



Circuit breaker size S2 for motor protection, CLASS 10 A-release 42...52 A N-release 741 A screw terminal Standard switching capacity with transverse auxiliary switches 1 NO+1 NC

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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 | S2 |
| size of contactor can be combined company-specific | S2 |
| product extension auxiliary switch | Yes |
| power loss [W] for rated value of the current | |
| • at AC in hot operating state | 24.5 W |
| • at AC in hot operating state per pole | 8.2 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 Sinus |
| mechanical service life (switching cycles) | |
| • of the main contacts typical | 50 000 |
| • of auxiliary contacts typical | 50 000 |
| electrical endurance (switching cycles) typical | 50 000 |
| 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 Prohibition (Date) | 15.10.2014 00:00:00 |
| Ambient conditions | |
| installation altitude at height above sea level maximum | 2 000 m |
| • ambient temperature during operation | -20 ... +60 °C |
| • ambient temperature during storage | -50 ... +80 °C |
| • ambient temperature 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 |

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| adjustable current response value current of the current-dependent overload release | 42 ... 52 A |
| <ul style="list-style-type: none"> operating voltage rated value operating voltage at AC-3 rated value maximum | 690 V 690 V |
| operating frequency rated value | 50 ... 60 Hz |
| operational current rated value | 52 A |
| operational current at AC-3 at 400 V rated value | 52 A |
| operating power 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 | 15 000 W 22 000 W 30 000 W 45 000 W |
| operating frequency at AC-3 maximum | 15 1/h |
| Auxiliary circuit | |
| design of the auxiliary switch | transverse |
| number of NC contacts for auxiliary contacts | 1 |
| number of NO contacts for auxiliary contacts | 1 |
| operational current of auxiliary contacts at AC-15 | |
| <ul style="list-style-type: none"> at 24 V at 230 V | 2 A 0.5 A |
| operational current of auxiliary contacts at DC-13 | |
| <ul style="list-style-type: none"> at 24 V at 60 V at 110 V at 125 V at 220 V | 1 A 0.15 A 0 A 0 A 0 A |
| Protective and monitoring functions | |
| product function | |
| <ul style="list-style-type: none"> ground fault detection phase failure detection | No Yes |
| trip class | CLASS 10 |
| design of the overload release | thermal |
| breaking capacity operating short-circuit current (Ics) 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 30 kA 4 kA 2 kA |
| breaking capacity maximum short-circuit current (Icu) | |
| <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 | 100 kA 65 kA 8 kA 4 kA |
| response value current of instantaneous short-circuit trip unit | 741 A |
| UL/CSA ratings | |
| full-load current (FLA) for 3-phase AC motor | |
| <ul style="list-style-type: none"> at 480 V rated value at 600 V rated value | 52 A 52 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 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 | 5 hp 10 hp 15 hp 20 hp 40 hp 50 hp |

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| contact rating of auxiliary contacts according to UL | C300 / R300 |
| Short-circuit protection | |
| product function short circuit protection | Yes |
| design of the short-circuit trip | magnetic |
| design of the fuse link <ul style="list-style-type: none"> for short-circuit protection of the auxiliary switch required | fuse gG: 10 A, miniature circuit breaker C 6 A (short-circuit current $I_k < 400$ A) |
| design of the fuse link for IT network for short-circuit protection of the main circuit <ul style="list-style-type: none"> at 240 V at 400 V at 500 V at 690 V | none required 160 125 100 |
| 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 | 140 mm |
| width | 55 mm |
| depth | 149 mm |
| 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 | 50 mm 50 mm 10 mm 50 mm 50 mm 10 mm 50 mm 50 mm 10 mm 50 mm 50 mm 10 mm 0 mm 10 mm 0 mm 50 mm 50 mm 0 mm 10 mm 0 mm |
| Connections/ Terminals | |
| product function removable terminal for auxiliary and control circuit | No |
| type of electrical connection <ul style="list-style-type: none"> for main current circuit for auxiliary and control circuit | screw-type terminals 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 | |

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| — solid or stranded | 2x (1 ... 35 mm ²), 1x (1 ... 50 mm ²) |
| — finely stranded with core end processing | 2x (1 ... 25 mm ²), 1x (1 ... 35 mm ²) |
| • at AWG cables for main contacts | 2x (18 ... 2), 1x (18 ... 1) |
| type of connectable conductor cross-sections | |
| • for auxiliary contacts | |
| — solid or stranded | 2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²) |
| — finely stranded with core end processing | 2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²) |
| • at AWG cables for auxiliary contacts | 2x (20 ... 16), 2x (18 ... 14) |
| • tightening torque for main contacts with screw-type terminals | 3 ... 4.5 N·m |
| • tightening torque for auxiliary 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 2 |
| design of the thread of the connection screw | |
| • for main contacts | M6 |
| • of the auxiliary and control contacts | M3 |

| Safety related data | |
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| 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 % |
| failure rate [FIT] | |
| • 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 | For use in hazardous locations |



[KC](#)



| For use in hazardous locations | Declaration of Conformity | Test Certificates | Marine / Shipping |
|--------------------------------|---------------------------|-------------------|-------------------|
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[Miscellaneous](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



| Marine / Shipping |
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| other | Railway |
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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=3RV2031-4WA15>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2031-4WA15>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4WA15>

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

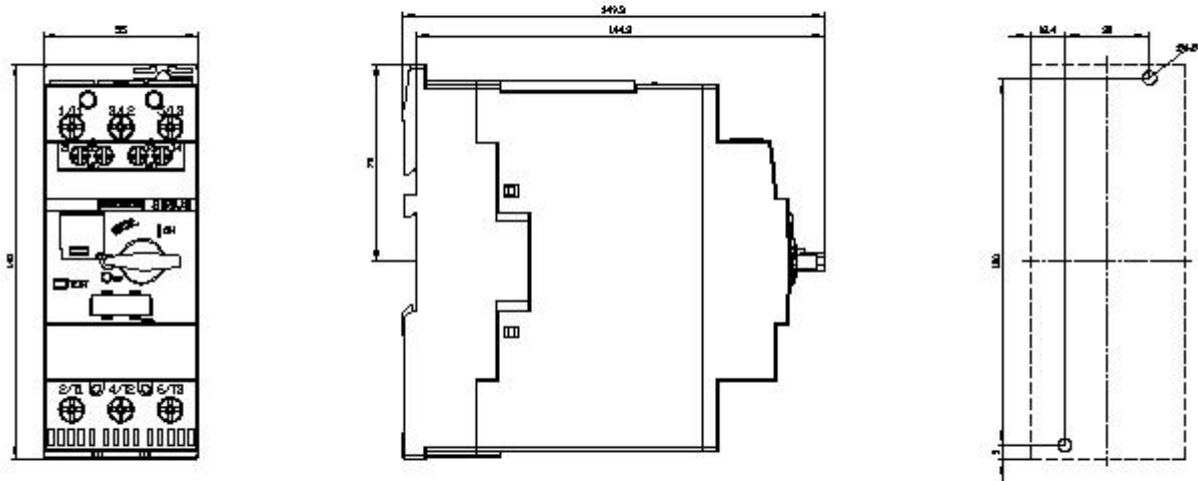
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2031-4WA15&lang=en

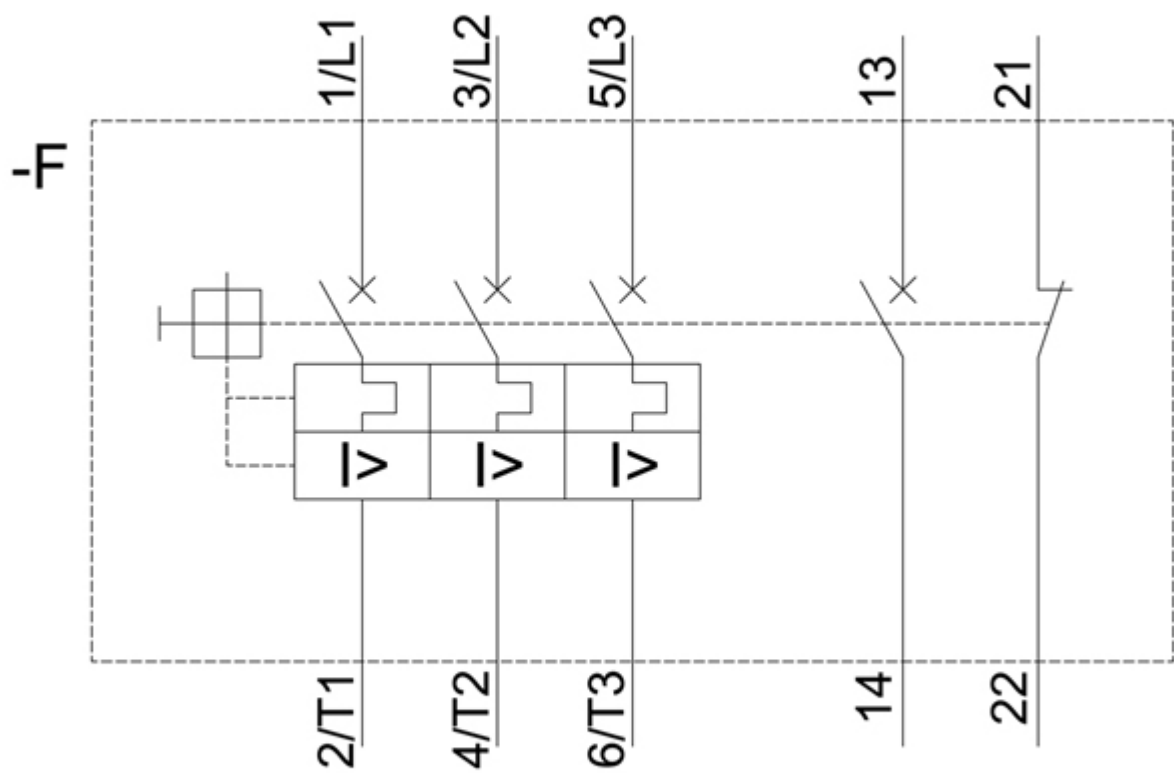
Characteristic: Tripping characteristics, I^2t , Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4WA15/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2031-4WA15&objecttype=14&gridview=view1>





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12/15/2020 