

Circuit breaker size S00 for motor protection, CLASS 10 A-release 2.8...4 A N release 52 A screw terminal Standard switching capacity Multi-unit packaging Pack = 12 units

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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 | |
| Product equipment of circuit breaker for motor protection complete unit with protection device | Yes |
| size of the circuit-breaker | S00 |
| size of contactor can be combined company-specific | S00, S0 |
| product function disconnecter functionality | Yes |
| 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 |
| type of calculation of power loss current-dependent | quadratic |
| insulation voltage with degree of pollution 3 at AC rated value | 690 V |
| surge voltage resistance rated value | 6 kV |
| maximum permissible voltage for protective separation | |
| • in networks with ungrounded 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 according to IEC 60529 | IP20 |
| • on the front | IP20 |
| • of the terminal | IP20 |
| shock resistance according to IEC 60068-2-27 | 25g / 11 ms |
| mechanical service life (operating cycles) | |
| • of the main contacts typical | 100 000 |
| • of auxiliary contacts typical | 100 000 |
| electrical endurance (operating cycles) typical | 100 000 |
| reference code according to IEC 81346-2 | Q |
| continuous current rated value | 4 A |
| Substance Prohibitance (day/month/year) | 10/01/2009 |
| SVHC substance name | Lead CAS-No. 7439-92-1 |
| Net Weight | 0.35 kg |
| 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 current-dependent overload release | 2.8 ... 4 A |
| type of voltage for main current circuit | AC |
| operating voltage | |

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| <ul style="list-style-type: none"> ● rated value | 690 V |
| <ul style="list-style-type: none"> ● rated value | 20 ... 690 V |
| <ul style="list-style-type: none"> ● at AC-3 rated value maximum | 690 V |
| <ul style="list-style-type: none"> ● at AC-3e rated value maximum | 690 V |
| operating frequency rated value | 50 ... 60 Hz |
| operational current rated value | 4 A |
| operational current | |
| <ul style="list-style-type: none"> ● at AC-3 at 400 V rated value | 4 A |
| <ul style="list-style-type: none"> ● at AC-3e at 400 V rated value | 4 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 | 0.8 kW 1.5 kW 2.2 kW 3 kW |
| <ul style="list-style-type: none"> ● at AC-3e <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 | 0.8 kW 1.5 kW 2.2 kW 3 kW |
| operating frequency | |
| <ul style="list-style-type: none"> ● at AC-3 maximum | 15 1/h |
| <ul style="list-style-type: none"> ● at AC-3e maximum | 15 1/h |
| Auxiliary circuit | |
| type of voltage for auxiliary and control circuit | AC/DC |
| 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 | |
| <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 |
| maximum short-circuit current breaking capacity (I_{cu}) | |
| <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 | 100 kA |
| <ul style="list-style-type: none"> ● at AC at 690 V rated value | 6 kA |
| operating short-circuit current breaking capacity (I_{cs}) at AC | |
| <ul style="list-style-type: none"> ● at 240 V rated value | 100 kA |
| <ul style="list-style-type: none"> ● at 400 V rated value | 100 kA |
| <ul style="list-style-type: none"> ● at 500 V rated value | 100 kA |
| <ul style="list-style-type: none"> ● at 690 V rated value | 4 kA |
| response value current of instantaneous short-circuit trip unit | 52 A |
| UL/CSA ratings | |
| full-load current (FLA) for 3-phase AC motor | |
| <ul style="list-style-type: none"> ● at 480 V rated value | 4 A |
| <ul style="list-style-type: none"> ● at 600 V rated value | 4 A |
| yielded mechanical performance [hp] | |
| <ul style="list-style-type: none"> ● for single-phase AC motor <ul style="list-style-type: none"> — at 110/120 V rated value — at 230 V rated value | 0.13 hp 0.33 hp |
| <ul style="list-style-type: none"> ● for 3-phase AC motor <ul style="list-style-type: none"> — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value | 0.8 hp 0.75 hp 2 hp 3 hp |
| UL File Number (CCN) | E47705 (NLRV, NLRV7) |

| Short-circuit protection | |
|---|--|
| 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 | |
| <ul style="list-style-type: none"> • at 400 V • at 500 V • at 690 V | <ul style="list-style-type: none"> gL/gG 32 A gL/gG 32 A gL/gG 25 A |
| certificate of suitability according to ATEX directive 2014/34/EU | DMT 02 ATEX F 001 |
| type of protection according to ATEX directive 2014/34/EU | Ex II (2) GD |
| Installation/ mounting/ dimensions | |
| mounting position | any |
| fastening method | screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 |
| Mounting method of circuit breaker for Transformer protection, Generator protection and system protection optional standard bar mounting | Yes |
| height | 97 mm |
| width | 45 mm |
| depth | 97 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 • 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 | <ul style="list-style-type: none"> 0 mm 0 mm 50 mm 50 mm 0 mm 0 mm 0 mm 50 mm 30 mm 50 mm 0 mm 0 mm 50 mm 50 mm 30 mm 30 mm 9 mm 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 |

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| <ul style="list-style-type: none"> • for live parts at 690 V <ul style="list-style-type: none"> — downwards — upwards — backwards — at the side — forwards | 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 • for AWG cables for main contacts | 2x (0,75 ... 2,5 mm ²), 2x 4 mm ² 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (18 ... 14), 2x 12 |
| connectable conductor cross-section for main contacts <ul style="list-style-type: none"> • solid or stranded • finely stranded with core end processing | 0.75 ... 4 mm ² 0.5 ... 2.5 mm ² |
| AWG number as coded connectable conductor cross section for main contacts | 18 ... 12 |
| tightening torque <ul style="list-style-type: none"> • for main 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 size 2 |
| design of the thread of the connection screw <ul style="list-style-type: none"> • for main contacts | M3 |
| Safety related data | |
| product function suitable for safety function | Yes |
| suitability for use <ul style="list-style-type: none"> • safety-related switching on • safety-related switching OFF | No Yes |
| service life maximum | 10 a |
| test wear-related service life necessary | Yes |
| proportion of dangerous failures <ul style="list-style-type: none"> • with low demand rate according to SN 31920 • with high demand rate according to SN 31920 | 40 % 50 % |
| B10 value with high demand rate according to SN 31920 | 5 000 |
| failure rate [FIT] with low demand rate according to SN 31920 | 50 FIT |
| ISO 13849 | |
| device type according to ISO 13849-1 | 3 |
| overdimensioning according to ISO 13849-2 necessary | Yes |
| IEC 61508 | |
| safety device type according to IEC 61508-2 | Type A |
| T1 value <ul style="list-style-type: none"> • for proof test interval or service life according to IEC 61508 | 10 a |
| Electrical Safety | |
| protection class IP on the front according to IEC 60529 | IP20 |
| touch protection on the front according to IEC 60529 | finger-safe, for vertical contact from the front |
| Display | |
| display version for switching status | Handle |
| Approvals Certificates | |
| Environmental Product Declaration | |
| <ul style="list-style-type: none"> • global warming potential [CO2 eq] / during manufacturing • global warming potential [CO2 eq] / during sales • global warming potential [CO2 eq] / during operation | 1.98 kg 0.134 kg 72.7 kg |

- global warming potential [CO2 eq] / after end of life
- global warming potential [CO2 eq] / total

-0.116 kg
74.698 kg

Environment **General Product Approval**

[Environmental Confirmations](#)



General Product Approval **For use in hazardous locations**



EG-Konf.



IECEX

For use in hazardous locations **Test Certificates** **Maritime application**



ATEX

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



ABS



BUREAU VERITAS



DNV

Maritime application **other**



LRS



PRS



RINA

[Miscellaneous](#)

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other **Railway**



[Confirmation](#)

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Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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=3RV2011-1EA10-Z W97>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2011-1EA10-Z W97>

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

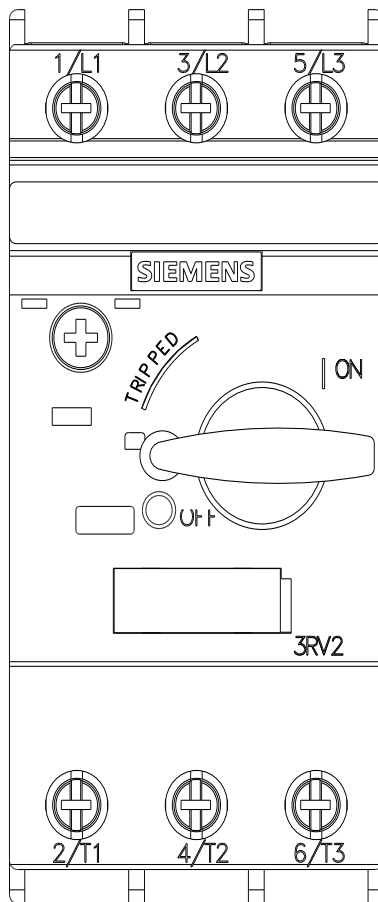
https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2011-1EA10-Z W97&lang=en

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2011-1EA10-Z W97>

Characteristic curves

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