

power contactor, AC-3 25 A, 11 kW / 400 V 1 NO + 1 NC, 42 V AC, 50 Hz, 3-pole, Size S0 screw terminal



| | |
|--------------------------|-----------------|
| Product brand name | SIRIUS |
| Product designation | Power contactor |
| Product type designation | 3RT2 |

| General technical data | |
|---|-------|
| Size of contactor | S0 |
| Product extension | |
| <ul style="list-style-type: none"> function module for communication | No |
| <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 | 4.8 W |
| <ul style="list-style-type: none"> at AC in hot operating state per pole | 1.6 W |
| Power loss [W] for rated value of the current without load current share typical | 9.8 W |
| Surge voltage resistance | |
| <ul style="list-style-type: none"> of main circuit rated value | 6 kV |
| <ul style="list-style-type: none"> of auxiliary circuit rated value | 6 kV |
| maximum permissible voltage for safe isolation | |
| <ul style="list-style-type: none"> between coil and main contacts acc. to EN 60947-1 | 400 V |

| | |
|---|----------------------------|
| Protection class IP | |
| • on the front | IP20 |
| • of the terminal | IP20 |
| Shock resistance at rectangular impulse | |
| • at AC | 8,3g / 5 ms, 5,3g / 10 ms |
| Shock resistance with sine pulse | |
| • at AC | 13,5g / 5 ms, 8,3g / 10 ms |
| Mechanical service life (switching cycles) | |
| • of contactor typical | 10 000 000 |
| • of the contactor with added electronics-compatible auxiliary switch block typical | 5 000 000 |
| • of the contactor with added auxiliary switch block typical | 10 000 000 |
| Reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750 | K |
| 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 | -25 ... +60 °C |
| • during storage | -55 ... +80 °C |

Main circuit

| | |
|--|--------|
| Number of poles for main current circuit | 3 |
| Number of NO contacts for main contacts | 3 |
| Operating voltage | |
| • at AC-3 rated value maximum | 690 V |
| Operating current | |
| • at AC-1 at 400 V | |
| — at ambient temperature 40 °C rated value | 40 A |
| • at AC-1 | |
| — up to 690 V at ambient temperature 40 °C rated value | 40 A |
| — up to 690 V at ambient temperature 60 °C rated value | 35 A |
| • at AC-2 at 400 V rated value | 25 A |
| • at AC-3 | |
| — at 400 V rated value | 25 A |
| — at 500 V rated value | 18 A |
| — at 690 V rated value | 13 A |
| • at AC-4 at 400 V rated value | 15.5 A |
| • at AC-5a up to 690 V rated value | 35.2 A |

| | |
|--|---|
| <ul style="list-style-type: none"> • at AC-5b up to 400 V rated value | 20.7 A |
| <ul style="list-style-type: none"> • at AC-6a <ul style="list-style-type: none"> — up to 230 V for current peak value n=20 rated value — up to 400 V for current peak value n=20 rated value — up to 500 V for current peak value n=20 rated value — up to 690 V for current peak value n=20 rated value | 20.2 A 20.2 A 20.2 A 12.9 A |
| <ul style="list-style-type: none"> • at AC-6a <ul style="list-style-type: none"> — up to 230 V for current peak value n=30 rated value — up to 400 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value | 13.5 A 13.5 A 13.5 A 13 A |
| Minimum cross-section in main circuit | |
| <ul style="list-style-type: none"> • at maximum AC-1 rated value | 10 mm ² |
| Operating current for approx. 200000 operating cycles at AC-4 | |
| <ul style="list-style-type: none"> • at 400 V rated value • at 690 V rated value | 9 A 9 A |
| Operating current | |
| <ul style="list-style-type: none"> • at 1 current path at DC-1 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value • with 2 current paths in series at DC-1 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value • with 3 current paths in series at DC-1 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value | 35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 5 A 1 A 0.8 A 35 A 35 A 35 A 2.9 A |

| | |
|--|-----------|
| — at 600 V rated value | 1.4 A |
| Operating current | |
| • at 1 current path at DC-3 at DC-5 | |
| — at 24 V rated value | 20 A |
| — at 110 V rated value | 2.5 A |
| — at 220 V rated value | 1 A |
| — at 440 V rated value | 0.09 A |
| — at 600 V rated value | 0.06 A |
| • with 2 current paths in series at DC-3 at DC-5 | |
| — at 24 V rated value | 35 A |
| — at 110 V rated value | 15 A |
| — at 220 V rated value | 3 A |
| — at 440 V rated value | 0.27 A |
| — at 600 V rated value | 0.16 A |
| • with 3 current paths in series at DC-3 at DC-5 | |
| — at 24 V rated value | 35 A |
| — at 110 V rated value | 35 A |
| — at 220 V rated value | 10 A |
| — at 440 V rated value | 0.6 A |
| — at 600 V rated value | 0.6 A |
| Operating power | |
| • at AC-1 | |
| — at 230 V rated value | 13.3 kW |
| — at 230 V at 60 °C rated value | 13.3 kW |
| — at 400 V rated value | 23 kW |
| — at 400 V at 60 °C rated value | 23 kW |
| — at 690 V rated value | 40 kW |
| — at 690 V at 60 °C rated value | 40 kW |
| • at AC-2 at 400 V rated value | 11 kW |
| • at AC-3 | |
| — at 230 V rated value | 5.5 kW |
| — at 400 V rated value | 11 kW |
| — at 500 V rated value | 11 kW |
| — at 690 V rated value | 11 kW |
| Operating power for approx. 200000 operating cycles at AC-4 | |
| • at 400 V rated value | 4.4 kW |
| • at 690 V rated value | 7.7 kW |
| No-load switching frequency | |
| • at AC | 5 000 1/h |
| Operating frequency | |

| | |
|-------------------|-----------|
| • at AC-1 maximum | 1 000 1/h |
| • at AC-2 maximum | 750 1/h |
| • at AC-3 maximum | 750 1/h |
| • at AC-4 maximum | 250 1/h |

Control circuit/ Control

| | |
|---|------------------|
| Type of voltage of the control supply voltage | AC |
| Control supply voltage at AC | |
| • at 50 Hz rated value | 42 V |
| Operating range factor control supply voltage rated value of magnet coil at AC | |
| • at 50 Hz | 0.8 ... 1.1 |
| Apparent pick-up power of magnet coil at AC | |
| • at 50 Hz | 77 V·A |
| Inductive power factor with closing power of the coil | |
| • at 50 Hz | 0.82 |
| Apparent holding power of magnet coil at AC | |
| • at 50 Hz | 9.8 V·A |
| Inductive power factor with the holding power of the coil | |
| • at 50 Hz | 0.25 |
| Closing delay | |
| • at AC | 8 ... 40 ms |
| Opening delay | |
| • at AC | 4 ... 16 ms |
| Arcing time | 10 ... 10 ms |
| Control version of the switch operating mechanism | Standard A1 - A2 |

Auxiliary circuit

| | |
|---|------|
| Number of NC contacts for auxiliary contacts | |
| • instantaneous contact | 1 |
| Number of NO contacts for auxiliary contacts | |
| • instantaneous contact | 1 |
| Operating current at AC-12 maximum | 10 A |
| Operating current at AC-15 | |
| • at 230 V rated value | 10 A |
| • at 400 V rated value | 3 A |
| • at 500 V rated value | 2 A |
| • at 690 V rated value | 1 A |
| Operating current at DC-12 | |
| • at 24 V rated value | 10 A |
| • at 48 V rated value | 6 A |
| • at 60 V rated value | 6 A |
| • at 110 V rated value | 3 A |

| | |
|---|---|
| <ul style="list-style-type: none"> • at 125 V rated value • at 220 V rated value • at 600 V rated value | <p>2 A</p> <p>1 A</p> <p>0.15 A</p> |
| Operating current at DC-13 <ul style="list-style-type: none"> • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value | <p>10 A</p> <p>2 A</p> <p>2 A</p> <p>1 A</p> <p>0.9 A</p> <p>0.3 A</p> <p>0.1 A</p> |
| Contact reliability of auxiliary contacts | <p>1 faulty switching per 100 million (17 V, 1 mA)</p> |

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>21 A</p> <p>22 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>2 hp</p> <p>3 hp</p> <p>5 hp</p> <p>7.5 hp</p> <p>15 hp</p> <p>20 hp</p> |
| Contact rating of auxiliary contacts according to UL | <p>A600 / P600</p> |

Short-circuit protection

| | |
|--|--|
| Design of the fuse link <ul style="list-style-type: none"> • for short-circuit protection of the main circuit <ul style="list-style-type: none"> — with type of coordination 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required | <p>gG: 100 A (690 V, 100 kA), aM: 50 A (690 V, 100 kA), BS88: 100 A (415 V, 80 kA)</p> <p>gG: 35A (690V, 100kA), aM: 20A (690V, 100kA), BS88: 35A (415V, 80kA)</p> <p>gG: 10 A (500 V, 1 kA)</p> |
|--|--|

Installation/ mounting/ dimensions

| | |
|--|---|
| Mounting position | <p>+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface</p> |
| Mounting type <ul style="list-style-type: none"> • Side-by-side mounting | <p>screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715</p> <p>Yes</p> |

| | |
|--|-------|
| Height | 85 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 10 mm — upwards 10 mm — downwards 10 mm — at the side 0 mm • for grounded parts <ul style="list-style-type: none"> — forwards 10 mm — upwards 10 mm — at the side 6 mm — downwards 10 mm • for live parts <ul style="list-style-type: none"> — forwards 10 mm — upwards 10 mm — downwards 10 mm — at the side 6 mm | |

Connections/ Terminals

| | |
|--|--|
| Type of electrical connection | |
| <ul style="list-style-type: none"> • for main current circuit screw-type terminals • for auxiliary and control current circuit screw-type terminals • at contactor for auxiliary contacts Screw-type terminals • of magnet coil Screw-type terminals | |
| Type of connectable conductor cross-sections | |
| <ul style="list-style-type: none"> • for main contacts <ul style="list-style-type: none"> — solid 2x (1 ... 2.5 mm²), 2x (2.5 ... 10 mm²) — single or multi-stranded 2x (1 ... 2,5 mm²), 2x (2,5 ... 10 mm²) — finely stranded with core end processing 2x (1 ... 2.5 mm²), 2x (2.5 ... 6 mm²), 1x 10 mm² • at AWG conductors for main contacts 2x (16 ... 12), 2x (14 ... 8) | |
| Connectable conductor cross-section for main contacts | |
| <ul style="list-style-type: none"> • solid 1 ... 10 mm² • stranded 1 ... 10 mm² • finely stranded with core end processing 1 ... 10 mm² | |
| Connectable conductor cross-section for auxiliary contacts | |
| <ul style="list-style-type: none"> • single or multi-stranded 0.5 ... 2.5 mm² • finely stranded with core end processing 0.5 ... 2.5 mm² | |
| Type of connectable conductor cross-sections | |
| <ul style="list-style-type: none"> • for auxiliary contacts | |

| | |
|--|---|
| — single or multi-stranded | 2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²) |
| — finely stranded with core end processing | 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) |
| • at AWG conductors for auxiliary contacts | 2x (20 ... 16), 2x (18 ... 14) |
| AWG number as coded connectable conductor cross section | |
| • for main contacts | 16 ... 8 |
| • for auxiliary contacts | 20 ... 14 |

| Safety related data | |
|---|-------------|
| B10 value | |
| • with high demand rate acc. to SN 31920 | 1 000 000 |
| Proportion of dangerous failures | |
| • with low demand rate acc. to SN 31920 | 40 % |
| • with high demand rate acc. to SN 31920 | 73 % |
| Failure rate [FIT] | |
| • with low demand rate acc. to SN 31920 | 100 FIT |
| Product function | |
| • Mirror contact acc. to IEC 60947-4-1 | Yes |
| T1 value for proof test interval or service life acc. to IEC 61508 | 20 y |
| Protection against electrical shock | finger-safe |

Certificates/ approvals

| | |
|--------------------------|-----|
| General Product Approval | EMC |
|--------------------------|-----|



[KC](#)



| | | | |
|---------------------------------------|---------------------------|-------------------|-------------------|
| Functional Safety/Safety of Machinery | Declaration of Conformity | Test Certificates | Marine / Shipping |
|---------------------------------------|---------------------------|-------------------|-------------------|

[Type Examination Certificate](#)



[Miscellaneous](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



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



[Confirmation](#)

| |
|-------|
| other |
|-------|



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=3RT2026-1AD00>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2026-1AD00>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2026-1AD00>

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

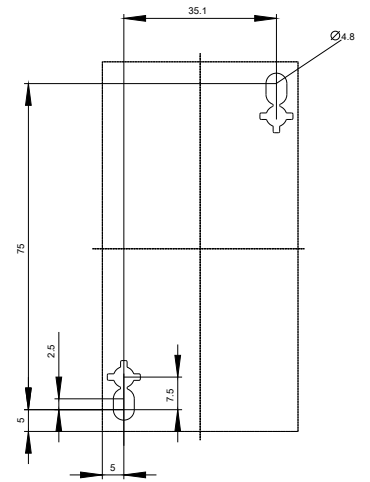
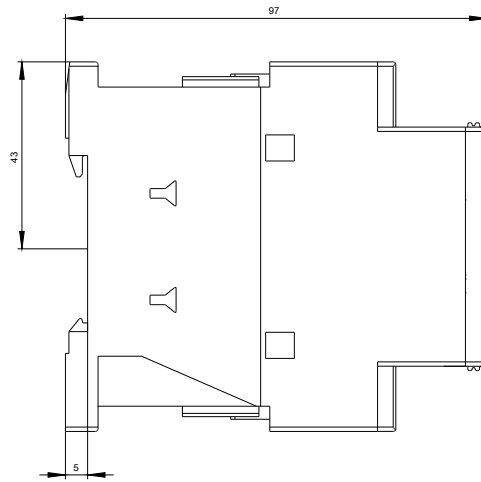
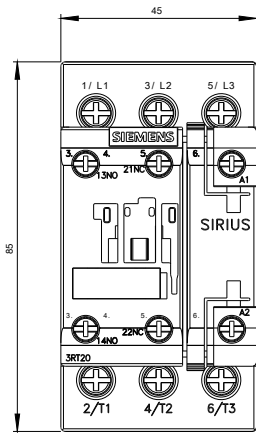
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2026-1AD00&lang=en

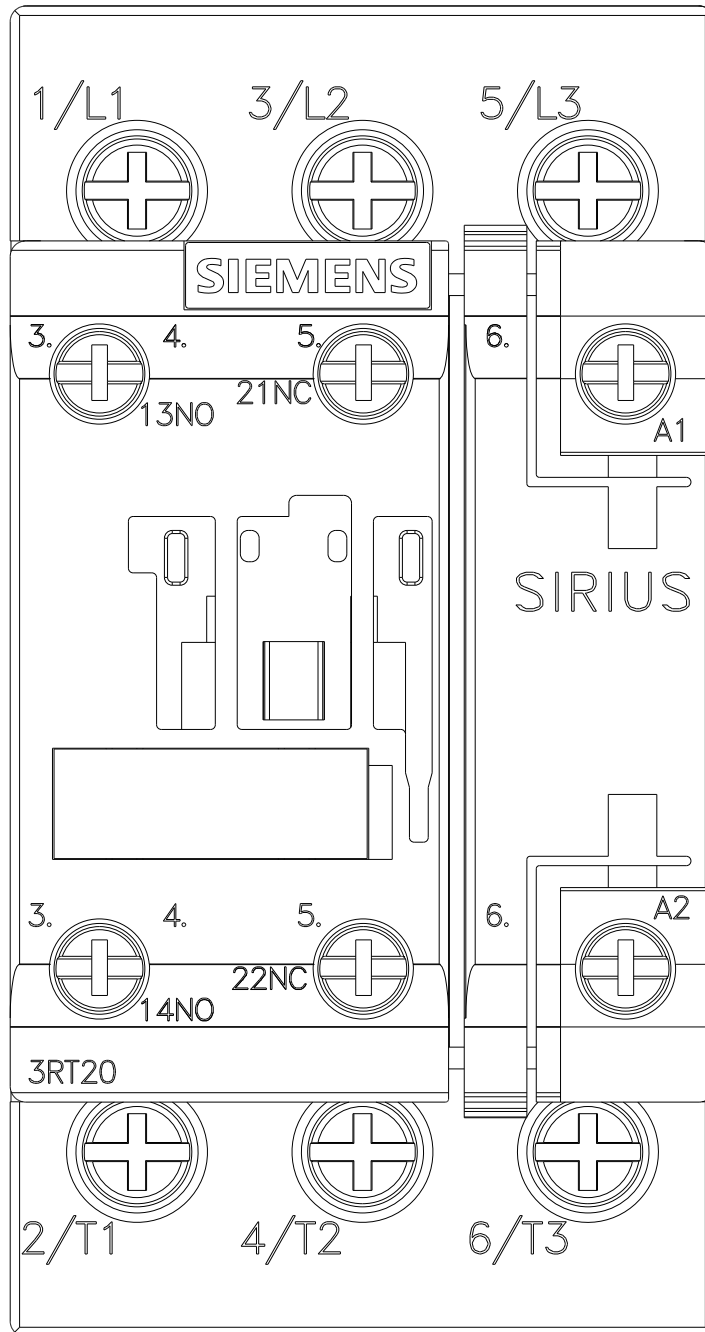
Characteristic: Tripping characteristics, I²t, Let-through current

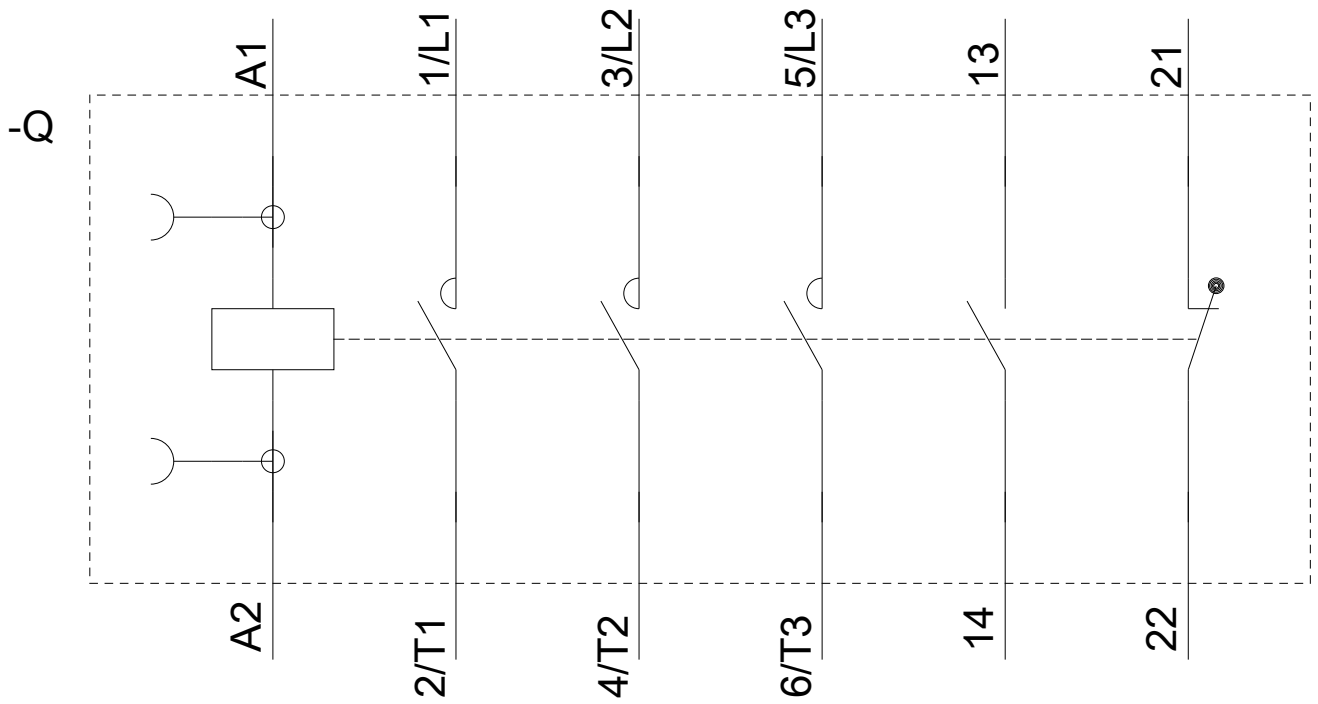
<https://support.industry.siemens.com/cs/ww/en/ps/3RT2026-1AD00/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2026-1AD00&objecttype=14&gridview=view1>







last modified:

11/19/2019