| operational current at AC-3e at 400 V rated value | 12.5 A |
| operating power | |
| • at AC-3 | |
| — at 400 V rated value | 5.5 kW |
| — at 500 V rated value | 7.5 kW |
| — at 690 V rated value | 7.5 kW |
| • at AC-3e | |
| — at 400 V rated value | 5.5 kW |
| — at 500 V rated value | 7.5 kW |
| — at 690 V rated value | 7.5 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 |
| 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 | 12.5 A |
| • at 600 V rated value | 12.5 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 | Contactor mounting |
| height | 76 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 | screw-type terminals |
| • for auxiliary and control circuit | screw-type terminals |
| arrangement of electrical connectors for main current circuit | Top and bottom |
| type of connectable conductor cross-sections | |
| • for main contacts | |
| — solid or stranded | 2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²), 2x 4 mm² |
| — finely stranded with core end processing | 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²) |
| • for AWG cables for main contacts | 2x (20 ... 16), 2x (18 ... 14), 2x 12 |

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|---|---|
| type of connectable conductor cross-sections | |
| <ul style="list-style-type: none"> for auxiliary contacts <ul style="list-style-type: none"> — solid or stranded | 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) |
| <ul style="list-style-type: none"> — finely stranded with core end processing | 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) |
| <ul style="list-style-type: none"> for AWG cables for auxiliary contacts | 2x (20 ... 16), 2x (18 ... 14) |
| tightening torque | |
| <ul style="list-style-type: none"> for main contacts with screw-type terminals | 0.8 ... 1.2 N·m |
| <ul style="list-style-type: none"> for auxiliary contacts with screw-type terminals | 0.8 ... 1.2 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 | M3 |
| <ul style="list-style-type: none"> of the auxiliary and control contacts | M3 |

Safety related data

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| failure rate [FIT] with low demand rate according to SN 31920 | 50 FIT |
| MTTF with high demand rate | 2 280 a |
| 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

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| 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

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| display version for switching status | Slide switch |
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Approvals Certificates

General Product Approval



[Confirmation](#)



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| For use in hazardous locations | Test Certificates | Marine / Shipping |
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[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping



| | | |
|--------------|----------------|--------------------|
| other | Railway | Environment |
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[Miscellaneous](#)

[Confirmation](#)

[Special Test Certificate](#)



[Environmental Confirmations](#)

Further information

Information on the packaging

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

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=3RU2116-1KB0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2116-1KB0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1KB0>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2116-1KB0&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1KB0/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2116-1KB0&objecttype=14&gridview=view1>



