

Overload relay 20...80 A for motor protection Size S2, Class 10E
 Stand-alone installation Main circuit: Straight-through transformer
 Auxiliary circuit: Screw Manual-Automatic-Reset



Figure similar

| | |
|--------------------------|----------------------------|
| Product brand name | SIRIUS |
| Product designation | solid-state overload relay |
| Product type designation | 3RB3 |

| General technical data | |
|--|-------|
| Size of overload relay | S2 |
| Size of contactor can be combined company-specific | S2 |
| Power loss [W] total typical | 0.2 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 | |
| <ul style="list-style-type: none"> in networks with grounded star point between auxiliary and auxiliary circuit | 300 V |
| <ul style="list-style-type: none"> in networks with grounded star point between auxiliary and auxiliary circuit | 300 V |
| <ul style="list-style-type: none"> in networks with grounded star point between main and auxiliary circuit | 600 V |

| | |
|---|--|
| <ul style="list-style-type: none"> in networks with grounded star point between main and auxiliary circuit | 690 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 | 15g / 11 ms |
| <ul style="list-style-type: none"> acc. to IEC 60068-2-27 | 15g / 11 ms |
| Vibration resistance | 1-6 Hz, 15 mm; 6-500 Hz, 20 m/s ² ; 10 cycles |
| Thermal current | 80 A |
| Recovery time | |
| <ul style="list-style-type: none"> after overload trip with automatic reset typical | 3 min |
| <ul style="list-style-type: none"> after overload trip with remote-reset | 0 min |
| <ul style="list-style-type: none"> after overload trip with manual reset | 0 min |
| Type of protection | II (2) G [Ex e] [Ex d] [Ex px] II (2) D [Ex t] [Ex p] |
| Certificate of suitability relating to ATEX | PTB 09 ATEX 3001 |
| Protection against electrical shock | finger-safe |
| 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 | -25 ... +60 °C |
| <ul style="list-style-type: none"> during storage | -40 ... +80 °C |
| <ul style="list-style-type: none"> during transport | -40 ... +80 °C |
| Temperature compensation | -25 ... +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 | 20 ... 80 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 | 80 A |
| Operating power | |
| <ul style="list-style-type: none"> for three-phase motors at 400 V at 50 Hz | 11 ... 37 kW |
| <ul style="list-style-type: none"> for AC motors at 500 V at 50 Hz | 15 ... 55 kW |
| <ul style="list-style-type: none"> for AC motors at 690 V at 50 Hz | 18.5 ... 75 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 |
| Operating current of auxiliary contacts at AC-15 | |
| • at 24 V | 4 A |
| • at 110 V | 4 A |
| • at 120 V | 4 A |
| • at 125 V | 4 A |
| • at 230 V | 3 A |
| Operating current of auxiliary contacts at DC-13 | |
| • at 24 V | 2 A |
| • at 60 V | 0.55 A |
| • at 110 V | 0.3 A |
| • at 125 V | 0.3 A |
| • at 220 V | 0.11 A |

Protective and monitoring functions

| | |
|---------------------------------------|------------|
| Trip class | CLASS 10E |
| Design of the overload release | electronic |

UL/CSA ratings

| | |
|---|-------------|
| Full-load current (FLA) for three-phase AC motor | |
| • at 480 V rated value | 80 A |
| • at 600 V rated value | 80 A |
| Contact rating of auxiliary contacts according to UL | B600 / R300 |

Short-circuit protection

| | |
|---|-----------------------|
| Design of the fuse link | |
| • for short-circuit protection of the main circuit | |
| — with type of coordination 1 required | gG: 250 A, RK5: 300 A |
| — with type of assignment 2 required | gG: 250 A |
| • for short-circuit protection of the auxiliary switch required | fuse gG: 6 A |

Installation/ mounting/ dimensions

| | |
|------------------------------|--------------------------|
| Mounting position | any |
| Mounting type | stand-alone installation |
| Height | 81 mm |
| Width | 55 mm |
| Depth | 109 mm |
| Required spacing | |
| • with side-by-side mounting | |
| — forwards | 0 mm |

| | |
|----------------------|-------|
| — Backwards | 0 mm |
| — upwards | 0 mm |
| — downwards | 0 mm |
| — at the side | 0 mm |
| • for grounded parts | |
| — forwards | 10 mm |
| — Backwards | 0 mm |
| — upwards | 10 mm |
| — at the side | 6 mm |
| — downwards | 10 mm |
| • for live parts | |
| — forwards | 10 mm |
| — Backwards | 0 mm |
| — upwards | 10 mm |
| — downwards | 10 mm |
| — at the side | 10 mm |

Connections/Terminals

| | |
|--|--|
| Product function | |
| • removable terminal for auxiliary and control circuit | Yes |
| Type of electrical connection | |
| • for main current circuit | straight-through transformers |
| • 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 | 1x (1 ... 50 mm ²), 2x (1 ... 35 mm ²) |
| Type of connectable conductor cross-sections | |
| • for auxiliary contacts | |
| — solid | 1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²) |
| — single or multi-stranded | 1x (0,5 ... 4 mm ²), 2x (0,5 ... 2,5 mm ²) |
| — finely stranded with core end processing | 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²) |
| • at AWG conductors for auxiliary contacts | 1x (20 ... 14), 2x (20 ... 14) |
| Tightening torque | |
| • for auxiliary contacts with screw-type terminals | 0.8 ... 1.2 N·m |
| Design of screwdriver shaft | Diameter 5 to 6 mm |
| Size of the screwdriver tip | Pozidriv PZ 2 |
| Design of the thread of the connection screw | |
| • of the auxiliary and control contacts | M3 |

Communication/ Protocol

| | |
|---|----|
| Type of voltage supply via input/output link master | No |
|---|----|

Electromagnetic compatibility

| | |
|--|---|
| Conducted interference | |
| <ul style="list-style-type: none"> • due to burst acc. to IEC 61000-4-4 | 2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3 |
| <ul style="list-style-type: none"> • due to conductor-earth surge acc. to IEC 61000-4-5 | 2 kV (line to earth) corresponds to degree of severity 3 |
| <ul style="list-style-type: none"> • due to conductor-conductor surge acc. to IEC 61000-4-5 | 1 kV (line to line) corresponds to degree of severity 3 |
| <ul style="list-style-type: none"> • due to high-frequency radiation acc. to IEC 61000-4-6 | 10 V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1 kHz |
| Field-bound parasitic coupling acc. to IEC 61000-4-3 | 10 V/m |
| Electrostatic discharge acc. to IEC 61000-4-2 | 6 kV contact discharge / 8 kV air discharge |



Display

| | |
|--|--------------|
| Display version | |
| <ul style="list-style-type: none"> • for switching status | Slide switch |

Certificates/approvals

| | | |
|--|---|---|
| General Product Approval | EMC | For use in hazardous locations |
|  CCC |  CSA |  UL |
|  EAC |  C-Tick |  ATEX |

| | | | | | |
|---|--|--|--|--|---|
| Declaration of Conformity | Test Certificates | Marine / Shipping | | | |
|  EG-Konf. | Type Test Certificates/Test Report |  ABS |  LRS |  PRS |  RINA |

| | |
|---|---|
| Marine / Shipping | other |
|  RMRS |  DNV-GL |

[Confirmation](#)

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)
<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RB3036-1WW1>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB3036-1WW1>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3036-1WW1>

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

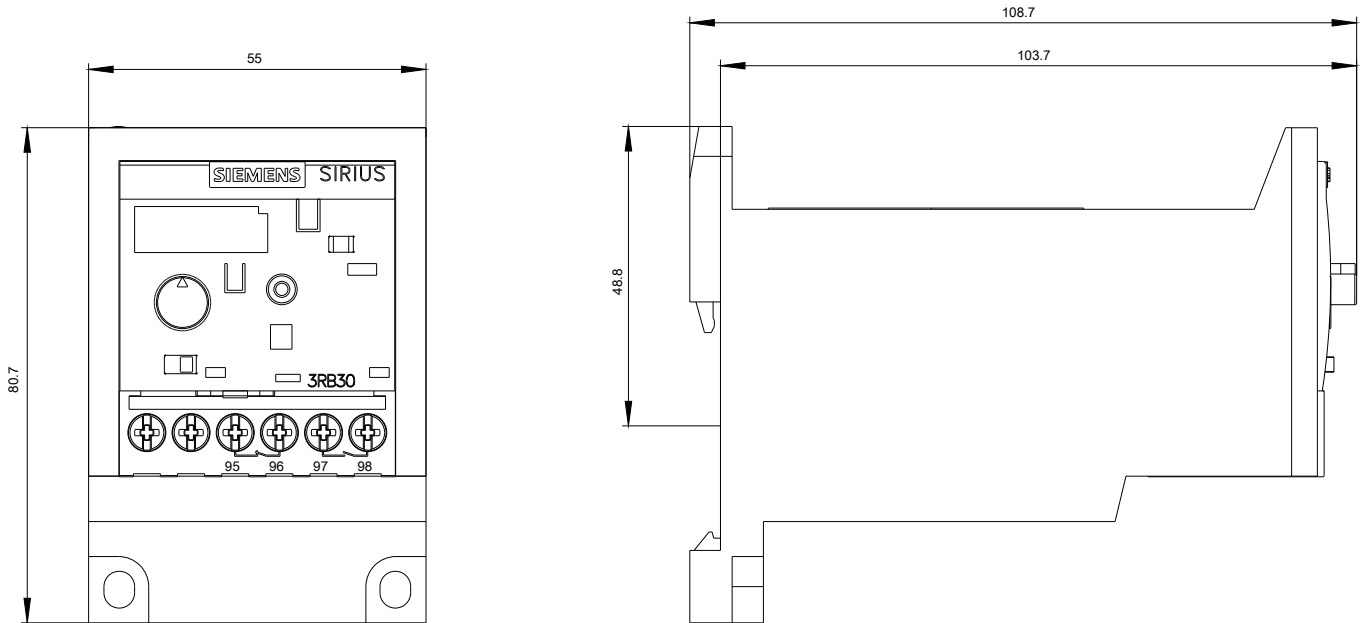
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3036-1WW1&lang=en

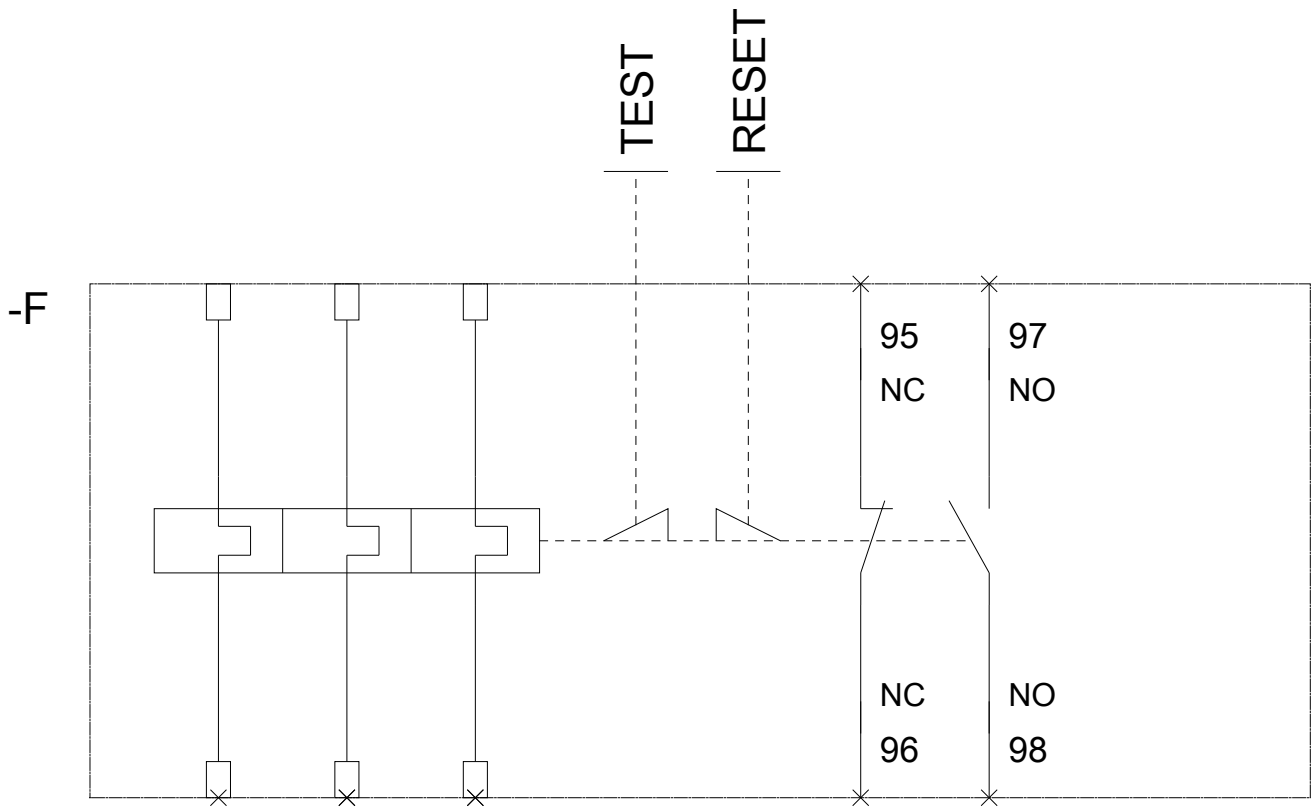
Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3036-1WW1/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB3036-1WW1&objecttype=14&gridview=view1>





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