

Overload relay 1.4...2.0 A Thermal For motor protection Size S00,
Class 10 Contactor mounting Main circuit: Screw Auxiliary circuit:
Screw 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 |
| • at AC in hot operating state per pole | 1.9 W |
| Insulation voltage with degree of pollution 3 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 |
| • in networks with grounded star point between auxiliary and auxiliary circuit | 440 V |
| • in networks with grounded star point between main and auxiliary circuit | 440 V |

| | |
|---|-------------------|
| <ul style="list-style-type: none"> in networks with grounded star point between main and auxiliary circuit | 440 V |
| Protection class IP | |
| <ul style="list-style-type: none"> on the front | IP20 |
| <ul style="list-style-type: none"> of the terminal | IP20 |
| Shock resistance | |
| <ul style="list-style-type: none"> 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 DIN EN 81346-2 | F |

Ambient conditions

| | |
|--|----------------|
| Installation altitude at height above sea level | |
| <ul style="list-style-type: none"> maximum | 2 000 m |
| Ambient temperature | |
| <ul style="list-style-type: none"> during operation | -40 ... +70 °C |
| <ul style="list-style-type: none"> during storage | -55 ... +80 °C |
| <ul style="list-style-type: none"> 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 pick-up value current of the current-dependent overload release | 1.4 ... 2 A |
| Operating voltage | |
| <ul style="list-style-type: none"> rated value | 690 V |
| <ul style="list-style-type: none"> at AC-3 rated value maximum | 690 V |
| Operating frequency rated value | 50 ... 60 Hz |
| Operating current rated value | 2 A |
| Operating power at AC-3 | |
| <ul style="list-style-type: none"> at 400 V rated value | 0.75 kW |
| <ul style="list-style-type: none"> at 500 V rated value | 0.75 kW |
| <ul style="list-style-type: none"> at 690 V rated value | 1.1 kW |

Auxiliary circuit

| | |
|--|-----------------------------|
| Design of the auxiliary switch | integrated |
| Number of NC contacts for auxiliary contacts | 1 |
| <ul style="list-style-type: none"> Note | for contactor disconnection |
| Number of NO contacts for auxiliary contacts | 1 |
| <ul style="list-style-type: none"> Note | for message "Tripped" |
| Number of CO contacts | |
| <ul style="list-style-type: none"> for auxiliary contacts | 0 |

| | |
|---|-------------|
| Operating 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 |
| Operating 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 three-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 |
| Mounting type | Contactormounting |
| Height | 76 mm |
| Width | 45 mm |
| Depth | 70 mm |
| Required spacing | |
| • with side-by-side mounting | |
| — forwards | 0 mm |
| — Backwards | 0 mm |
| — upwards | 6 mm |
| — downwards | 6 mm |
| — at the side | 6 mm |
| • for grounded parts | |
| — forwards | 0 mm |

| | |
|------------------|------|
| — Backwards | 0 mm |
| — upwards | 6 mm |
| — at the side | 6 mm |
| — downwards | 6 mm |
| • for live parts | |
| — forwards | 0 mm |
| — Backwards | 0 mm |
| — upwards | 6 mm |
| — downwards | 6 mm |
| — at the side | 6 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 current circuit | screw-type terminals |
| Arrangement of electrical connectors for main current circuit | Top and bottom |
| Type of connectable conductor cross-sections | |
| • for main contacts | |
| — single or multi-stranded | 2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²), 2x 4 mm ² |
| — finely stranded with core end processing | 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) |
| • at AWG conductors for main contacts | 2x (20 ... 16), 2x (18 ... 14), 2x 12 |
| Type of connectable conductor cross-sections | |
| • for auxiliary contacts | |
| — single or multi-stranded | 2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²) |
| — finely stranded with core end processing | 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) |
| • at AWG conductors for auxiliary contacts | 2x (20 ... 16), 2x (18 ... 14) |
| Tightening torque | |
| • for main contacts with screw-type terminals | 0.8 ... 1.2 N·m |
| • 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 | |
| • for main contacts | M3 |
| • of the auxiliary and control contacts | 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

Display

Display version

- for switching status

Slide switch

Certificates/ approvals

General Product Approval



CCC



CSA



UL



ATEX



IECEX

Declaration of Conformity



EG-Konf.

[Miscellaneous](#)

Test Certificates

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

Marine / Shipping



ABS



BUREAU VERITAS

Marine / Shipping



LRS



PRS



RINA



RMRS



DNVGL.COM/AF

other

[Confirmation](#)

Railway

[Vibration and Shock](#)

Further information

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

www.siemens.com/sirius/catalogs

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RU2116-1BB0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2116-1BB0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1BB0>

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

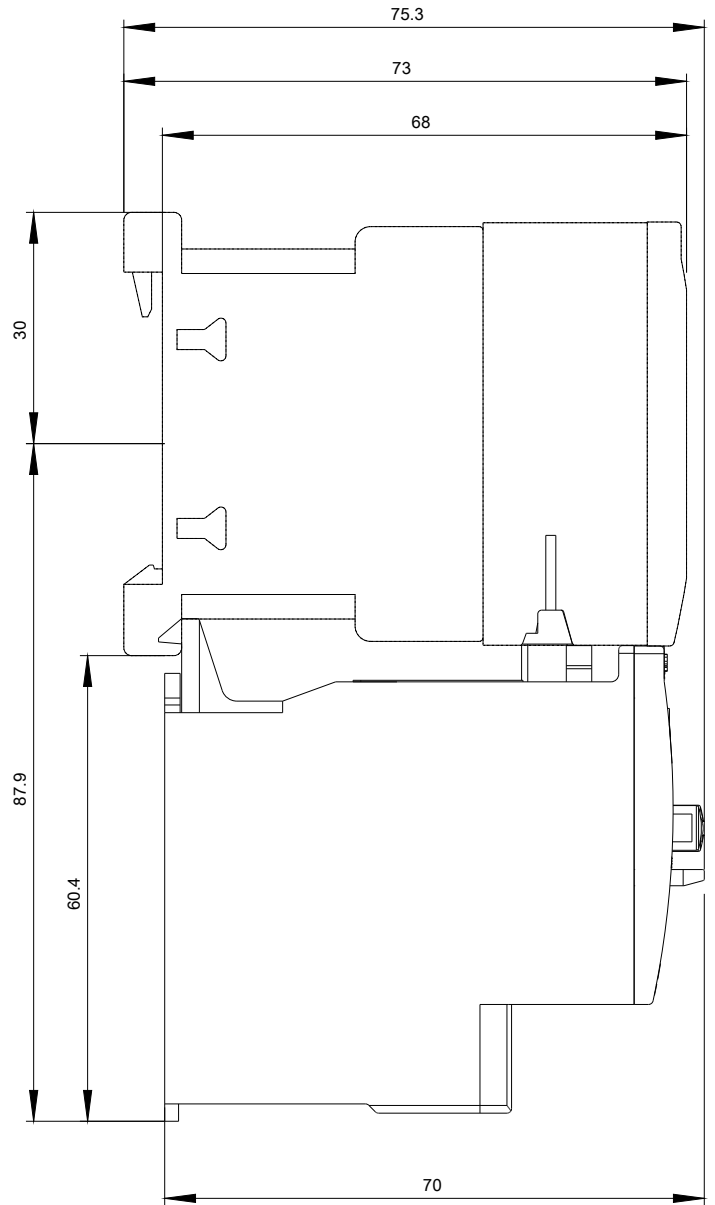
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2116-1BB0&lang=en

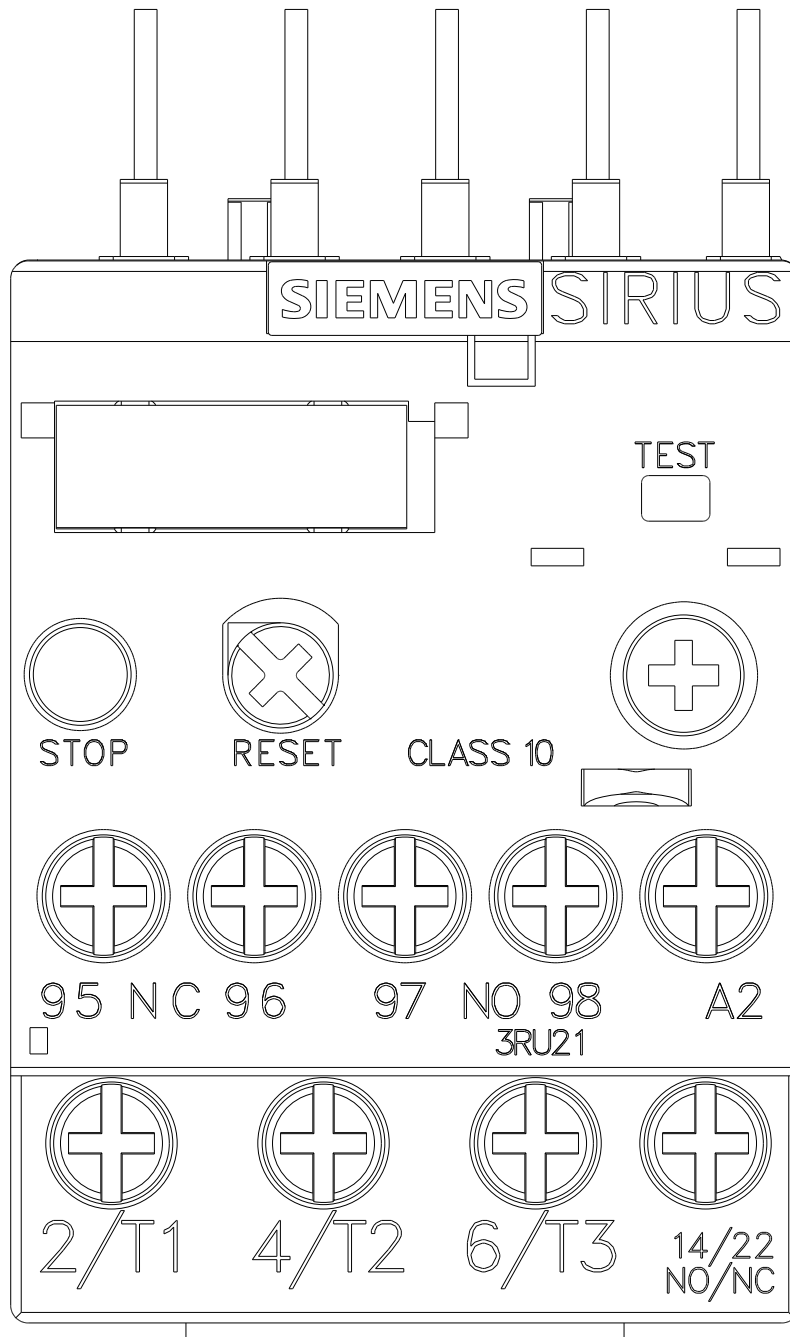
Characteristic: Tripping characteristics, I²t, Let-through current

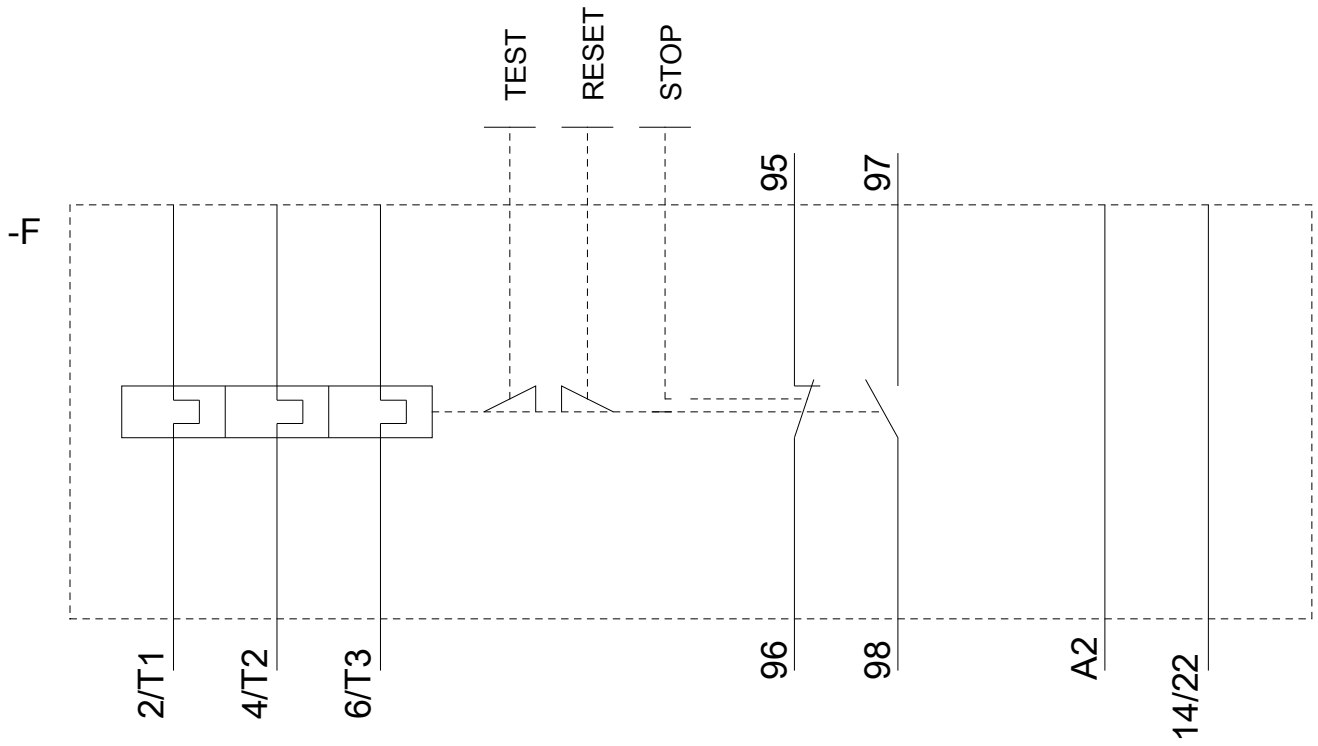
<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1BB0/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2116-1BB0&objecttype=14&gridview=view1>







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