



power contactor, AC-3, 16 A, 7.5 kW / 400 V, 4-pole, 24 V DC, main contacts: 2 NO + 2 NC, screw terminal, size: S00

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| product brand name | SIRIUS |
| product designation | contactor |
| product type designation | 3RT25 |
| General technical data | |
| size of contactor | S00 |
| product extension | |
| • function module for communication | No |
| • auxiliary switch | Yes |
| power loss [W] for rated value of the current | |
| • at AC in hot operating state per pole | 1 W |
| • without load current share typical | 4 W |
| type of calculation of power loss depending on pole | quadratic |
| insulation voltage | |
| • of main circuit with degree of pollution 3 rated value | 690 V |
| • of auxiliary circuit with degree of pollution 3 rated value | 690 V |
| surge voltage resistance | |
| • of main circuit rated value | 6 kV |
| • of auxiliary circuit rated value | 6 kV |
| maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 | 400 V |
| shock resistance at rectangular impulse | |
| • at DC | 7.3g / 5 ms, 4.7g / 10 ms |
| shock resistance with sine pulse | |
| • at DC | 11.4g / 5 ms, 7.3g / 10 ms |
| mechanical service life (operating cycles) | |
| • of contactor typical | 30 000 000 |
| • of the contactor with added electronically optimized auxiliary switch block typical | 5 000 000 |
| • of the contactor with added auxiliary switch block typical | 10 000 000 |
| reference code according to IEC 81346-2 | Q |
| Substance Prohibitance (Date) | 10/01/2009 |
| 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 |
| relative humidity minimum | 10 % |
| relative humidity at 55 °C according to IEC 60068-2-30 maximum | 95 % |
| Environmental footprint | |
| Environmental Product Declaration(EPD) | Yes |

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| Global Warming Potential [CO2 eq] total | 153 kg |
| Global Warming Potential [CO2 eq] during manufacturing | 1.42 kg |
| Global Warming Potential [CO2 eq] during operation | 152 kg |
| Global Warming Potential [CO2 eq] after end of life | -0.305 kg |
| Main circuit | |
| number of poles for main current circuit | 4 |
| number of NO contacts for main contacts | 2 |
| number of NC contacts for main contacts | 2 |
| operational current | |
| • at AC-1 up to 690 V | |
| — at ambient temperature 40 °C rated value | 22 A |
| — at ambient temperature 60 °C rated value | 20 A |
| • at AC-2 at AC-3 at 400 V | |
| — per NO contact rated value | 16 A |
| — per NC contact rated value | 9 A |
| minimum cross-section in main circuit at maximum AC-1 rated value | 4 mm ² |
| operational current | |
| • at 1 current path at DC-1 | |
| — at 24 V rated value | 20 A |
| — at 110 V rated value | 2.1 A |
| — at 220 V rated value | 0.8 A |
| — at 440 V rated value | 0.6 A |
| • with 2 current paths in series at DC-1 | |
| — at 24 V rated value | 20 A |
| — at 110 V rated value | 12 A |
| — at 220 V rated value | 1.6 A |
| — at 440 V rated value | 0.8 A |
| • at 1 current path at DC-3 at DC-5 | |
| — at 24 V per NC contact rated value | 20 A |
| — at 24 V per NO contact rated value | 20 A |
| — at 110 V per NC contact rated value | 0.075 A |
| — at 110 V per NO contact rated value | 0.15 A |
| — at 220 V per NC contact rated value | 0.375 A |
| — at 220 V per NO contact rated value | 0.75 A |
| • with 2 current paths in series at DC-3 at DC-5 | |
| — at 24 V per NC contact rated value | 20 A |
| — at 24 V per NO contact rated value | 20 A |
| — at 110 V per NC contact rated value | 0.175 A |
| — at 110 V per NO contact rated value | 0.35 A |
| operating power at AC-2 at AC-3 | |
| • at 230 V per NC contact rated value | 2.2 kW |
| • at 230 V per NO contact rated value | 4 kW |
| • at 400 V per NC contact rated value | 4 kW |
| • at 400 V per NO contact rated value | 7.5 kW |
| short-time withstand current in cold operating state up to 40 °C | |
| • limited to 1 s switching at zero current maximum | 165 A; Use minimum cross-section acc. to AC-1 rated value |
| • limited to 5 s switching at zero current maximum | 165 A; Use minimum cross-section acc. to AC-1 rated value |
| • limited to 10 s switching at zero current maximum | 128 A; Use minimum cross-section acc. to AC-1 rated value |
| • limited to 30 s switching at zero current maximum | 92 A; Use minimum cross-section acc. to AC-1 rated value |
| • limited to 60 s switching at zero current maximum | 74 A; Use minimum cross-section acc. to AC-1 rated value |
| power loss [W] at AC-3 at 400 V for rated value of the operational current per conductor | 1 W |
| power loss [W] at AC-3e at 400 V for rated value of the operational current per conductor | 1 W |
| no-load switching frequency | |
| • at AC | 10 000 1/h |
| • at DC | 10 000 1/h |
| operating frequency | |
| • at AC-1 maximum | 1 000 1/h |
| Control circuit/ Control | |

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| type of voltage of the control supply voltage | DC |
| control supply voltage at DC rated value | 24 V |
| • | |
| operating range factor control supply voltage rated value of magnet coil at DC | |
| • initial value | 0.8 |
| • full-scale value | 1.1 |
| closing power of magnet coil at DC | 4 W |
| holding power of magnet coil at DC | 4 W |
| closing delay | |
| • at DC | 30 ... 100 ms |
| opening delay | |
| • at DC | 7 ... 13 ms |
| arcing time | 10 ... 15 ms |
| Auxiliary circuit | |
| number of NC contacts for auxiliary contacts instantaneous contact | 0 |
| number of NO contacts for auxiliary contacts instantaneous contact | 0 |
| operational current at AC-12 maximum | 10 A |
| operational current at AC-15 | |
| • at 230 V rated value | 10 A |
| • at 400 V rated value | 3 A |
| operational current at DC-12 | |
| • 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 |
| operational 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 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 | |
| yielded mechanical performance [hp] | |
| • for single-phase AC motor at 230 V rated value | 2 hp |
| • for 3-phase AC motor at 460/480 V rated value | 5 hp |
| contact rating of auxiliary contacts according to UL | A600 / Q600 |
| Short-circuit protection | |
| design of the fuse link | |
| • for short-circuit protection of the main circuit | |
| — with type of coordination 1 required | gG: 35 A (690 V, 100 kA) |
| — with type of assignment 2 required | gG: 20A (690V, 100kA) |
| • for short-circuit protection of the auxiliary switch required | fuse gG: 10 A |
| Installation/ mounting/ dimensions | |
| mounting position | +/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface |
| fastening method | screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 50022 |
| height | 57.5 mm |
| width | 45 mm |
| depth | 73 mm |
| required spacing | |
| • with side-by-side mounting | |
| — forwards | 0 mm |
| — backwards | 0 mm |
| — upwards | 0 mm |
| — downwards | 0 mm |

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| — at the side | 0 mm |
| • for grounded parts | |
| — forwards | 0 mm |
| — backwards | 0 mm |
| — upwards | 0 mm |
| — at the side | 6 mm |
| — downwards | 0 mm |
| • for live parts | |
| — forwards | 0 mm |
| — backwards | 0 mm |
| — upwards | 0 mm |
| — downwards | 0 mm |
| — at the side | 6 mm |

Connections/ Terminals

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|---|---|
| type of electrical connection | |
| • for main current circuit | screw-type terminals |
| • for auxiliary and control circuit | screw-type terminals |
| • at contactor for auxiliary contacts | Screw-type terminals |
| • of magnet coil | Screw-type terminals |
| type of connectable conductor cross-sections for main contacts | |
| • solid | 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²), 2x 4 mm ² |
| • solid or stranded | 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²), 2x 4 mm ² |
| • finely stranded with core end processing | 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) |
| type of connectable conductor cross-sections | |
| • for auxiliary contacts | |
| — solid | 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²), 2x 4 mm ² |
| — solid or stranded | 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²), 2x 4 mm ² |
| — finely stranded with core end processing | 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) |
| • for AWG cables for auxiliary contacts | 2x (20 ... 16), 2x (18 ... 14), 2x 12 |
| AWG number as coded connectable conductor cross section for main contacts | 20 ... 12 |

Safety related data

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| product function | |
| • mirror contact according to IEC 60947-4-1 | Yes; with 3RH29 |
| • positively driven operation according to IEC 60947-5-1 | No |
| IEC 61508 | |
| T1 value | |
| • for proof test interval or service life according to IEC 61508 | 20 a |
| Electrical Safety | |
| protection class IP on the front according to IEC 60529 | IP20 |
| touch protection on the front according to IEC 60529 | finger-safe, for vertical contact from the front |

Approvals Certificates

| | | | | |
|---|---|---|---|---|
| General Product Approval | | | | |
|  | Confirmation |  |  |  |
|  | | | | |
| General Product Approval | EMV | Functional Safety | Test Certificates | Marine / Shipping |
|  |  | Type Examination Certificate | Special Test Certificate | Type Test Certificates/Test Report |
| | | | |  |

Marine / Shipping



| other | Railway | Dangerous Good | Environment |
|-------------------------------|------------------------------|--|---------------------------------------|
| Miscellaneous | Confirmation | Special Test Certificate | Transport Information |



Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

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

<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2518-1BB40>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2518-1BB40>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2518-1BB40>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2518-1BB40&lang=en

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2518-1BB40/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2518-1BB40&objecttype=14&gridview=view1>



