

CIRCUIT-BREAKER SIZE S3, FOR MOTOR PROTECTION, CLASS 10, WITH OVERLOAD RELAY FUNCTION A-REL. 36...50A, N-REL. 650A, SCREW CONNECTION, INCREASED BREAKING CAPACITY



3RV2142-4HA10

| | |
|--------------------------|---|
| product brandname | 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 | |
| • Auxiliary switch | Yes |
| Power loss [W] total typical | 21 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 | |

| | |
|---|--|
| <ul style="list-style-type: none"> • on the front • of the terminal | IP20 IP00 |
| Mechanical service life (switching cycles) | |
| <ul style="list-style-type: none"> • of the main contacts typical • of auxiliary contacts typical | 25 000 25 000 |
| Electrical endurance (switching cycles) | |
| <ul style="list-style-type: none"> • 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

| | |
|--|--|
| Ambient temperature | |
| <ul style="list-style-type: none"> • during operation • during storage • during transport | -20 ... +60 °C -50 ... +80 °C -50 ... +80 °C |
| Temperature compensation | -20 ... +60 °C |

Main circuit

| | |
|---|--|
| Number of poles for main current circuit | 3 |
| Adjustable pick-up value current of the current-dependent overload release | 36 ... 50 A |
| Operating voltage | |
| <ul style="list-style-type: none"> • rated value • at AC-3 rated value maximum | 690 V 690 V |
| Operating frequency rated value | 50 ... 60 Hz |
| Operating current rated value | 50 A |
| Operating current | |
| <ul style="list-style-type: none"> • at AC-3 — at 400 V rated value | 50 A |
| Operating power | |
| <ul style="list-style-type: none"> • at AC-3 — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value | 11 000 W 22 000 W 30 000 W 45 000 W |
| Operating frequency | |
| <ul style="list-style-type: none"> • 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 | |

Protective and monitoring functions

| | |
|--|-----------|
| Product function | |
| • Ground fault detection | No |
| • Phase failure detection | Yes |
| Trip class | CLASS 10 |
| Design of the overload release | thermal |
| Operational short-circuit current breaking capacity (Ics) at AC | |
| • at 240 V rated value | 100 000 A |
| • at 400 V rated value | 50 000 A |
| • at 500 V rated value | 7 500 A |
| • at 690 V rated value | 5 000 A |
| Maximum short-circuit current breaking capacity (Icu) | |
| • at AC at 240 V rated value | 100 kA |
| • at AC at 400 V rated value | 100 kA |
| • at AC at 500 V rated value | 15 kA |
| • at AC at 690 V rated value | 10 kA |

UL/CSA ratings

| | |
|---|-------|
| Full-load current (FLA) for three-phase AC motor | |
| • at 480 V rated value | 50 A |
| • at 600 V rated value | 50 A |
| Yielded mechanical performance [hp] | |
| • for single-phase AC motor | |
| — at 110/120 V rated value | 5 hp |
| — at 230 V rated value | 10 hp |
| • for three-phase AC motor | |
| — at 200/208 V rated value | 15 hp |
| — at 220/230 V rated value | 20 hp |
| — at 460/480 V rated value | 40 hp |
| — at 575/600 V rated value | 50 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 — Backwards — upwards — downwards — at the side • for grounded parts <ul style="list-style-type: none"> — forwards — Backwards — upwards — at the side — downwards • for live parts <ul style="list-style-type: none"> — forwards — Backwards — upwards — downwards — at the side | 0 mm 0 mm 150 mm 150 mm 0 mm 0 mm 0 mm 150 mm 30 mm 150 mm 0 mm 0 mm 150 mm 150 mm 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 — single or multi-stranded | 2x (2.5 ... 16 mm ²) 2x (2,5 ... 50 mm ²), 1x (10 ... 70 mm ²) |
| 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 | 4.5 ... 6 N·m |





- for auxiliary contacts with screw-type terminals

0.8 ... 1.2 N·m

Safety related data

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|--|--------|
| Proportion of dangerous failures | |
| <ul style="list-style-type: none"> • with low demand rate acc. to SN 31920 | 50 % |
| <ul style="list-style-type: none"> • with high demand rate acc. to SN 31920 | 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 | |
|---|---|---|---|--|--|
|  |  |  |  | Special Test Certificate | Declaration of the Compliance with the order |
| CCC | CSA | UL | EG-Konf. | | |
| other | | | Railway | | |
| Confirmation | Miscellaneous | Vibration and Shock | | | |

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=3RV2142-4HA10>

Cax online generator

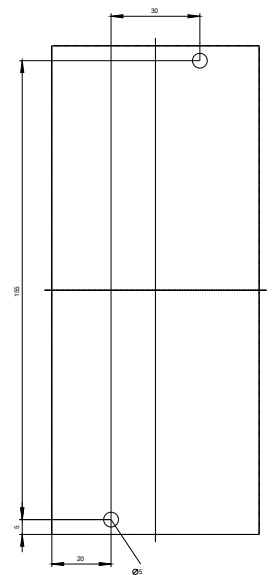
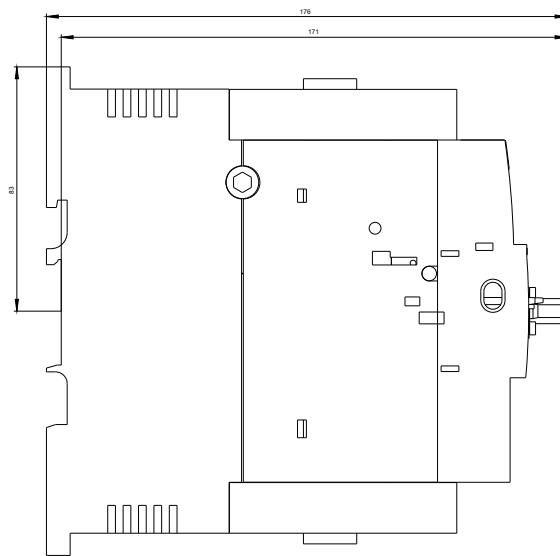
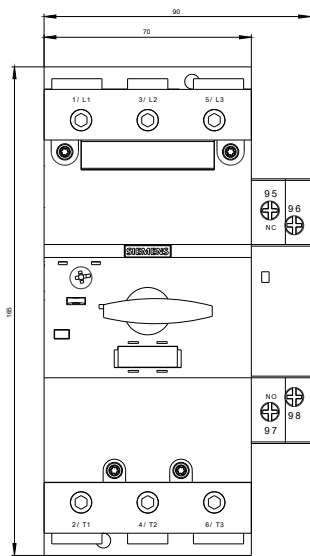
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2142-4HA10>

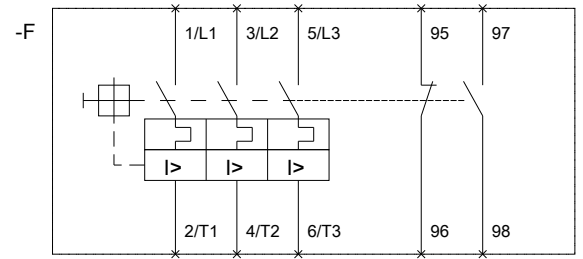
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2142-4HA10>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2142-4HA10&lang=en





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