

Siemens
EcoTech



Circuit breaker size S3 for motor protection, CLASS 10 A-release 65...84 A N-release 1170 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 | S3 |
| size of contactor can be combined company-specific | S3 |
| product extension auxiliary switch | Yes |
| power loss [W] for rated value of the current | |
| • at AC in hot operating state | 34 W |
| • at AC in hot operating state per pole | 11.3 W |
| insulation voltage with degree of pollution 3 at AC rated value | 1 000 V |
| surge voltage resistance rated value | 8 kV |
| shock resistance according to IEC 60068-2-27 | 25g / 11 ms Sinus |
| 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 |
| Substance Prohibitance (Date) | 03/01/2017 |
| SVHC substance name | Lead - 7439-92-1 |
| Weight | 2.273 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 |
| relative humidity during operation | 10 ... 95 % |
| Environmental footprint | |
| Environmental Product Declaration (EPD) | Yes |
| global warming potential [CO2 eq] total | 283.24 kg |
| global warming potential [CO2 eq] during manufacturing | 18.5 kg |
| global warming potential [CO2 eq] during sales | 1.24 kg |
| global warming potential [CO2 eq] during operation | 265 kg |
| global warming potential [CO2 eq] after end of life | -1.5 kg |
| Siemens Eco Profile (SEP) | Siemens EcoTech |

| Main circuit | |
|---|--|
| number of poles for main current circuit | 3 |
| adjustable current response value current of the current-dependent overload release | 65 ... 84 A |
| type of voltage for main current circuit | AC |
| operating voltage <ul style="list-style-type: none"> • rated value • at AC-3 rated value maximum • at AC-3e rated value maximum | 20 ... 690 V 690 V 690 V |
| operating frequency rated value | 50 ... 60 Hz |
| operational current rated value | 84 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 | 84 A 84 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 | 22 kW 45 kW 55 kW 75 kW 22 kW 45 kW 55 kW 75 kW |
| operating frequency <ul style="list-style-type: none"> • at AC-3 maximum • at AC-3e maximum | 15 1/h 15 1/h |
| Auxiliary circuit | |
| design of the auxiliary switch | transverse |
| type of voltage for auxiliary and control circuit | AC/DC |
| number of NC contacts for auxiliary contacts | 1 |
| number of NO contacts for auxiliary contacts | 1 |
| number of CO contacts for auxiliary contacts | 0 |
| 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 | 1 A 0.15 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 |
| 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 | 100 kA 65 kA 8 kA 5 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 | 100 kA 30 kA 4 kA 3 kA |
| response value current of instantaneous short-circuit trip unit | 1 170 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 | 84 A 84 A |

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| 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 | <p>7.5 hp 15 hp</p> <p>25 hp 30 hp 60 hp 75 hp</p> |
| 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 |
| Installation/ mounting/ dimensions | |
| mounting position | any |
| fastening method | screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 |
| height | 165 mm |
| width | 70 mm |
| depth | 176 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 — 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 — at the side ● for live parts at 690 V <ul style="list-style-type: none"> — downwards — upwards — at the side | <p>0 mm</p> <p>70 mm 70 mm 10 mm</p> <p>70 mm 70 mm 10 mm</p> <p>110 mm 110 mm 10 mm</p> <p>110 mm 110 mm 10 mm</p> <p>150 mm 150 mm 30 mm</p> <p>150 mm 150 mm 30 mm</p> |
| Connections/ Terminals | |
| type of electrical connection | |
| <ul style="list-style-type: none"> ● for main current circuit ● for auxiliary and control circuit | <p>screw-type terminals</p> <p>screw-type terminals</p> |
| 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 | <p>2x (2.5 ... 16 mm²)</p> <p>2x (2,5 ... 50 mm²), 1x (10 ... 70 mm²)</p> <p>2x (2.5 ... 35 mm²), 1x (2.5 ... 50 mm²)</p> <p>2x (10 ... 35 mm²), 1x (10 ... 50 mm²)</p> |
| type of connectable conductor cross-sections | |
| <ul style="list-style-type: none"> ● for auxiliary contacts <ul style="list-style-type: none"> — finely stranded with core end processing ● for AWG cables for auxiliary contacts | <p>2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)</p> <p>2x (20 ... 16), 2x (18 ... 14)</p> |

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|---|----------------------------------|
| tightening torque | |
| <ul style="list-style-type: none"> for main contacts for ring cable lug | 4.5 ... 6 N·m |
| outer diameter of the usable ring cable lug maximum | 19 mm |
| tightening torque | |
| <ul style="list-style-type: none"> for main contacts with screw-type terminals for auxiliary contacts with screw-type terminals | 4.5 ... 6 N·m 0.8 ... 1.2 N·m |
| design of the thread of the connection screw | |
| <ul style="list-style-type: none"> of the auxiliary and control contacts | M3 |

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 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

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|--|-----|
| device type according to ISO 13849-1 | 3 |
| overdimensioning according to ISO 13849-2 necessary | Yes |

IEC 61508

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|--|--------|
| 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

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|--|--|
| 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

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| display version for switching status | Handle |
|--------------------------------------|--------|

Approvals Certificates

General Product Approval



[KC](#)



| | | | |
|---------------------------------|---------------------------------------|--------------------------|-----------------------------|
| General Product Approval | For use in hazardous locations | Test Certificates | Maritime application |
|---------------------------------|---------------------------------------|--------------------------|-----------------------------|



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



| | |
|-----------------------------|--------------|
| Maritime application | other |
|-----------------------------|--------------|



[Miscellaneous](#)

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



Confirmation



Special Test Certificate

Confirmation



Environment



Environmental Confirmations

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=3RV2041-4RA15>

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2041-4RA15>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2041-4RA15>

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

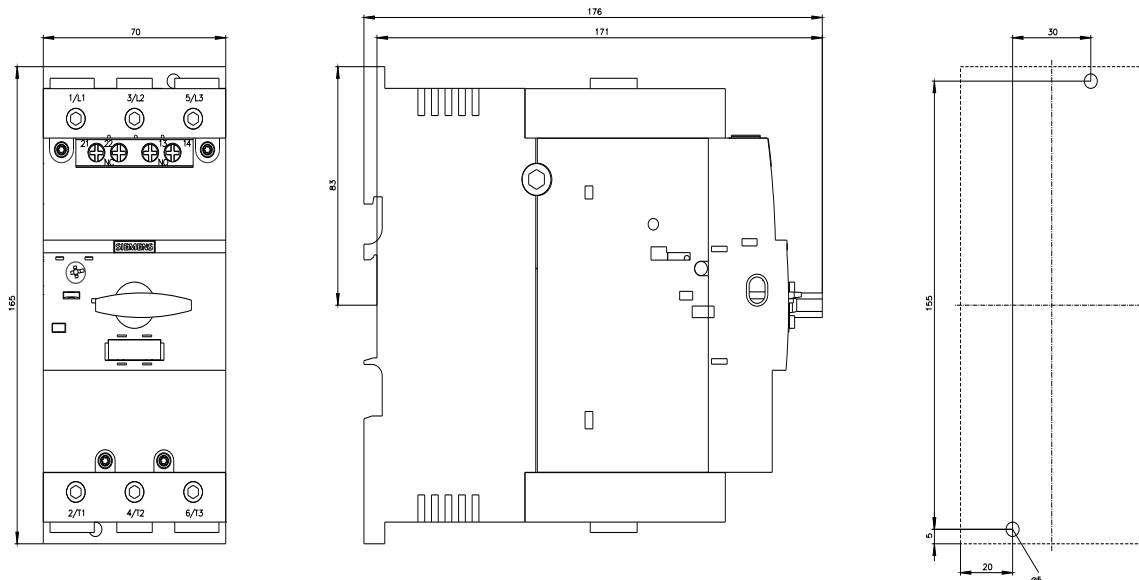
https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2041-4RA15&lang=en

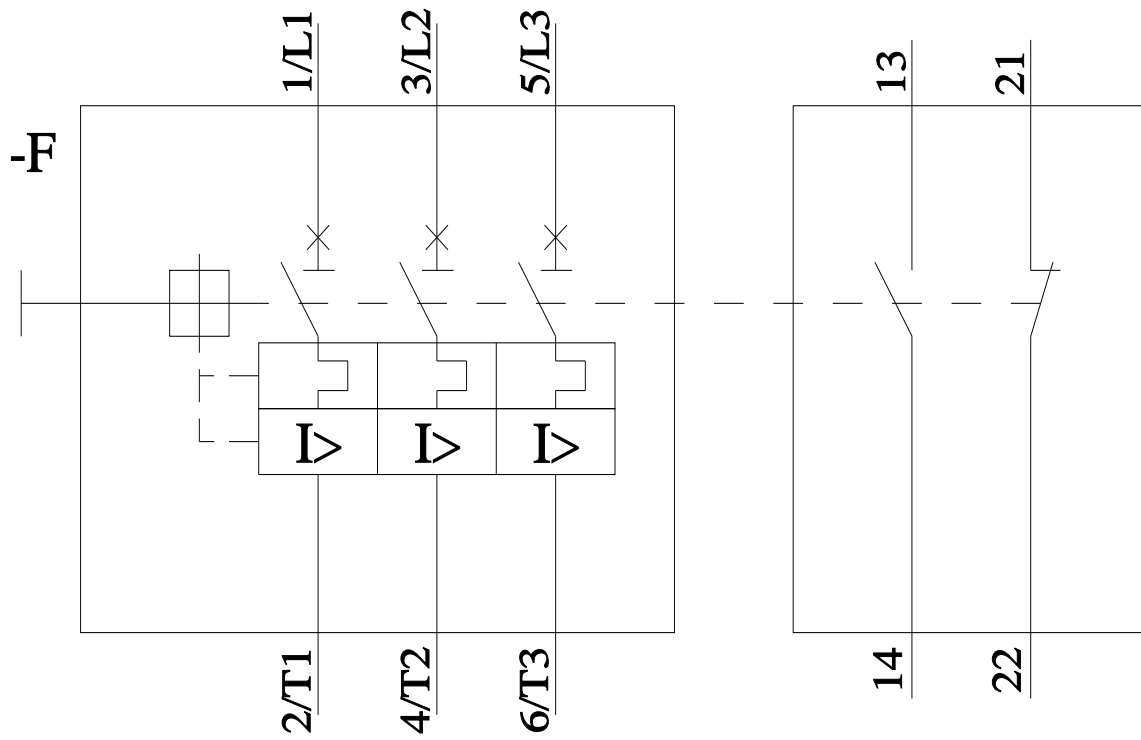
Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2041-4RA15/char>

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

<https://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2041-4RA15&objecttype=14&gridview=view1>





last modified:

11/11/2025 