



circuit breaker frame size S00 for transformer protection with approval circuit breaker UL 489, CSA C22.2 no. 5-02 thermal overload release 8 A short-circuit release 163 A screw terminal standard switching capacity

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| product brand name | SIRIUS |
| product designation | Circuit breaker |
| design of the product | For transformer protection according to UL 489/CSA C22.2 No.5 |
| 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 |
| 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 | 9.25 W |
| • at AC in hot operating state per pole | 3.1 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 | IP00 |
| shock resistance according to IEC 60068-2-27 | 25 g / 11 ms (rectangular impulse and sine pulse) |
| 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 | 8 A |
| Substance Prohibitance (day/month/year) | 10/01/2009 |
| Net Weight | 498 g |
| 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 |
| type of voltage for main current circuit | AC |
| operating voltage | |
| • rated value | 690 V |
| • rated value | 20 ... 690 V |
| • at AC-3 rated value maximum | 690 V |

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| <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 | 8 A |
| operational current | |
| <ul style="list-style-type: none"> ● at AC-3 at 400 V rated value ● at AC-3e at 400 V rated value | 8 A 8 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 ● 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 | 1.5 kW 3 kW 4 kW 5.5 kW 1.5 kW 3 kW 4 kW 5.5 kW |
| operating frequency | |
| <ul style="list-style-type: none"> ● at AC-3 maximum ● at AC-3e maximum | 15 1/h 15 1/h |

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| 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 |

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| Protective and monitoring functions | |
| product function | |
| <ul style="list-style-type: none"> ● ground fault detection ● phase failure detection | No No |
| design of the overload release | thermal |
| protection function thermal overload protection (ANSI 49) | Yes |
| maximum short-circuit current breaking capacity (I_{cu}) | |
| <ul style="list-style-type: none"> ● at AC at 240 V rated value ● at AC at 400 V rated value ● at AC at 500 V rated value ● at AC at 690 V rated value ● at 480 AC Y/277 V according to UL 489 rated value | 100 kA 100 kA 42 kA 6 kA 65 kA |
| operating short-circuit current breaking capacity (I_{cs}) at AC | |
| <ul style="list-style-type: none"> ● at 240 V rated value ● at 400 V rated value ● at 500 V rated value ● at 690 V rated value | 100 kA 100 kA 42 kA 4 kA |
| response value current of instantaneous short-circuit trip unit | 163 A |

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| 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 | gG 50 A gG 40 A gG 35 A |

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| 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 | 144 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 30 mm — upwards 30 mm — at the side 30 mm ● for live parts at 400 V <ul style="list-style-type: none"> — downwards 30 mm — upwards 30 mm — at the side 30 mm ● for grounded parts at 500 V <ul style="list-style-type: none"> — downwards 30 mm — upwards 30 mm — at the side 30 mm ● for live parts at 500 V <ul style="list-style-type: none"> — downwards 30 mm — upwards 30 mm — at the side 30 mm ● for grounded parts at 690 V <ul style="list-style-type: none"> — downwards 70 mm — upwards 70 mm — backwards 0 mm — at the side 30 mm — forwards 0 mm ● for live parts at 690 V <ul style="list-style-type: none"> — downwards 70 mm — upwards 70 mm — backwards 0 mm — at the side 30 mm — forwards 0 mm | |

Connections/ Terminals

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| 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 1 ... 10 mm², max. 2x 10 mm² — finely stranded with core end processing 1 ... 16 mm², max. 6 + 16 mm² ● for AWG cables for main contacts 2x (14 ... 10) | |
| connectable conductor cross-section for main contacts | |
| <ul style="list-style-type: none"> ● solid or stranded 1 ... 10 mm² ● finely stranded with core end processing 1 ... 16 mm² | |
| AWG number as coded connectable conductor cross section for main contacts | 14 ... 10 |
| tightening torque | |
| <ul style="list-style-type: none"> ● for main contacts with screw-type terminals 2.5 ... 3 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

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| product function suitable for safety function | Yes |
| suitability for use | |
| <ul style="list-style-type: none"> ● safety-related switching on No ● safety-related switching OFF Yes | |
| service life maximum | 10 a |
| test wear-related service life necessary | Yes |
| proportion of dangerous failures | |

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| • with low demand rate according to SN 31920 | 40 % |
| • with high demand rate according to SN 31920 | 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 | 10 a |
| • for proof test interval or service life according to IEC 61508 | |
| 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 | |
| • global warming potential [CO2 eq] / during manufacturing | 1.98 kg |
| • global warming potential [CO2 eq] / during sales | 0.134 kg |
| • global warming potential [CO2 eq] / during operation | 72.7 kg |
| • global warming potential [CO2 eq] / after end of life | -0.116 kg |
| • global warming potential [CO2 eq] / total | 74.698 kg |
| Environment | General Product Approval |

[Environmental Confirmations](#)



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|---------------------------------|--|
| General Product Approval | Test Certificates |
| | Type Test Certificates/Test Report Special Test Certificate |

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| Maritime application | other |
| | Confirmation Miscellaneous |
| | Confirmation Miscellaneous |

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| other | Railway |
| | Special Test Certificate |

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?mfb=3RV2811-1HD10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2811-1HD10>

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

https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2811-1HD10&lang=en

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2811-1HD10>

Characteristic curves

[https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP="HAUPT"></mmp_prod_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP=)

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