



Circuit breaker size S0 for motor protection, CLASS 10 A-release 4.5...6.3 A N-release 82 A screw terminal Standard switching capacity

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| product brand name | SIRIUS |
| product designation | Circuit breaker |
| design of the product | For motor protection |
| product type designation | 3RV2 |
| General technical data | |
| size of the circuit-breaker | S0 |
| size of contactor can be combined company-specific | S00, S0 |
| product extension auxiliary switch | Yes |
| power loss [W] for rated value of the current | |
| • at AC in hot operating state | 7.25 W |
| • at AC in hot operating state per pole | 2.4 W |
| insulation voltage with degree of pollution 3 at AC 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 |
| • between main and auxiliary circuit | 400 V |
| shock resistance acc. to IEC 60068-2-27 | 25g / 11 ms |
| mechanical service life (switching cycles) | |
| • of the main contacts typical | 100 000 |
| • of auxiliary contacts typical | 100 000 |
| electrical endurance (switching cycles) typical | 100 000 |
| 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 02 ATEX F 001 |
| reference code acc. to IEC 81346-2 | Q |
| Substance Prohibitance (Date) | 01.10.2009 |
| 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 current response value current of the | 4.5 ... 6.3 A |

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| current-dependent overload release | |
| operating voltage | |
| • rated value | 690 V |
| • rated value | 20 ... 690 V |
| • at AC-3 rated value maximum | 690 V |
| operating frequency rated value | 50 ... 60 Hz |
| operational current rated value | 6.3 A |
| operational current at AC-3 at 400 V rated value | 6.3 A |
| operating power at AC-3 | |
| • at 230 V rated value | 1.5 kW |
| • at 400 V rated value | 2.2 kW |
| • at 500 V rated value | 3 kW |
| • at 690 V rated value | 4 kW |
| operating frequency at AC-3 maximum | 15 1/h |
| Auxiliary circuit | |
| number of NC contacts for auxiliary contacts | 0 |
| number of NO contacts for auxiliary contacts | 0 |
| 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 |
| breaking capacity operating short-circuit current (Ics) at AC | |
| • at 240 V rated value | 100 kA |
| • at 400 V rated value | 100 kA |
| • at 500 V rated value | 100 kA |
| • at 690 V rated value | 4 kA |
| breaking capacity maximum short-circuit current (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 | 100 kA |
| • at AC at 690 V rated value | 6 kA |
| response value current of instantaneous short-circuit trip unit | 82 A |
| UL/CSA ratings | |
| full-load current (FLA) for 3-phase AC motor | |
| • at 480 V rated value | 6.3 A |
| • at 600 V rated value | 6.3 A |
| yielded mechanical performance [hp] | |
| • for single-phase AC motor | |
| — at 110/120 V rated value | 0.25 hp |
| — at 230 V rated value | 0.5 hp |
| • for 3-phase AC motor | |
| — at 200/208 V rated value | 1 hp |
| — at 220/230 V rated value | 1.5 hp |
| — at 460/480 V rated value | 3 hp |
| — at 575/600 V rated value | 5 hp |
| Short-circuit protection | |
| product function short circuit protection | Yes |
| design of the short-circuit trip | magnetic |
| Installation/ mounting/ dimensions | |
| mounting position | any |
| fastening method | screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 |
| height | 97 mm |
| width | 45 mm |
| depth | 97 mm |

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| required spacing | |
| <ul style="list-style-type: none"> • for grounded parts at 400 V <ul style="list-style-type: none"> — downwards — upwards — at the side • for live parts at 400 V <ul style="list-style-type: none"> — downwards — upwards — at the side • for grounded parts at 500 V <ul style="list-style-type: none"> — downwards — upwards — at the side • for live parts at 500 V <ul style="list-style-type: none"> — downwards — upwards — at the side • for grounded parts at 690 V <ul style="list-style-type: none"> — downwards — upwards — backwards — at the side — forwards • for live parts at 690 V <ul style="list-style-type: none"> — downwards — upwards — backwards — at the side — forwards | 30 mm 30 mm 9 mm 30 mm 30 mm 9 mm 30 mm 30 mm 9 mm 50 mm 50 mm 0 mm 30 mm 0 mm 50 mm 50 mm 0 mm 30 mm 0 mm |
| Connections/ Terminals | |
| product component removable terminal for auxiliary and control circuit | No |
| type of electrical connection | |
| <ul style="list-style-type: none"> • for main current circuit | 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 or stranded — finely stranded with core end processing • at AWG cables for main contacts | 2x (1 ... 2.5 mm ²), 2x (2.5 ... 10 mm ²) 2x (1 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²), 1x 10 mm ² 2x (16 ... 12), 2x (14 ... 8) |
| tightening torque | |
| <ul style="list-style-type: none"> • for main contacts with screw-type terminals | 2 ... 2.5 N·m |
| design of screwdriver shaft | Diameter 5 to 6 mm |
| size of the screwdriver tip | Pozidriv size 2 |
| design of the thread of the connection screw | |
| <ul style="list-style-type: none"> • for main contacts | M4 |
| Safety related data | |
| B10 value | |
| <ul style="list-style-type: none"> • with high demand rate acc. to SN 31920 | 5 000 |
| 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 % |
| failure rate [FIT] | |
| <ul style="list-style-type: none"> • with low demand rate acc. to SN 31920 | 50 FIT |
| T1 value for proof test interval or service life acc. to IEC 61508 | 10 y |
| protection class IP on the front acc. to IEC 60529 | IP20 |
| touch protection on the front acc. to IEC 60529 | finger-safe, for vertical contact from the front |
| display version for switching status | Handle |

Certificates/ approvals

General Product Approval



[Confirmation](#)



[KC](#)



For use in hazardous locations



[UK Declaration of Conformity](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

Marine / Shipping



Marine / Shipping

other

Railway



[Confirmation](#)



[Vibration and Shock](#)

[Confirmation](#)

Further information

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

<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2021-1GA10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-1GA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1GA10>

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

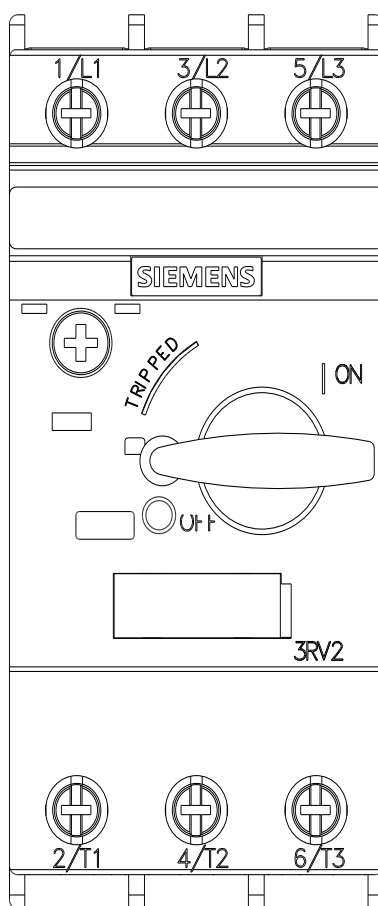
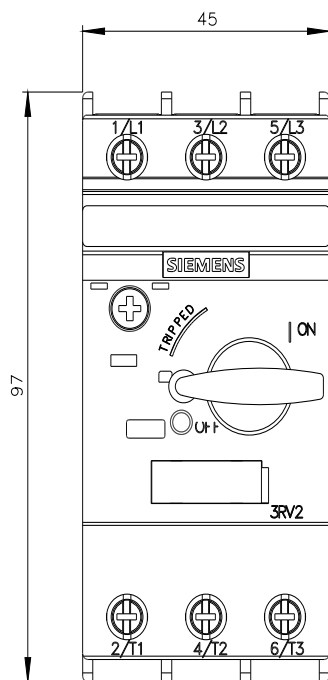
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-1GA10&lang=en

Characteristic: Tripping characteristics, I_t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1GA10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-1GA10&objecttype=14&gridview=view1>





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