

Contactor, AC-3, 55 kW/400 V 1 NO+1 NC, 230 V AC/50 Hz 3-pole, 3 NO, Size S3 Spring-type terminal



Figure similar

| | |
|---|-----------------|
| Product brand name | SIRIUS |
| Product designation | Power contactor |
| Product type designation | 3RT2 |
| General technical data | |
| Size of contactor | S3 |
| Product extension | |
| • function module for communication | No |
| • Auxiliary switch | Yes |
| Insulation voltage | |
| • rated value | 1 000 V |
| Degree of pollution | 3 |
| Surge voltage resistance rated value | 6 kV |
| maximum permissible voltage for safe isolation | |
| • between coil and main contacts acc. to EN 60947-1 | 690 V |
| Protection class IP | |
| • on the front | IP20 |

| | |
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| • of the terminal | IP00 |
| Shock resistance at rectangular impulse | |
| • at AC | 6.7 g / 5 ms, 4.0 g / 10 ms |
| Shock resistance with sine pulse | |
| • at AC | 10.6 g / 5 ms, 6.3 g / 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 identifier acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750 | K |

Ambient conditions

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| 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

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| Number of poles for main current circuit | 3 |
| Number of NO contacts for main contacts | 3 |
| Operating voltage | |
| • at AC-3 rated value maximum | 1 000 V |
| Operating current | |
| • at AC-1 at 400 V | |
| — at ambient temperature 40 °C rated value | 130 A |
| • at AC-1 | |
| — up to 690 V at ambient temperature 40 °C rated value | 130 A |
| — up to 690 V at ambient temperature 60 °C rated value | 110 A |
| • at AC-2 at 400 V rated value | 110 A |
| • at AC-3 | |
| — at 400 V rated value | 110 A |
| — at 500 V rated value | 110 A |
| — at 690 V rated value | 98 A |
| Connectable conductor cross-section in main circuit at AC-1 | |
| • at 60 °C minimum permissible | 35 mm² |
| • at 40 °C minimum permissible | 50 mm² |

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| Operating current for approx. 200000 operating cycles at AC-4 | |
| • at 400 V rated value | 46 A |
| • at 690 V rated value | 36 A |
| Operating current | |
| • at 1 current path at DC-1 | |
| — at 24 V rated value | 100 A |
| — at 110 V rated value | 9 A |
| — at 220 V rated value | 2 A |
| — at 440 V rated value | 0.6 A |
| — at 600 V rated value | 0.4 A |
| • with 2 current paths in series at DC-1 | |
| — at 24 V rated value | 100 A |
| — at 110 V rated value | 100 A |
| — at 220 V rated value | 10 A |
| — at 440 V rated value | 1.8 A |
| — at 600 V rated value | 1 A |
| • with 3 current paths in series at DC-1 | |
| — at 24 V rated value | 100 A |
| — at 110 V rated value | 100 A |
| — at 220 V rated value | 80 A |
| — at 440 V rated value | 4.5 A |
| — at 600 V rated value | 2.6 A |
| Operating current | |
| • at 1 current path at DC-3 at DC-5 | |
| — at 24 V rated value | 40 A |
| — at 110 V rated value | 2.5 A |
| — at 220 V rated value | 1 A |
| — at 440 V rated value | 0.15 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 | 100 A |
| — at 110 V rated value | 100 A |
| — at 220 V rated value | 7 A |
| — at 440 V rated value | 0.42 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 | 100 A |
| — at 110 V rated value | 100 A |
| — at 220 V rated value | 35 A |
| — at 440 V rated value | 0.8 A |

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| — at 600 V rated value | 0.35 A |
| Operating power | |
| • at AC-1 | |
| — at 230 V rated value | 49 kW |
| — at 230 V at 60 °C rated value | 42 kW |
| — at 400 V rated value | 86 kW |
| — at 400 V at 60 °C rated value | 72 kW |
| — at 690 V rated value | 148 kW |
| — at 690 V at 60 °C rated value | 125 kW |
| • at AC-2 at 400 V rated value | 55 kW |
| • at AC-3 | |
| — at 230 V rated value | 30 kW |
| — at 400 V rated value | 55 kW |
| — at 500 V rated value | 75 kW |
| — at 690 V rated value | 90 kW |
| Operating power for approx. 200000 operating cycles at AC-4 | |
| • at 400 V rated value | 24.3 kW |
| • at 690 V rated value | 32.9 kW |
| Thermal short-time current limited to 10 s | 880 A |
| Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor | 7.9 W |
| No-load switching frequency | |
| • at AC | 5 000 1/h |
| Operating frequency | |
| • at AC-1 maximum | 900 1/h |
| • at AC-2 maximum | 350 1/h |
| • at AC-3 maximum | 850 1/h |
| • at AC-4 maximum | 200 1/h |
| Control circuit/ Control | |
| Type of voltage of the control supply voltage | AC |
| Control supply voltage at AC | |
| • at 50 Hz rated value | 230 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 | 296 V·A |
| Inductive power factor with closing power of the coil | |
| • at 50 Hz | 0.61 |
| Apparent holding power of magnet coil at AC | |
| • at 50 Hz | 19 V·A |

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| Inductive power factor with the holding power of the coil | |
| • at 50 Hz | 0.38 |
| Closing delay | |
| • at AC | 13 ... 50 ms |
| Opening delay | |
| • at AC | 10 ... 21 ms |
| Arcing time | 10 ... 20 ms |
| Control version of the switch operating mechanism | Standard A1 - A2 |

Auxiliary circuit

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| 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 | 6 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 |
| • at 125 V rated value | 2 A |
| • at 220 V rated value | 1 A |
| • at 600 V rated value | 0.15 A |
| Operating current at DC-13 | |
| • at 24 V rated value | 10 A |
| • at 48 V rated value | 2 A |
| • at 60 V rated value | 2 A |
| • at 110 V rated value | 1 A |
| • at 125 V rated value | 0.9 A |
| • at 220 V rated value | 0.3 A |
| • at 600 V rated value | 0.1 A |
| Contact reliability of auxiliary contacts | 1 faulty switching per 100 million (17 V, 1 mA) |

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 | 96 A 99 A |
| 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 | 10 hp 20 hp 30 hp 40 hp 75 hp 100 hp |
| Contact rating of auxiliary contacts according to UL | A600 / P600 |

Short-circuit protection

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|--|---|
| 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 | gL/gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 250 A gL/gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 200 A fuse gG: 10 A |
|--|---|

Installation/ mounting/ dimensions

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|--|--|
| Mounting position | +/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface |
| Mounting type <ul style="list-style-type: none"> • Side-by-side mounting | screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 Yes |
| Height | 140 mm |
| Width | 70 mm |
| Depth | 152 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 | 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 10 mm 10 mm 10 mm |

| | |
|------------------|-------|
| • for live parts | |
| — forwards | 0 mm |
| — Backwards | 0 mm |
| — upwards | 10 mm |
| — downwards | 10 mm |
| — at the side | 10 mm |

Connections/Terminals

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|--|--|
| Type of electrical connection | |
| • for main current circuit | screw-type terminals |
| • for auxiliary and control current circuit | spring-loaded terminals |
| Type of connectable conductor cross-sections | |
| • for main contacts | |
| — finely stranded with core end processing | 2x (2.5 ... 35 mm ²), 1x (2.5 ... 50 mm ²) |
| • at AWG conductors for main contacts | 2x (10 ... 1/0), 1x (10 ... 2) |
| Connectable conductor cross-section for main contacts | |
| • solid | 2.5 ... 16 mm ² |
| • stranded | 6 ... 70 mm ² |
| Type of connectable conductor cross-sections | |
| • for auxiliary contacts | |
| — single or multi-stranded | 2x (0,5 ... 2,5 mm ²) |
| — finely stranded with core end processing | 2x (0.5 ... 1.5 mm ²) |
| — finely stranded without core end processing | 2x (0.5 ... 2.5 mm ²) |
| • at AWG conductors for auxiliary contacts | 2x (20 ... 16) |

Safety related data

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|---|--|
| 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 % |
| Product function | |
| • Mirror contact acc. to IEC 60947-4-1 | Yes |
| • positively driven operation acc. to IEC 60947-5-1 | No |
| T1 value for proof test interval or service life acc. to IEC 61508 | 20 y |
| Protection against electrical shock | finger-safe when touched vertically from front acc. to IEC 60529 |

Certificates/approvals

| General Product Approval | | | | Declaration of Conformity | Test Certificates |
|--|--|---|---|---|--|
|  CCC |  CSA |  UL |  |  EG-Konf. | Type Test Certificates/Test Report |

| Test Certificates | other | Railway |
|--|------------------------------|-------------------------------------|
| Special Test Certificate | 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?mlfb=3RT2047-3AP00>

Cax online generator

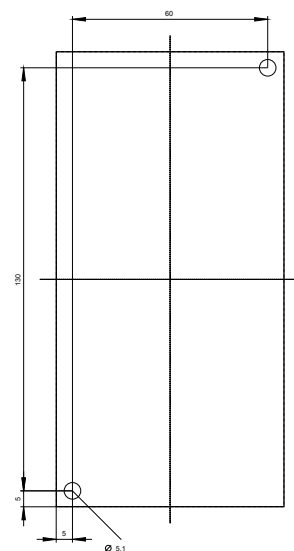
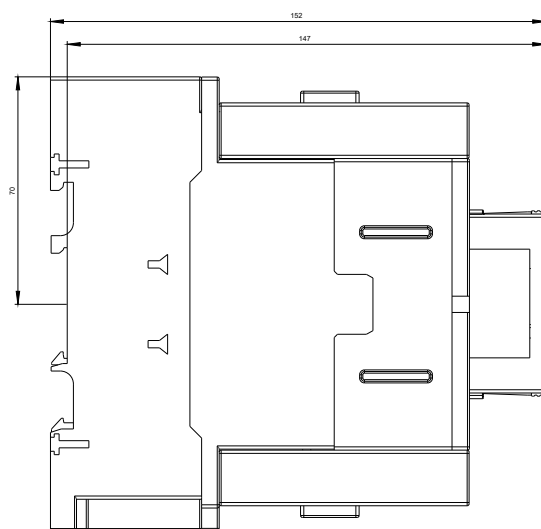
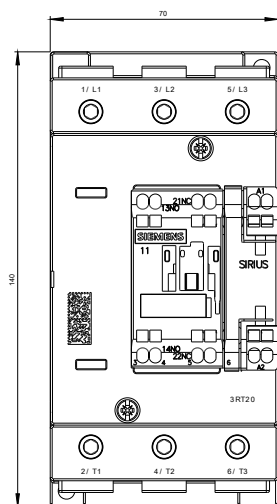
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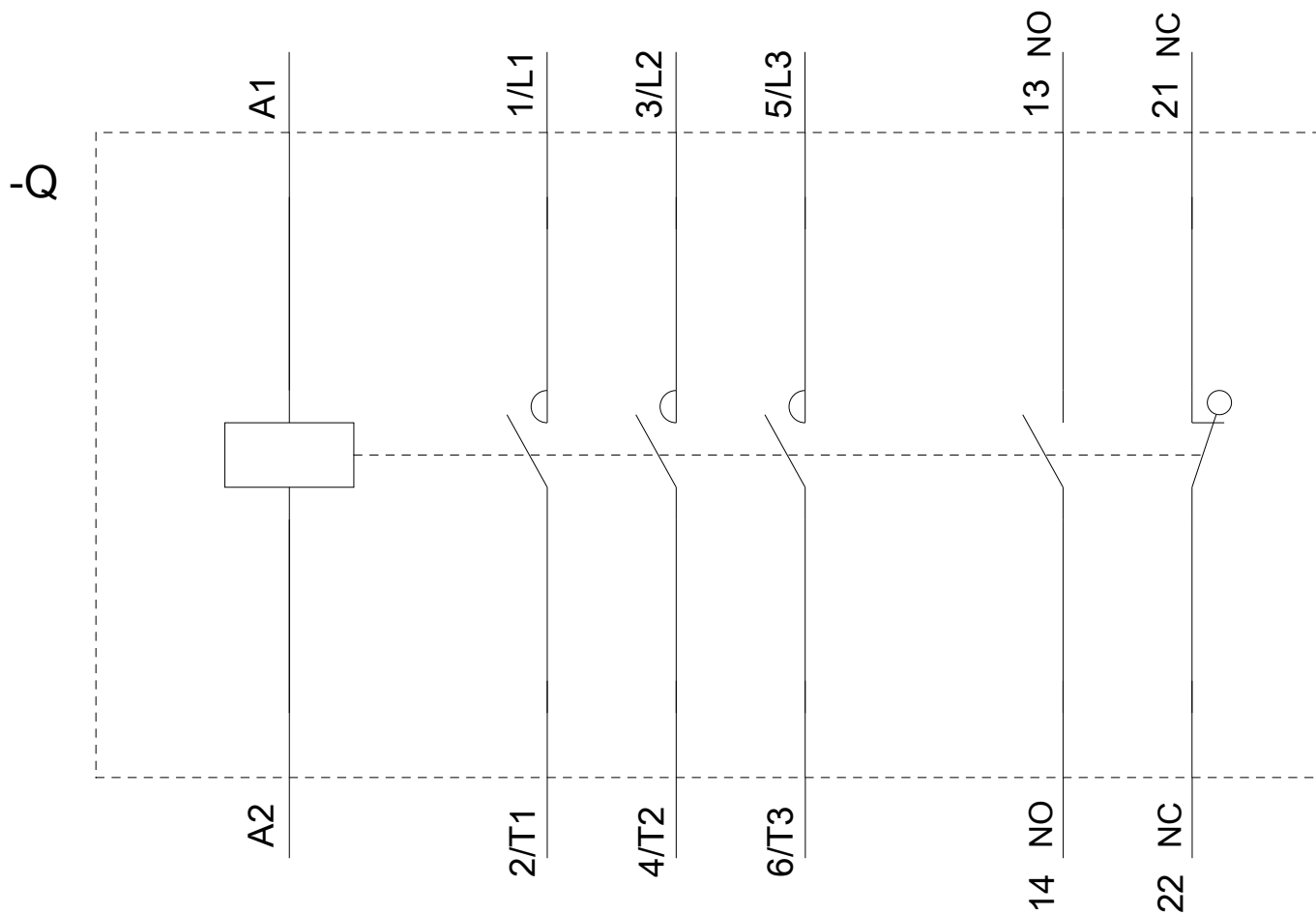
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2047-3AP00>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2047-3AP00&lang=en





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