



Overload relay 3.5...5.0 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 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 acc. 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 acc. to IEC 81346-2 | F |
| Substance Prohibition (Date) | 01.10.2009 00:00:00 |
| Ambient conditions | |
| installation altitude at height above sea level maximum | 2 000 m |
| • ambient temperature during operation | -40 ... +70 °C |
| • ambient temperature during storage | -55 ... +80 °C |
| • ambient temperature 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 | 3.5 ... 5 A |
| • operating voltage rated value | 690 V |
| • operating voltage at AC-3 rated value maximum | 690 V |

| | |
|---|---|
| operating frequency rated value | 50 ... 60 Hz |
| operational current rated value | 5 A |
| operating power at AC-3 | |
| • at 400 V rated value | 1.5 kW |
| • at 500 V rated value | 2.2 kW |
| • at 690 V rated value | 4 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 | 5 A |
| • at 600 V rated value | 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 function 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) |
| • at AWG cables for main contacts | 2x (20 ... 16), 2x (18 ... 14), 2x 12 |
| 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 • at AWG cables for auxiliary contacts | 2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²) 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 14) |
| <ul style="list-style-type: none"> • tightening torque for main contacts with screw-type terminals • tightening torque for auxiliary contacts with screw-type terminals | 0.8 ... 1.2 N·m 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 • of the auxiliary and control contacts | M3 M3 |

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



| Declaration of Conformity | Test Certificates | Marine / Shipping |
|---------------------------|-------------------|-------------------|
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[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



| Marine / Shipping | other |
|-------------------|-------|
|-------------------|-------|



[Confirmation](#)

| Railway |
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[Vibration and Shock](#)

| Further information |
|---------------------|
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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=3RU2116-1FB0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2116-1FB0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1FB0>

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

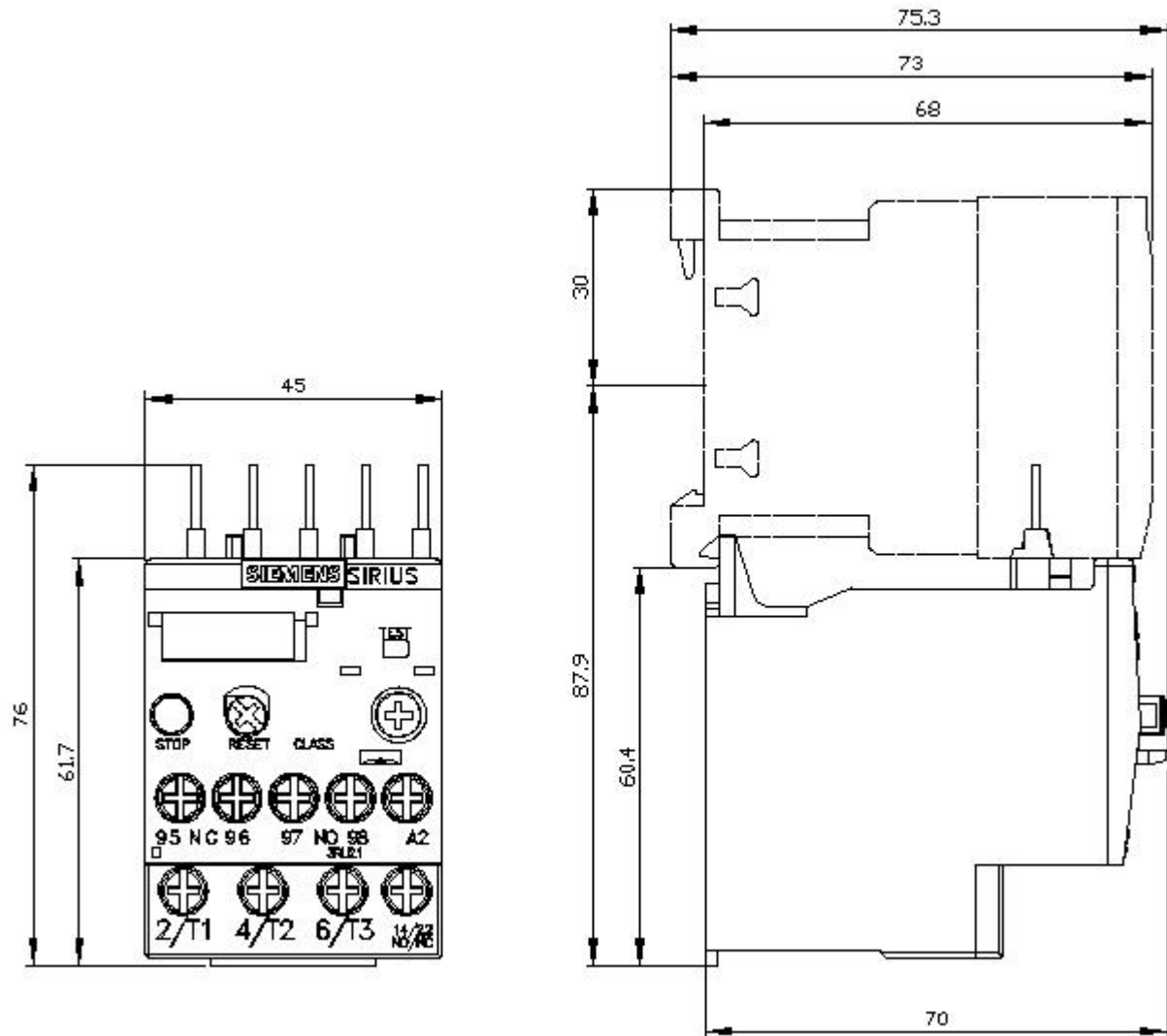
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2116-1FB0&lang=en

Characteristic: Tripping characteristics, I_t, Let-through current

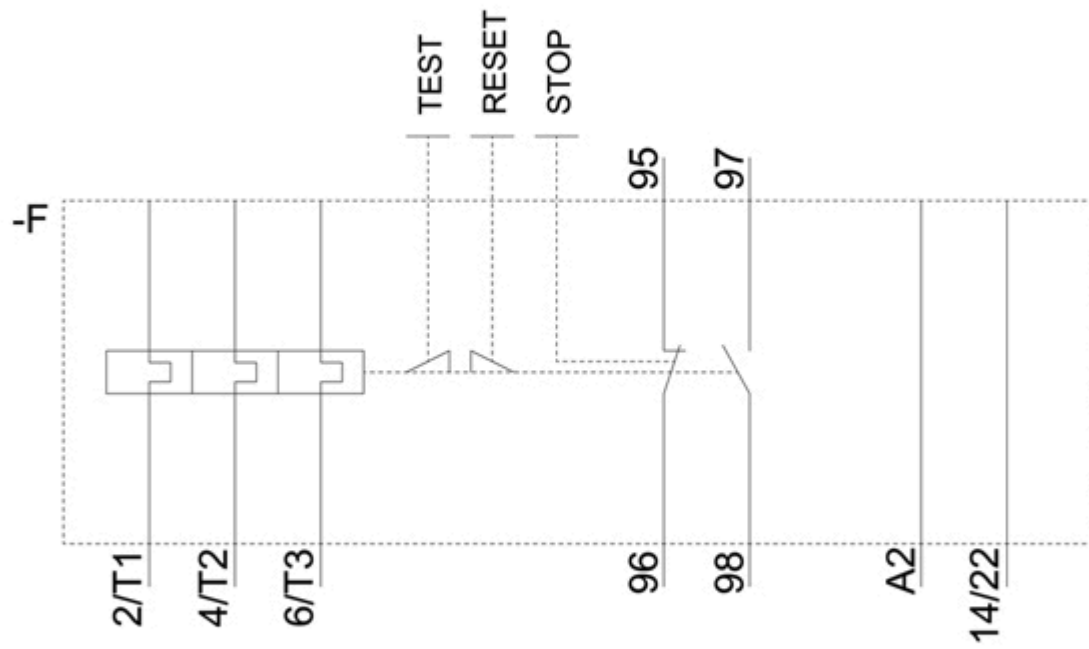
<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1FB0/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2116-1FB0&objecttype=14&gridview=view1>







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