

Circuit breaker size S3 for motor protection, CLASS 10 A-release 80...100 A N-release 1300 A screw terminal Standard switching capacity



Figure similar

| | |
|--------------------------|----------------------|
| 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] total typical | 38 W |
| Insulation voltage with degree of pollution 3 rated value | 1 000 V |
| Surge voltage resistance rated value | 8 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 | |
| • on the front | IP20 |
| • of the terminal | IP00 |
| Shock resistance | |
| • acc. to IEC 60068-2-27 | 25g / 11 ms Sinus |
| Mechanical service life (switching cycles) | |
| • of the main contacts typical | 25 000 |
| • of auxiliary contacts typical | 25 000 |
| Electrical endurance (switching cycles) | |
| • typical | 25 000 |
| Certificate of suitability ATEX | Yes |
| Protection against electrical shock | finger-safe when touched vertically from front acc. to IEC 60529 |
| Reference code acc. to DIN EN 81346-2 | Q |

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 |
| 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 | 80 ... 100 A |
| Operating voltage | |
| • rated value | 690 V |
| • at AC-3 rated value maximum | 690 V |
| Operating frequency rated value | 50 ... 60 Hz |
| Operating current rated value | 100 A |
| Operating current | |
| • at AC-3 | |
| — at 400 V rated value | 100 A |
| Operating power | |
| • at AC-3 | |
| — at 230 V rated value | 30 000 W |
| — at 400 V rated value | 45 000 W |
| — at 690 V rated value | 90 000 W |
| Operating frequency | |
| • at AC-3 maximum | 15 1/h |

Protective and monitoring functions

| | |
|--|--|
| Product function | |
| <ul style="list-style-type: none"> • Ground fault detection • Phase failure detection | <p>No</p> <p>Yes</p> |
| Trip class | CLASS 10 |
| Design of the overload release | thermal |
| Operational 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 | <p>100 000 A</p> <p>30 000 A</p> <p>4 000 A</p> <p>3 000 A</p> |
| 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 | <p>100 kA</p> <p>65 kA</p> <p>8 kA</p> <p>5 kA</p> |
| Response value current | |
| <ul style="list-style-type: none"> • of instantaneous short-circuit trip unit | 1 300 A |

UL/CSA ratings

| | |
|---|---|
| Full-load current (FLA) for three-phase AC motor | |
| <ul style="list-style-type: none"> • at 480 V rated value • at 600 V rated value | <p>100 A</p> <p>100 A</p> |
| 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 three-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</p> <p>20 hp</p> <p>30 hp</p> <p>40 hp</p> <p>75 hp</p> <p>100 hp</p> |

Short-circuit protection

| | |
|--|----------|
| Product function Short circuit protection | Yes |
| Design of the short-circuit trip | magnetic |

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 | 165 mm |
| Width | 70 mm |

| | |
|---|--------|
| Depth | 176 mm |
| Required spacing | |
| <ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards 0 mm — Backwards 0 mm — upwards 150 mm — downwards 150 mm — at the side 0 mm • for grounded parts <ul style="list-style-type: none"> — forwards 0 mm — Backwards 0 mm — upwards 150 mm — at the side 30 mm — downwards 150 mm • for live parts <ul style="list-style-type: none"> — forwards 0 mm — Backwards 0 mm — upwards 150 mm — downwards 150 mm — at the side 30 mm | |

| Connections/Terminals | |
|---|----------------------|
| Product function | |
| <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 | 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"> — solid 2x (2.5 ... 16 mm²) — single or multi-stranded 2x (2,5 ... 50 mm²), 1x (10 ... 70 mm²) — finely stranded with core end processing 2x (2.5 ... 35 mm²), 2.5 ... 50 mm² | |
| Tightening torque | |
| <ul style="list-style-type: none"> • for ring cable lug <ul style="list-style-type: none"> — for main contacts 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 4.5 ... 6 N·m | |

| Safety related data | |
|---------------------|--|
| 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 | 50 % |
| <ul style="list-style-type: none"> with high demand rate acc. to SN 31920 | 50 % |
| 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 |
|---------------------------------------|----------------------------------|--------------------------|--------------------------|



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



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



[Confirmation](#)



[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?mfb=3RV2041-4MA10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RV2041-4MA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2041-4MA10>

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

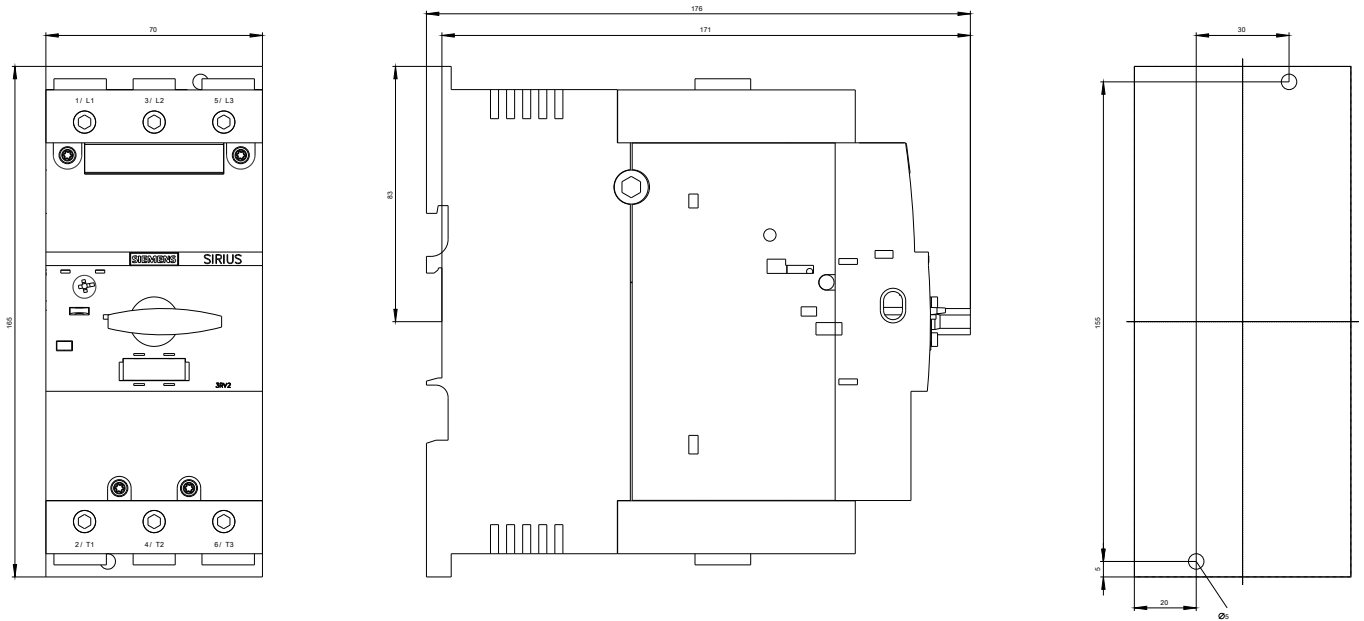
http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3RV2041-4MA10&lang=en

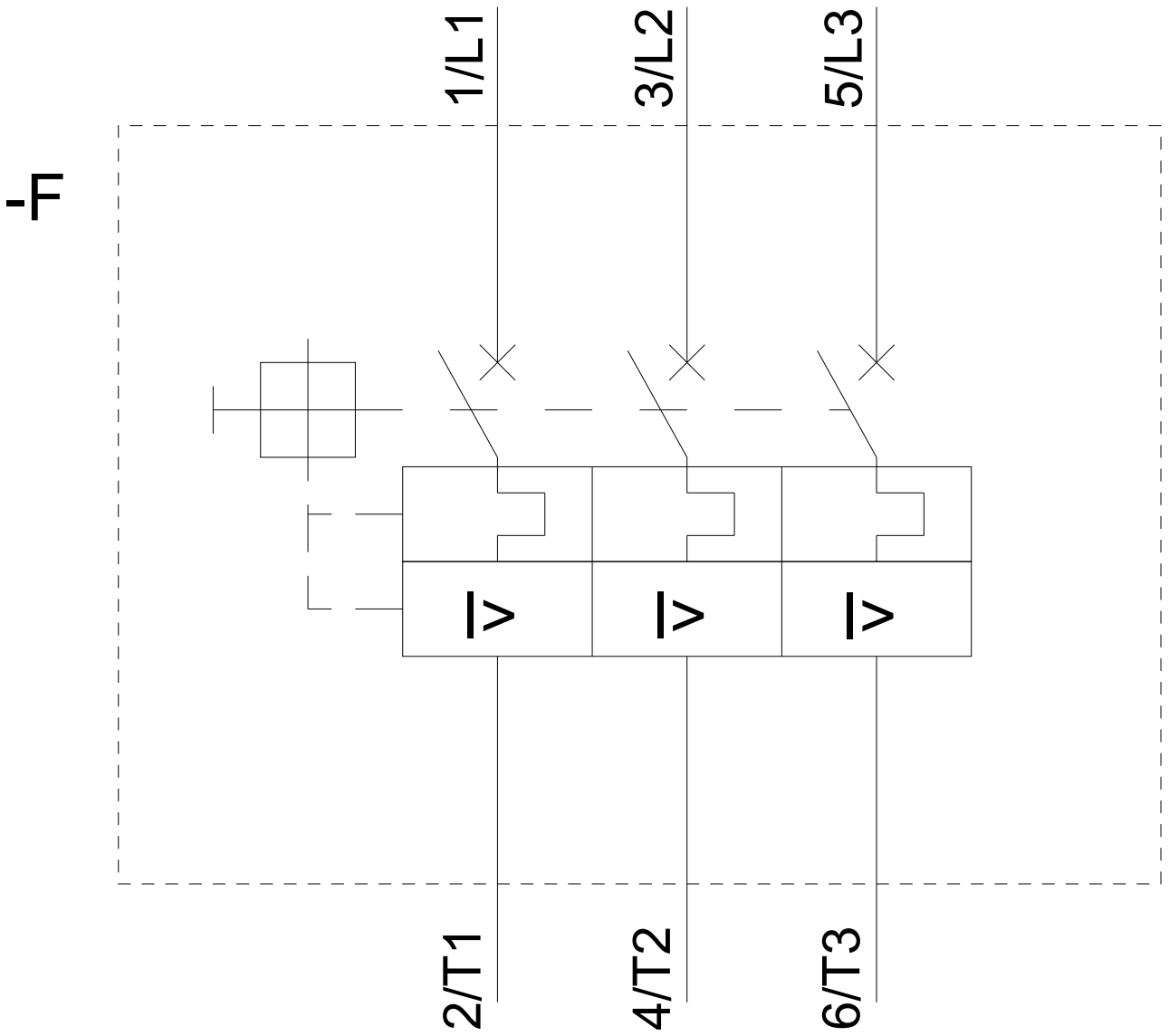
Characteristic: Tripping characteristics, I_t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2041-4MA10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2041-4MA10&objecttype=14&gridview=view1>





last modified:

01/12/2019