

CIRCUIT-BREAKER SIZE S3, FOR MOTOR PROTECTION, CLASS 10, WITH OVERLOAD RELAY FUNCTION A-REL. 57...75A, N-REL. 975A, SCREW CONNECTION INCREASED BREAKING CAPACITY



Figure similar

| | |
|--------------------------|---|
| Product brand name | SIRIUS |
| Product designation | Circuit breaker |
| Design of the product | For motor protection with overload relay function |
| Product type designation | 3RV2 |

| General technical data | |
|---|---------|
| Size of the circuit-breaker | S3 |
| Size of contactor can be combined company-specific | S3 |
| Product extension | Yes |
| • Auxiliary switch | Yes |
| Power loss [W] total typical | 32 W |
| Insulation voltage with degree of pollution 3 rated value | 1 000 V |
| Surge voltage resistance rated value | 8 kV |
| maximum permissible voltage for safe isolation | |
| • in networks with grounded star point between main and auxiliary circuit | 400 V |
| • in networks with grounded star point between main and auxiliary circuit | 400 V |

| | |
|---|--|
| Protection class IP | |
| • on the front | IP20 |
| • of the terminal | IP00 |
| Shock resistance | |
| • acc. to IEC 60068-2-27 | 25g / 11 ms Sinus |
| Mechanical service life (switching cycles) | |
| • of the main contacts typical | 25 000 |
| • of auxiliary contacts typical | 25 000 |
| Electrical endurance (switching cycles) | |
| • typical | 25 000 |
| Protection against electrical shock | finger-safe when touched vertically from front acc. to IEC 60529 |
| Equipment marking acc. to DIN EN 81346-2 | Q |

Ambient conditions

| | |
|--|----------------|
| Installation altitude at height above sea level | |
| • maximum | 2 000 m |
| Ambient temperature | |
| • during operation | -20 ... +60 °C |
| • during storage | -50 ... +80 °C |
| • during transport | -50 ... +80 °C |
| Temperature compensation | -20 ... +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 | 57 ... 75 A |
| Operating voltage | |
| • rated value | 690 V |
| • at AC-3 rated value maximum | 690 V |
| Operating frequency rated value | 50 ... 60 Hz |
| Operating current rated value | 75 A |
| Operating current | |
| • at AC-3 | |
| — at 400 V rated value | 75 A |
| Operating power | |
| • at AC-3 | |
| — at 230 V rated value | 22 000 W |
| — at 400 V rated value | 37 000 W |
| — at 500 V rated value | 45 000 W |
| — at 690 V rated value | 55 000 W |
| Operating frequency | |
| • at AC-3 maximum | 15 1/h |

Auxiliary circuit

| | |
|--|---|
| Number of NC contacts | |
| <ul style="list-style-type: none"> • for auxiliary contacts | |
| — Note | 1 |
| Number of NO contacts | |
| <ul style="list-style-type: none"> • for auxiliary contacts | |
| — Note | 1 |

Protective and monitoring functions

| | |
|--|-----------|
| Product function | |
| <ul style="list-style-type: none"> • Ground fault detection | No |
| <ul style="list-style-type: none"> • Phase failure detection | Yes |
| Trip class | CLASS 10 |
| Design of the overload release | thermal |
| Operational short-circuit current breaking capacity (Ics) at AC | |
| <ul style="list-style-type: none"> • at 240 V rated value | 100 000 A |
| <ul style="list-style-type: none"> • at 400 V rated value | 50 000 A |
| <ul style="list-style-type: none"> • at 500 V rated value | 5 000 A |
| <ul style="list-style-type: none"> • at 690 V rated value | 3 000 A |
| Maximum short-circuit current breaking capacity (Icu) | |
| <ul style="list-style-type: none"> • at AC at 240 V rated value | 100 kA |
| <ul style="list-style-type: none"> • at AC at 400 V rated value | 100 kA |
| <ul style="list-style-type: none"> • at AC at 500 V rated value | 10 kA |
| <ul style="list-style-type: none"> • at AC at 690 V rated value | 6 kA |
| Response value current | |
| <ul style="list-style-type: none"> • of instantaneous short-circuit trip unit | 975 A |

UL/CSA ratings

| | |
|---|--------|
| Full-load current (FLA) for three-phase AC motor | |
| <ul style="list-style-type: none"> • at 480 V rated value | 75 A |
| <ul style="list-style-type: none"> • at 600 V rated value | 75 A |
| Yielded mechanical performance [hp] | |
| <ul style="list-style-type: none"> • for single-phase AC motor | |
| — at 110/120 V rated value | 7.5 hp |
| — at 230 V rated value | 15 hp |
| <ul style="list-style-type: none"> • for three-phase AC motor | |
| — at 200/208 V rated value | 25 hp |
| — at 220/230 V rated value | 30 hp |
| — at 460/480 V rated value | 60 hp |
| — at 575/600 V rated value | 75 hp |

Short-circuit protection

| | |
|--|-----|
| Product function Short circuit protection | Yes |
|--|-----|


| | |
|---|--|
| Design of the short-circuit trip | magnetic |
| Installation/ mounting/ dimensions | |
| Mounting position | any |
| Mounting type | screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 |
| Height | 165 mm |
| Width | 90 mm |
| Depth | 176 mm |
| Required spacing | |
| <ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards 0 mm — Backwards 0 mm — upwards 150 mm — downwards 150 mm — at the side 0 mm • for grounded parts <ul style="list-style-type: none"> — forwards 0 mm — Backwards 0 mm — upwards 150 mm — at the side 30 mm — downwards 150 mm • for live parts <ul style="list-style-type: none"> — forwards 0 mm — Backwards 0 mm — upwards 150 mm — downwards 150 mm — at the side 30 mm | |
| Connections/Terminals | |
| Product function | |
| <ul style="list-style-type: none"> • 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 current circuit | screw-type terminals screw-type 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 2x (2.5 ... 16 mm²) — single or multi-stranded 2x (2,5 ... 50 mm²), 1x (10 ... 70 mm²) | |
| Type of connectable conductor cross-sections | |
| <ul style="list-style-type: none"> • for auxiliary contacts | |

| | |
|--|---|
| <ul style="list-style-type: none"> — finely stranded with core end processing • at AWG conductors for auxiliary contacts | 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 14) |
| Tightening torque <ul style="list-style-type: none"> • for ring cable lug <ul style="list-style-type: none"> — for main contacts | 4.5 ... 6 N·m |
| Outer diameter of the usable ring cable lug maximum | 19 mm |
| Tightening torque <ul style="list-style-type: none"> • for main contacts with screw-type terminals • for auxiliary contacts with screw-type terminals | 4.5 ... 6 N·m 0.8 ... 1.2 N·m |
| Design of the thread of the connection screw <ul style="list-style-type: none"> • of the auxiliary and control contacts | M3 |

| Safety related data | |
|---|--------------|
| Proportion of dangerous failures <ul style="list-style-type: none"> • with low demand rate acc. to SN 31920 • with high demand rate acc. to SN 31920 | 50 % 50 % |
| T1 value for proof test interval or service life acc. to IEC 61508 | 10 y |
| Display version <ul style="list-style-type: none"> • for switching status | Handle |

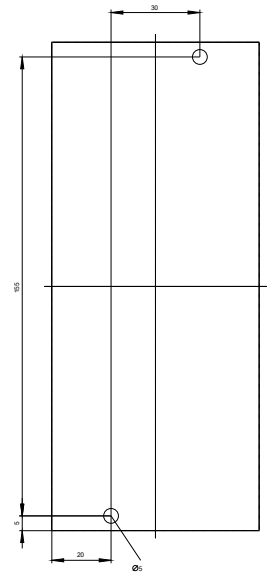
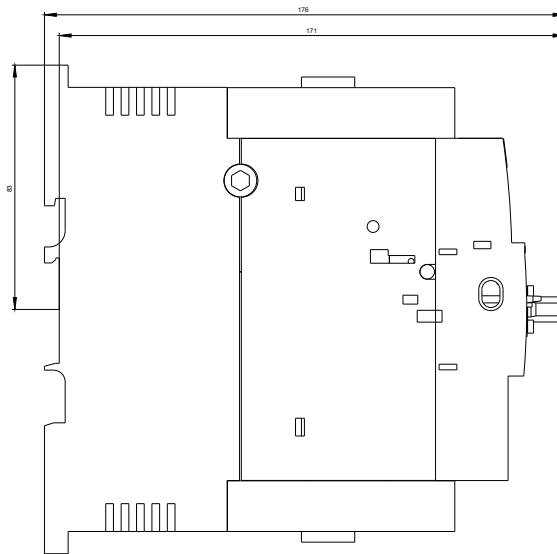
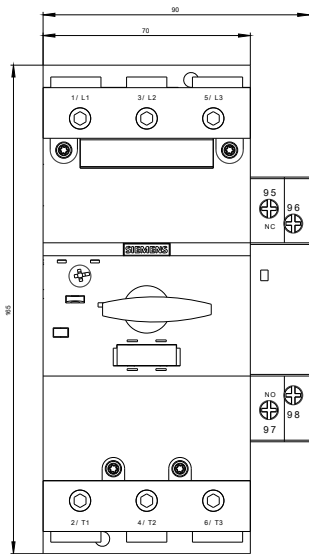
Certificates/approvals

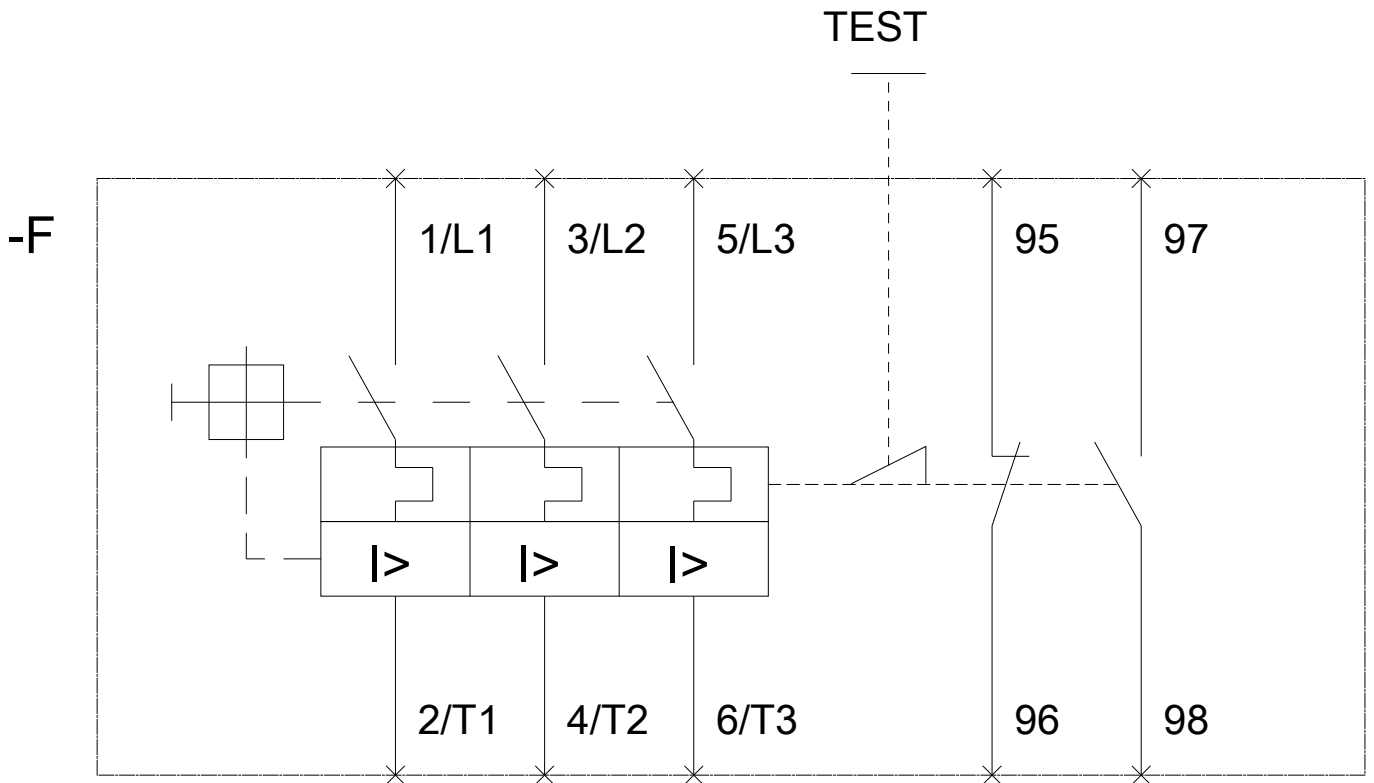
| General Product Approval | Declaration of Conformity | Test Certificates |
|--|--|---|
|  CCC |  EAC |  EG-Konf. |
|  CSA |  UL | Special Test Certificate |

| Test Certificates | other | Railway |
|--|--|-------------------------------------|
| Declaration of the Compliance with the order | Confirmation | Vibration and Shock |
| |  VDE | Miscellaneous |

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=3RV2142-4KA10>
- Cax online generator**
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2142-4KA10>
- Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
<https://support.industry.siemens.com/cs/ww/en/ps/3RV2142-4KA10>





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