

Siemens
EcoTech



Circuit breaker size S2 for motor protection, CLASS 10 with overload relay function
A-release 62...73 A N-release 949 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 with overload relay function |
| 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 | 29.5 W |
| • at AC in hot operating state per pole | 9.8 W |
| insulation voltage with degree of pollution 3 at AC rated value | 690 V |
| surge voltage resistance rated value | 6 kV |
| shock resistance according to IEC 60068-2-27 | 25g / 11 ms Sinus |
| mechanical service life (operating cycles) | |
| • of the main contacts typical | 20 000 |
| • of auxiliary contacts typical | 20 000 |
| electrical endurance (operating cycles) typical | 20 000 |
| reference code according to IEC 81346-2 | Q |
| Substance Prohibitance (Date) | 03/01/2017 |
| SVHC substance name | Lead - 7439-92-1 |
| 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 |
| 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 | 62 ... 73 A |
| operating voltage | |
| • rated value | 20 ... 690 V |
| • at AC-3 rated value maximum | 690 V |
| operating frequency rated value | 50 ... 60 Hz |
| operational current rated value | 73 A |

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| operational current | |
| <ul style="list-style-type: none"> at AC-3 at 400 V rated value | 73 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 | 22 kW 37 kW 45 kW 55 kW |
| operating frequency | |
| <ul style="list-style-type: none"> at AC-3 maximum | 15 1/h |
| Auxiliary circuit | |
| number of NC contacts for auxiliary contacts | 0 |
| <ul style="list-style-type: none"> note | 1 |
| number of NO contacts for auxiliary contacts | 0 |
| <ul style="list-style-type: none"> note | 1 |
| 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 |
| maximum short-circuit current breaking capacity (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 | 65 kA 65 kA 8 kA 4 kA |
| operating short-circuit current breaking capacity (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 | 65 kA 30 kA 5 kA 2 kA |
| response value current of instantaneous short-circuit trip unit | 949 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 | 65 A 62 A |
| yielded mechanical performance [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 | 20 hp 25 hp 50 hp 60 hp |
| 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 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 DIN rail according to DIN EN 60715 |
| height | 140 mm |
| width | 75 mm |
| depth | 149 mm |
| required spacing | |
| <ul style="list-style-type: none"> with side-by-side mounting at the side for grounded parts at 400 V <ul style="list-style-type: none"> downwards | 0 mm 50 mm |

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| — upwards | 50 mm |
| — at the side | 10 mm |
| • for live parts at 400 V | |
| — downwards | 50 mm |
| — upwards | 50 mm |
| — at the side | 10 mm |
| • for grounded parts at 500 V | |
| — downwards | 50 mm |
| — upwards | 50 mm |
| — at the side | 10 mm |
| • for live parts at 500 V | |
| — downwards | 50 mm |
| — upwards | 50 mm |
| — at the side | 10 mm |
| • for grounded parts at 690 V | |
| — downwards | 50 mm |
| — upwards | 50 mm |
| — backwards | 0 mm |
| — at the side | 10 mm |
| — forwards | 0 mm |
| • for live parts at 690 V | |
| — downwards | 50 mm |
| — upwards | 50 mm |
| — backwards | 0 mm |
| — at the side | 10 mm |
| — forwards | 0 mm |

Connections/ Terminals

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| type of electrical connection | |
| • for main current circuit | screw-type terminals |
| • for auxiliary and control circuit | screw-type terminals |
| arrangement of electrical connectors for main current circuit | Top and bottom |
| type of connectable conductor cross-sections | |
| • for main contacts | |
| — 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) |
| • for AWG cables for main contacts | 2x (18 ... 2), 1x (18 ... 1) |
| tightening torque | |
| • for main contacts with screw-type terminals | 3 ... 4.5 N·m |
| • 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 size 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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| product function suitable for safety function | Yes |
| suitability for use | |
| • 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 | |
| • 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 |

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| IEC 61508 | |
| safety device type according to IEC 61508-2 | Type A |
| T1 value | 10 a |
| <ul style="list-style-type: none"> 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 | |
| General Product Approval | |



[Confirmation](#)



EG-Konf.



CCC



UL

[KC](#)

| | | |
|--------------------------|-------------------|-------------------|
| General Product Approval | Test Certificates | Marine / Shipping |
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[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



ABS



BUREAU VERITAS



DNV

| | |
|-------------------|-------|
| Marine / Shipping | other |
|-------------------|-------|



LRS



PRS



RINA

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VDE

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|---------|-------------|
| Railway | Environment |
|---------|-------------|

[Special Test Certificate](#)

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Siemens EcoTech



[Environmental Confirmations](#)

Further information

Information on the packaging

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

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=3RV2131-4KA10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2131-4KA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2131-4KA10>

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

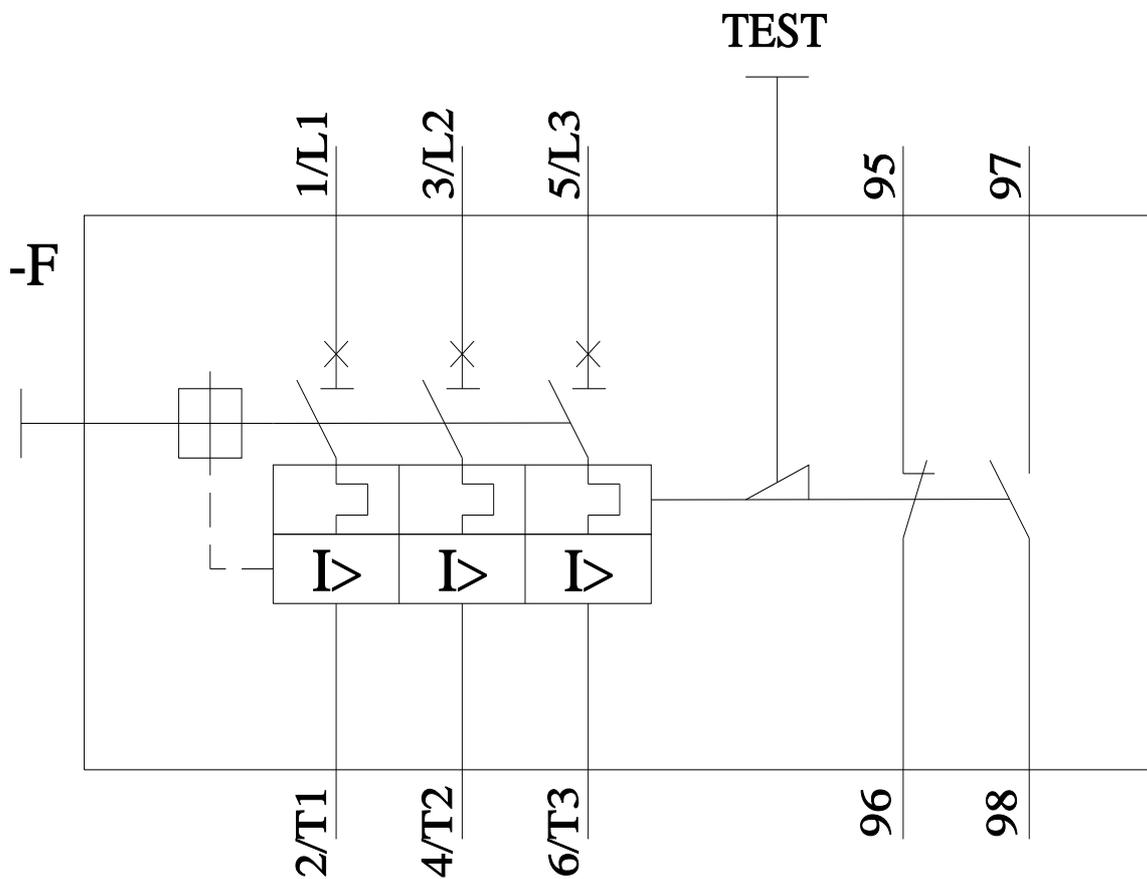
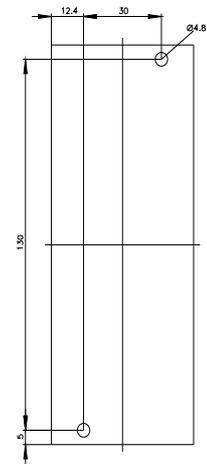
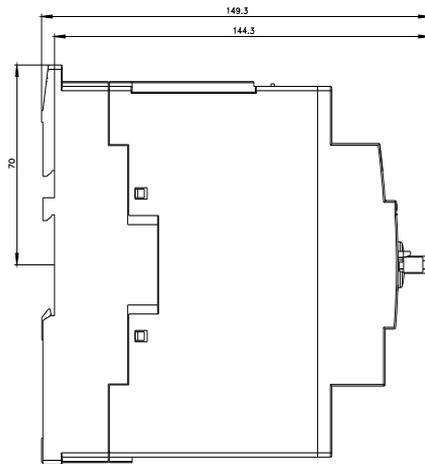
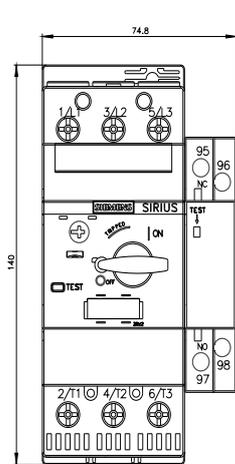
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2131-4KA10&lang=en

Characteristic: Tripping characteristics, I_t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2131-4KA10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2131-4KA10&objecttype=14&gridview=view1>



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