

Circuit breaker size S0 for motor protection, CLASS 10 A-release
18...25 A N-release 325 A Screw terminal Standard switching
capacity



| | |
|--------------------------|----------------------|
| 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 |
| • Auxiliary switch | |
| Power loss [W] total typical | 8 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 | |
| • in networks with grounded 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 | |

| | |
|---|-------------------------------|
| <ul style="list-style-type: none"> • on the front • of the terminal | <p>IP20</p> <p>IP20</p> |
| 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 • of auxiliary contacts typical | <p>100 000</p> <p>100 000</p> |
| Electrical endurance (switching cycles) | |
| <ul style="list-style-type: none"> • typical | 100 000 |
| Type of protection | Increased safety |
| Certificate of suitability ATEX | Yes |
| Protection against electrical shock | finger-safe |
| Reference code acc. to DIN EN 81346-2 | Q |

Ambient conditions

| | |
|--|---|
| 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 • during storage • during transport | <p>-20 ... +60 °C</p> <p>-50 ... +80 °C</p> <p>-50 ... +80 °C</p> |
| Temperature compensation | -20 ... +60 °C |
| Relative humidity during operation | 10 ... 95 % |

Main circuit

| | |
|---|--|
| Number of poles for main current circuit | 3 |
| Adjustable pick-up value current of the current-dependent overload release | 18 ... 25 A |
| Operating voltage | |
| <ul style="list-style-type: none"> • rated value • at AC-3 rated value maximum | <p>690 V</p> <p>690 V</p> |
| Operating frequency rated value | 50 ... 60 Hz |
| Operating current rated value | 25 A |
| Operating current | |
| <ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 400 V rated value | 25 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 | <p>5 500 W</p> <p>11 000 W</p> <p>15 000 W</p> <p>22 000 W</p> |
| 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 |
| 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 | 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 | 25 kA |
| • at 500 V rated value | 5 kA |
| • at 690 V rated value | 2 kA |
| Maximum short-circuit current breaking capacity (Icu) | |
| • at AC at 240 V rated value | 100 kA |
| • at AC at 400 V rated value | 55 kA |
| • at AC at 500 V rated value | 10 kA |
| • at AC at 690 V rated value | 4 kA |
| Breaking capacity short-circuit current (Icn) | |
| • at 1 current path at DC at 150 V rated value | 10 kA |
| • with 2 current paths in series at DC at 300 V rated value | 10 kA |
| • with 3 current paths in series at DC at 450 V rated value | 10 kA |
| Response value current | |
| • of instantaneous short-circuit trip unit | 325 A |
| UL/CSA ratings | |
| Full-load current (FLA) for three-phase AC motor | |
| • at 480 V rated value | 25 A |
| • at 600 V rated value | 25 A |
| Yielded mechanical performance [hp] | |
| • for single-phase AC motor | |
| — at 110/120 V rated value | 2 hp |
| — at 230 V rated value | 3 hp |
| • for three-phase AC motor | |
| — at 200/208 V rated value | 5 hp |
| — at 220/230 V rated value | 7.5 hp |

— at 460/480 V rated value

15 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 | |
| • at 400 V | gL/gG 63 A |
| • at 500 V | gL/gG 50 A |
| • at 690 V | gL/gG 50 A |

Installation/ mounting/ dimensions

| | |
|------------------------------|--|
| 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 | |
| • with side-by-side mounting | |
| — forwards | 0 mm |
| — Backwards | 0 mm |
| — upwards | 50 mm |
| — downwards | 50 mm |
| — at the side | 0 mm |
| • for grounded parts | |
| — forwards | 0 mm |
| — Backwards | 0 mm |
| — upwards | 50 mm |
| — at the side | 30 mm |
| — downwards | 50 mm |
| • for live parts | |
| — forwards | 0 mm |
| — Backwards | 0 mm |
| — upwards | 50 mm |
| — downwards | 50 mm |
| — at the side | 30 mm |

Connections/Terminals

| | |
|--|----------------------|
| Product function | |
| • removable terminal for auxiliary and control circuit | No |
| Type of electrical connection | |
| • for main current circuit | 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 | <p>2x (1 ... 2,5 mm²), 2x (2,5 ... 10 mm²)</p> <p>2x (1 ... 2.5 mm²), 2x (2.5 ... 6 mm²), 1x 10 mm²</p> <p>2x (16 ... 12), 2x (14 ... 8)</p> |
| Tightening torque | |
| <ul style="list-style-type: none"> • for main contacts with screw-type terminals | 2 ... 2.5 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 | M4 |

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 % |
| 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

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



[KC](#)



| | | | |
|--------------------------------|---------------------------|-------------------|-------------------|
| For use in hazardous locations | Declaration of Conformity | Test Certificates | Marine / Shipping |
|--------------------------------|---------------------------|-------------------|-------------------|



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



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



[Confirmation](#)

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



[Miscellaneous](#)

[Vibration and Shock](#)

Further information

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

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2021-4DA10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-4DA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4DA10>

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

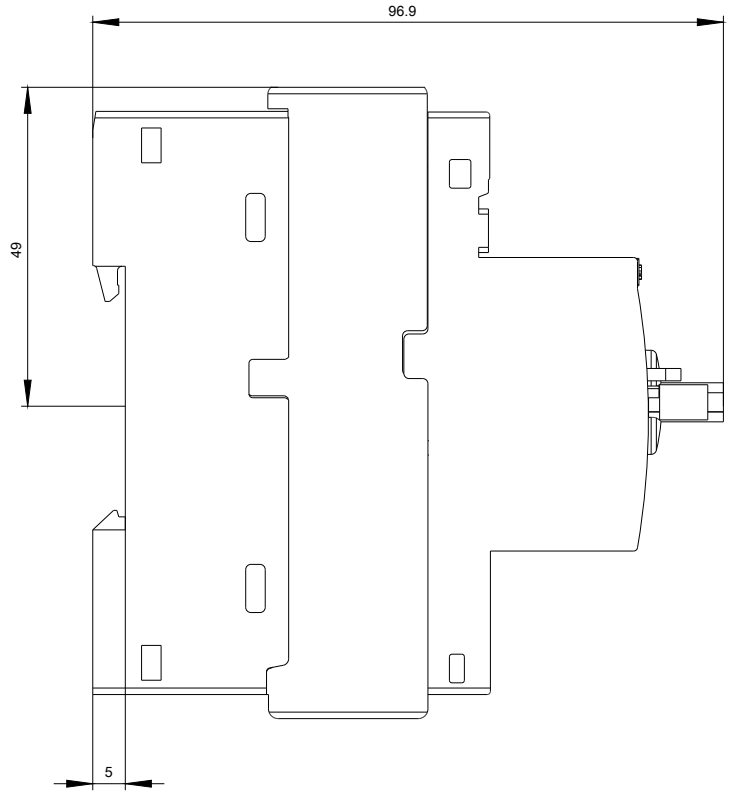
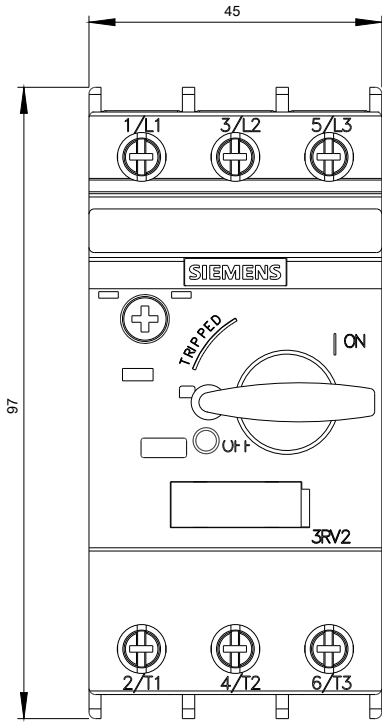
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-4DA10&lang=en

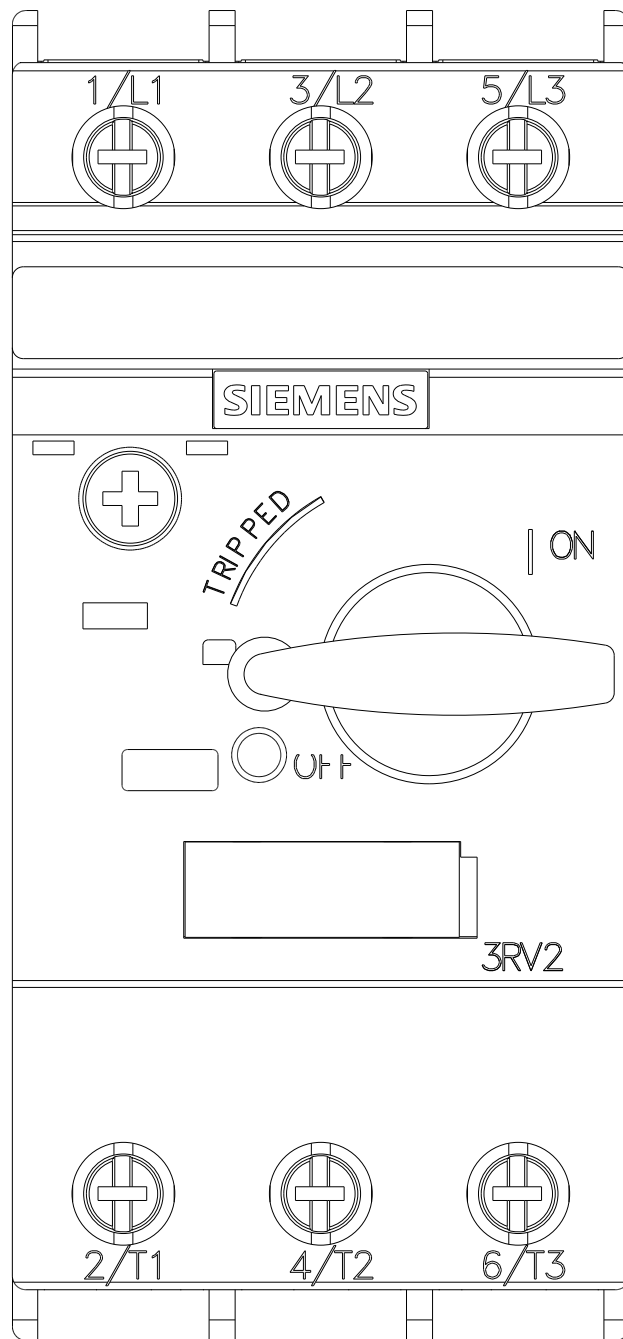
Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4DA10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-4DA10&objecttype=14&gridview=view1>







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