

Circuit breaker size S0 for motor protection, CLASS 10 A-release
 1.1...1.6 A N-release 21 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 | S0 |
| Size of contactor can be combined company-specific | S00, S0 |
| Product extension | Yes |
| <ul style="list-style-type: none"> Auxiliary switch | Yes |
| Power loss [W] for rated value of the current | |
| <ul style="list-style-type: none"> at AC in hot operating state | 7.25 W |
| <ul style="list-style-type: none"> at AC in hot operating state per pole | 2.4 W |
| Insulation voltage with degree of pollution 3 rated value | 690 V |
| Surge voltage resistance rated value | 6 kV |
| maximum permissible voltage for safe isolation | |
| <ul style="list-style-type: none"> in networks with grounded star point between main and auxiliary circuit | 400 V |

| | |
|---|-------------------|
| <ul style="list-style-type: none"> • in networks with grounded star point between main and auxiliary circuit | 400 V |
| Protection class IP | |
| <ul style="list-style-type: none"> • on the front | IP20 |
| <ul style="list-style-type: none"> • of the terminal | IP20 |
| Shock resistance | |
| <ul style="list-style-type: none"> • acc. to IEC 60068-2-27 | 25g / 11 ms |
| Mechanical service life (switching cycles) | |
| <ul style="list-style-type: none"> • of the main contacts typical | 100 000 |
| <ul style="list-style-type: none"> • of auxiliary contacts typical | 100 000 |
| Electrical endurance (switching cycles) | |
| <ul style="list-style-type: none"> • typical | 100 000 |
| 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 DIN EN 81346-2 | Q |

Ambient conditions

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|--|----------------|
| Installation altitude at height above sea level | |
| <ul style="list-style-type: none"> • maximum | 2 000 m |
| Ambient temperature | |
| <ul style="list-style-type: none"> • during operation | -20 ... +60 °C |
| <ul style="list-style-type: none"> • during storage | -50 ... +80 °C |
| <ul style="list-style-type: none"> • during transport | -50 ... +80 °C |
| Temperature compensation | -20 ... +60 °C |
| Relative humidity during operation | 10 ... 95 % |

Main circuit

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|---|----------------|
| Number of poles for main current circuit | 3 |
| Adjustable pick-up value current of the current-dependent overload release | 1.1 ... 1.6 A |
| Operating voltage | |
| <ul style="list-style-type: none"> • rated value | 690 V |
| <ul style="list-style-type: none"> • at AC-3 rated value maximum | 690 V |
| Operating frequency rated value | 50 ... 60 Hz |
| Operating current rated value | 1.6 A |
| Operating current | |
| <ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 400 V rated value | 1.6 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 | 250 W 550 W |

| | |
|----------------------------|---------|
| — at 500 V rated value | 750 W |
| — at 690 V rated value | 1 100 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 |
| Number of CO contacts | |
| • for auxiliary contacts | 0 |
| Operating current of auxiliary contacts at AC-15 | |
| • at 24 V | 2 A |
| • at 120 V | 0.5 A |
| • at 125 V | 0.5 A |
| • at 230 V | 0.5 A |
| Operating current of auxiliary contacts at DC-13 | |
| • at 24 V | 1 A |
| • at 60 V | 0.15 A |

Protective and monitoring functions

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|--|----------|
| Product function | |
| • Ground fault detection | No |
| • Phase failure detection | Yes |
| Trip class | CLASS 10 |
| Design of the overload release | thermal |
| Operational short-circuit current breaking capacity (Ics) at AC | |
| • at 240 V rated value | 100 kA |
| • at 400 V rated value | 100 kA |
| • at 500 V rated value | 100 kA |
| • at 690 V rated value | 100 kA |
| 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 AC at 500 V rated value | 100 kA |
| • at AC at 690 V rated value | 100 kA |
| Response value current | |
| • of instantaneous short-circuit trip unit | 21 A |

UL/CSA ratings

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|---|-------|
| Full-load current (FLA) for three-phase AC motor | |
| • at 480 V rated value | 1.6 A |
| • at 600 V rated value | 1.6 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 230 V rated value • for three-phase AC motor <ul style="list-style-type: none"> — at 460/480 V rated value — at 575/600 V rated value | <p>0.1 hp</p> <p>0.75 hp</p> <p>0.75 hp</p> |
| Contact rating of auxiliary contacts according to UL | C300 / R300 |

Short-circuit protection

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|---|---|
| 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 gL/gG: 10 A, miniature circuit breaker C 6 A (short-circuit current $I_k < 400$ A) |

Installation/ mounting/ dimensions

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|--|---|
| Mounting position | any |
| Mounting type | screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 |
| Height | 97 mm |
| Width | 45 mm |
| Depth | 97 mm |
| Required spacing | |
| <ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards — Backwards — upwards — downwards — at the side • for grounded parts <ul style="list-style-type: none"> — forwards — Backwards — upwards — at the side — downwards • for live parts <ul style="list-style-type: none"> — forwards — Backwards — upwards — downwards — at the side | <p>0 mm</p> <p>0 mm</p> <p>50 mm</p> <p>50 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>50 mm</p> <p>30 mm</p> <p>50 mm</p> <p>0 mm</p> <p>0 mm</p> <p>50 mm</p> <p>50 mm</p> <p>30 mm</p> |

Connections/ Terminals

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|-------------------------|--|
| Product function | |
|-------------------------|--|

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|--|---|
| <ul style="list-style-type: none"> 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 current 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 <ul style="list-style-type: none"> single or multi-stranded finely stranded with core end processing at AWG conductors for main contacts | 2x (1 ... 2,5 mm ²), 2x (2,5 ... 10 mm ²) 2x (1 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²), 1x 10 mm ² 2x (16 ... 12), 2x (14 ... 8) |
| Type of connectable conductor cross-sections <ul style="list-style-type: none"> for auxiliary contacts <ul style="list-style-type: none"> single or multi-stranded finely stranded with core end processing at AWG conductors for auxiliary contacts | 2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²) 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 14) |
| Tightening torque <ul style="list-style-type: none"> for main contacts with screw-type terminals for auxiliary contacts with screw-type terminals | 2 ... 2.5 N·m 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 <ul style="list-style-type: none"> for main contacts of the auxiliary and control contacts | M4 M3 |

Safety related data

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|---|--------------|
| B10 value <ul style="list-style-type: none"> with high demand rate acc. to SN 31920 | 5 000 |
| Proportion of dangerous failures <ul style="list-style-type: none"> with low demand rate acc. to SN 31920 with high demand rate acc. to SN 31920 | 50 % 50 % |
| Failure rate [FIT] <ul style="list-style-type: none"> 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 |
| Display version <ul style="list-style-type: none"> for switching status | Handle |

Certificates/ approvals

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|--------------------------|--------------------------------|
| General Product Approval | For use in hazardous locations |
|--------------------------|--------------------------------|



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|---------------------------|-------------------|-------------------|
| Declaration of Conformity | Test Certificates | Marine / Shipping |
|---------------------------|-------------------|-------------------|



[Miscellaneous](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



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



[Confirmation](#)

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



[Vibration and Shock](#)

[Confirmation](#)

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

www.siemens.com/sirius/catalogs

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2021-1AA15>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-1AA15>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1AA15>

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

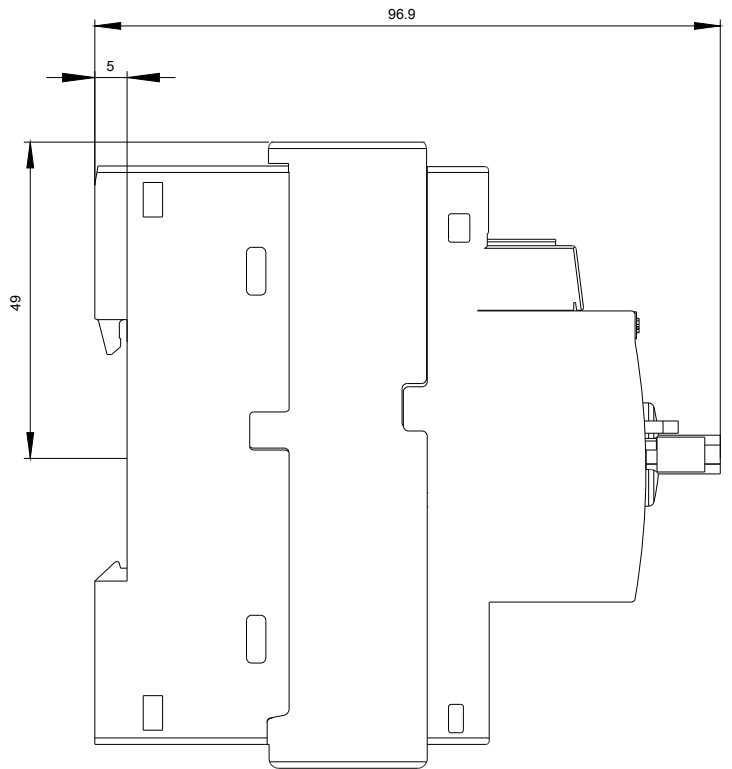
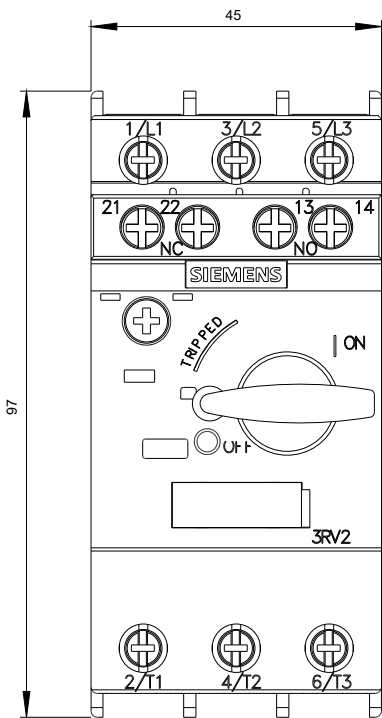
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-1AA15&lang=en

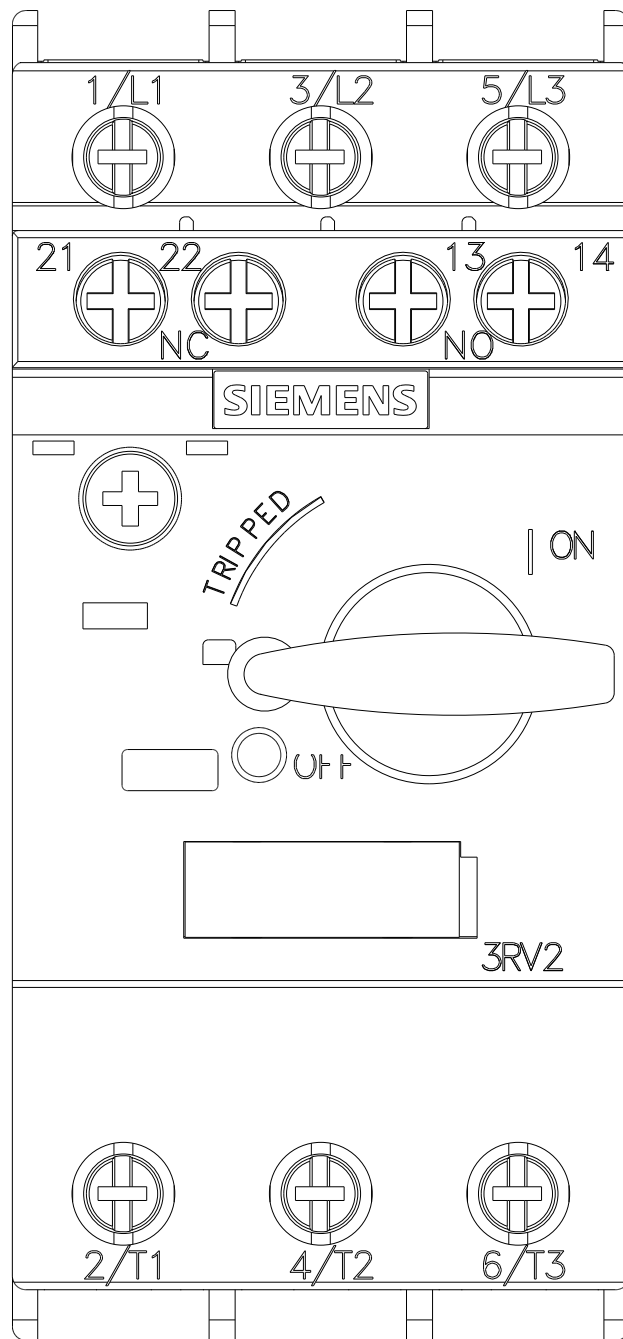
Characteristic: Tripping characteristics, I^t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1AA15/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-1AA15&objecttype=14&gridview=view1>







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