

Circuit breaker size S00 for motor protection, CLASS 10 A-release 2.2...3.2 A N release 42 A Screw terminal Standard switching capacity



| | |
|--------------------------|----------------------|
| Product brand name | SIRIUS |
| Product designation | Circuit breaker |
| Design of the product | For motor protection |
| Product type designation | 3RV1 |

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|---|-------|
| General technical data | |
| Size of the circuit-breaker | S00 |
| Size of contactor can be combined company-specific | S00 |
| Product extension | |
| • Auxiliary switch | Yes |
| Power loss [W] total typical | 6 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 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 | 100 000 100 000 |
| Electrical endurance (switching cycles) | |
| <ul style="list-style-type: none"> • typical | 100 000 |
| Type of protection | Increased safety |
| Certificate of suitability ATEX | Yes |
| Protection against electrical shock | finger-safe |
| Reference code acc. to DIN EN 81346-2 | Q |

Ambient conditions

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|--|--|
| 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 • during storage • during transport | -20 ... +60 °C -50 ... +80 °C -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 | 2.2 ... 3.2 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 | 3.2 A |
| Operating current | |
| <ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 400 V rated value | 3.2 A |
| Operating power | |
| <ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value | 550 W 1 100 W 1 500 W 2 200 W |
| Operating frequency | |
| <ul style="list-style-type: none"> • at AC-3 maximum | 15 1/h |

Auxiliary circuit

| | |
|--|-----------|
| Number of CO contacts | |
| • for auxiliary contacts | 0 |
| 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 | 100 000 A |
| • at 500 V rated value | 3 000 A |
| • at 690 V rated value | 2 000 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 | 3 kA |
| • at AC at 690 V rated value | 2 kA |
| Breaking capacity short-circuit current (Icn) | |
| • at 1 current path at DC at 150 V rated value | 10 kA |
| • with 2 current paths in series at DC at 300 V rated value | 10 kA |
| • with 3 current paths in series at DC at 450 V rated value | 10 kA |
| Response value current | |
| • of instantaneous short-circuit trip unit | 42 A |
| UL/CSA ratings | |
| Full-load current (FLA) for three-phase AC motor | |
| • at 480 V rated value | 3.2 A |
| • at 600 V rated value | 3.2 A |
| Yielded mechanical performance [hp] | |
| • for single-phase AC motor | |
| — at 110/120 V rated value | 0.1 hp |
| — at 230 V rated value | 0.25 hp |
| • for three-phase AC motor | |
| — at 200/208 V rated value | 0.5 hp |
| — at 220/230 V rated value | 0.75 hp |
| — at 460/480 V rated value | 1.5 hp |
| — at 575/600 V rated value | 2 hp |
| Short-circuit protection | |

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| Product function Short circuit protection | Yes |
| Design of the short-circuit trip | magnetic |
| Design of the fuse link for IT network for short-circuit protection of the main circuit | |
| • at 240 V | none required |
| • at 400 V | gL/gG 40 A |
| • at 500 V | gL/gG 35 A |
| • at 690 V | gL/gG 35 A |

| 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 | 90 mm |
| Width | 45 mm |
| Depth | 75 mm |




| Connections/Terminals | |
|--|--|
| Product function | |
| • removable terminal for auxiliary and control circuit | No |
| Type of electrical connection | |
| • for main 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 (1 ... 4 mm ²) |
| — finely stranded with core end processing | 2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²) |
| 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) |
| 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 |
| Size of the screwdriver tip | Pozidriv 2 |
| Design of the thread of the connection screw | |
| • for main contacts | M3 |





| Safety related data | |
|--|-------|
| B10 value | |
| • with high demand rate acc. to SN 31920 | 5 000 |
| Proportion of dangerous failures | |
| • with low demand rate acc. to SN 31920 | 50 % |
| • with high demand rate acc. to SN 31920 | 50 % |


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|---|---------------|
| Failure rate [FIT] <ul style="list-style-type: none"> with low demand rate acc. to SN 31920 | 50 FIT |
| Display version <ul style="list-style-type: none"> for switching status | Rocker switch |

Certificates/approvals

| General Product Approval | | | For use in hazardous locations | | |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| CCC | CSA | UL | | ATEX | IECEX |

| Declaration of Conformity | Test Certificates | | Marine / Shipping | |
|---|-------------------------------|--|---|---|
|  | Miscellaneous | Special Test Certificate | Type Test Certificates/Test Report | |
| EG-Konf. | | |  |  |
| | | | ABS | BUREAU VERITAS |

| Marine / Shipping | other | | | |
|--|--|--|--|-------------------------------|
|  |  |  |  | Miscellaneous |
| LRS | RINA | RMRS | DNV-GL | Confirmation |
| | | | DNVGL.COM/AF | |

| other |
|---|
|  |
| VDE |

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=3RV1011-1DA10>

Cax online generator
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV1011-1DA10>

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
<https://support.industry.siemens.com/cs/ww/en/ps/3RV1011-1DA10>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV1011-1DA10&lang=en

Characteristic: Tripping characteristics, I_t, Let-through current
<https://support.industry.siemens.com/cs/ww/en/ps/3RV1011-1DA10/char>

Further characteristics (e.g. electrical endurance, switching frequency)
<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV1011-1DA10&objecttype=14&gridview=view1>

