



circuit breaker size S3 for system protection with approval circuit breaker UL 489, CSA C22.2 no. 5-02 thermal release 45 A short-circuit release 585 A screw terminal

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| product brand name | SIRIUS |
| product designation | Circuit breaker |
| design of the product | For system 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 | S3 |
| 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 | 18 W |
| • at AC in hot operating state per pole | 6 W |
| type of calculation of power loss current-dependent | quadratic |
| insulation voltage with degree of pollution 3 at AC rated value | 1 000 V |
| surge voltage resistance rated value | 8 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 | 25 000 |
| • of auxiliary contacts typical | 25 000 |
| electrical endurance (operating cycles) typical | 25 000 |
| reference code according to IEC 81346-2 | Q |
| continuous current rated value | 45 A |
| Substance Prohibitance (day/month/year) | 03/01/2017 |
| SVHC substance name | Lead CAS-No. 7439-92-1 |
| Net Weight | 2.262 kg |
| Ambient conditions | |
| installation altitude at height above sea level maximum | 2 000 m |

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| 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 | 600 V |
| • rated value | 20 ... 600 V |
| operating frequency rated value | 50 ... 60 Hz |
| operational current rated value | 45 A |
| 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 | |
| • ground fault detection | No |
| • phase failure detection | No |
| design of the overload release | thermal |
| protection function thermal overload protection (ANSI 49) | Yes |
| 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 480 AC Y/277 V according to UL 489 rated value | 65 kA |
| operating short-circuit current breaking capacity (Ics) at AC | |
| • at 240 V rated value | 100 kA |
| • at 400 V rated value | 50 kA |
| response value current of instantaneous short-circuit trip unit | 585 A |
| 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 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 | 170 mm |
| width | 70 mm |
| depth | 176 mm |
| required spacing | |
| • for grounded parts at 400 V | |
| — downwards | 90 mm |
| — upwards | 90 mm |
| — at the side | 10 mm |
| • for live parts at 400 V | |
| — downwards | 90 mm |
| — upwards | 90 mm |
| — at the side | 10 mm |
| Connections/ Terminals | |
| product component removable terminal for auxiliary and control circuit | No |
| type of electrical connection | |
| • for main current circuit | screw-type terminals |

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| 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 — solid or stranded — finely stranded with core end processing — finely stranded without core end processing • for AWG cables for main contacts • for AWG cables for main contacts for box terminal using the front clamping point | <ul style="list-style-type: none"> 2x (2.5 ... 16 mm²) 2x (2.5 ... 50 mm²), 1x (10 ... 70 mm²) 2x (2.5 ... 35 mm²), 1x (2.5 ... 50 mm²) 2x (10 ... 35 mm²), 1x (10 ... 50 mm²) 8 8 |
| connectable conductor cross-section for main contacts | |
| <ul style="list-style-type: none"> • finely stranded with core end processing • finely stranded without core end processing | <ul style="list-style-type: none"> 2.5 ... 50 mm² 10 ... 50 mm² |
| AWG number as coded connectable conductor cross section for main contacts | 8 |
| tightening torque | |
| <ul style="list-style-type: none"> • for main contacts with screw-type terminals | 4.5 ... 6 N·m |
| design of screwdriver shaft | Hexagonal socket |
| size of the screwdriver tip | 4 mm |
| design of the thread of the connection screw | |
| <ul style="list-style-type: none"> • for main contacts | M8 |
| 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 • global warming potential [CO2 eq] / after end of life • global warming potential [CO2 eq] / total | <ul style="list-style-type: none"> 18.5 kg 1.24 kg 265 kg -1.5 kg 283.24 kg |
| Environment | General Product Approval |

[Environmental Conformations](#)



General Product Approval

Test Certificates



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

Maritime application other



[Miscellaneous](#)

[Confirmation](#)

[Miscellaneous](#)



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=3RV2742-5HD10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2742-5HD10>

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

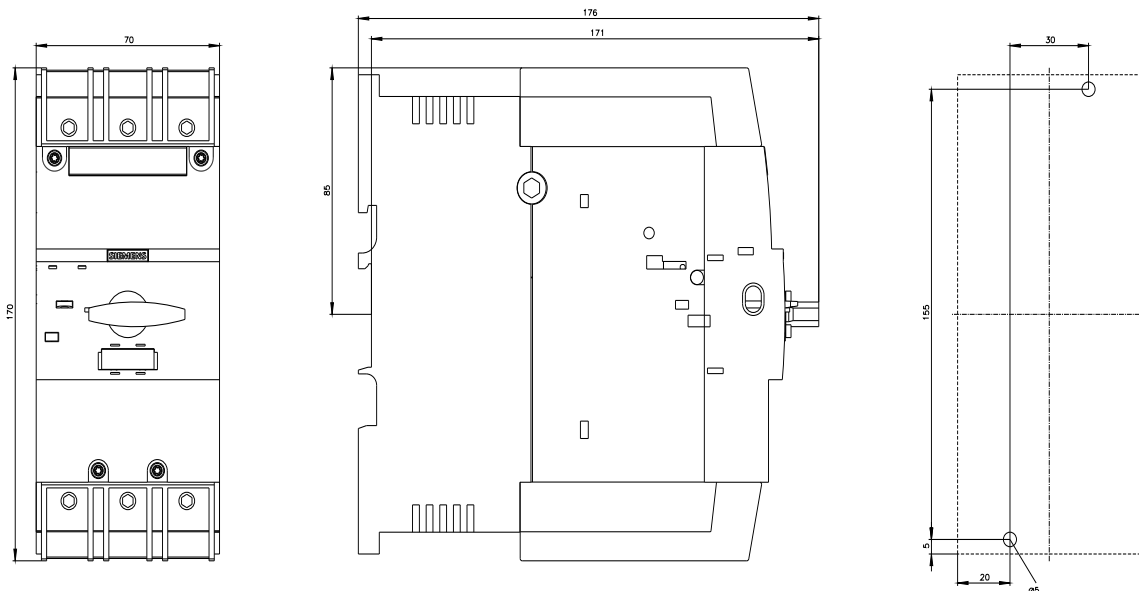
https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2742-5HD10&lang=en

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2742-5HD10>

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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