SIEMENS

## Data sheet 3RT2516-1AB00




power contactor, AC-3, 9 A, 4 kW / 400 V, 4-pole, 24 V AC, 50/60 Hz, main contacts: 2 NO + 2 NC, screw terminal, size: S00

| | |
|---|---|
| **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 | 0.3 W |
| ● without load current share typical | 1.1 W |
| **type of calculation of power loss current-dependent** | 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 AC | 6,7 g / 5 ms, 4,2 g / 10 ms |
| **shock resistance with sine pulse** | |
| ● at AC | 10,5 g / 5 ms, 6,6 g / 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 (day/month/year)** | 10/01/2009 |
| **Net Weight** | 0.217 kg |
| **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 % |


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| **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 | 18 A |
| — at ambient temperature 60 °C rated value | 16 A |
| ● at AC-2 at AC-3 at 400 V | |
| — per NO contact rated value | 9 A |
| — per NC contact rated value | 9 A |
| minimum cross-section in main circuit at maximum AC-1 rated value | 2.5 mm² |
| **operational current** | |
| **● at 1 current path at DC-1** | |
| — at 24 V rated value | 16 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 | 16 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 | 16 A |
| — at 24 V per NO contact rated value | 16 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 | 16 A |
| — at 24 V per NO contact rated value | 16 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 | 2.2 kW |
| ● at 400 V per NC contact rated value | 4 kW |
| ● at 400 V per NO contact rated value | 4 kW |
| **short-time withstand current in cold operating state up to 40 °C** | |
| ● limited to 1 s switching at zero current maximum | 110 A; Use minimum cross-section acc. to AC-1 rated value |
| ● limited to 5 s switching at zero current maximum | 110 A; Use minimum cross-section acc. to AC-1 rated value |
| ● limited to 10 s switching at zero current maximum | 86 A; Use minimum cross-section acc. to AC-1 rated value |
| ● limited to 30 s switching at zero current maximum | 66 A; Use minimum cross-section acc. to AC-1 rated value |
| ● limited to 60 s switching at zero current maximum | 54 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** | 0.3 W |
| **power loss [W] at AC-3e at 400 V for rated value of the operational current per conductor** | 0.3 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** | |
| **type of voltage of the control supply voltage** | AC |
| **control supply voltage at AC** | |


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| ● at 50 Hz rated value | 24 V |
| ● at 60 Hz rated value | 24 V |
| **operating range factor control supply voltage rated value of magnet coil at AC** | |
| ● at 50 Hz | 0.8 ... 1.1 |
| ● at 60 Hz | 0.85 ... 1.1 |
| **apparent pick-up power of magnet coil at AC** | 27 V·A |
| ● at 50 Hz | 27 V·A |
| ● at 60 Hz | 24.3 V·A |
| **inductive power factor with closing power of the coil** | 0.8 |
| ● at 50 Hz | 0.8 |
| ● at 60 Hz | 0.75 |
| **apparent holding power of magnet coil at AC** | 4.2 V·A |
| ● at 50 Hz | 4.2 V·A |
| ● at 60 Hz | 3.3 V·A |
| **inductive power factor with the holding power of the coil** | 0.25 |
| ● at 50 Hz | 0.25 |
| ● at 60 Hz | 0.25 |
| **closing delay** | |
| ● at AC | 9 ... 35 ms |
| **opening delay** | |
| ● at AC | 4 ... 15 ms |
| **arcing time** | 10 ... 15 ms |
| **residual current of the electronics for control with signal <0>** | |
| ● at AC at 230 V maximum permissible | 0.003 A |
| **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 | 1 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 coordination 2 required | gG: 20 A (690 V, 100 kA) |


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| **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 side-by-side mounting | Yes |
| **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 |
| — 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** | |
| **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 terminal |
| **type of connectable conductor cross-sections** | |
| ● for main contacts | |
| — solid | 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm² |
| — solid or stranded | 2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²), 2x 4 mm² |
| — finely stranded with core end processing | 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²) |
| ● for AWG cables for main contacts | 2x (20 ... 16), 2x (18 ... 14), 2x 12 |
| **type of connectable conductor cross-sections** | |
| ● for auxiliary contacts | |
| — solid | 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm² |
| — solid or stranded | 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm² |
| — finely stranded with core end processing | 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²) |
| ● 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 |
| **AWG number as coded connectable conductor cross section for auxiliary contacts** | 20 ... 12 |
| **Safety related data** | |
| **product function** | |
| ● **mirror contact according to IEC 60947-4-1** | Yes; with 3RH29 |
| ● **positively driven operation according to IEC 60947-5-1** | No |
| 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** | |
| Environmental Product Declaration | |
| ● global warming potential [CO2 eq] / during manufacturing | 1.18 kg |


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| | |
|---|---|
| • global warming potential [CO2 eq] / during operation | 38.5 kg |
| • global warming potential [CO2 eq] / after end of life | -0.155 kg |
| • global warming potential [CO2 eq] / total | 39.6 kg |

| Environment | General Product Approval | | | | |
|---|---|---|---|---|---|
| Environmental Confirmations | | | | | |

| General Product Approval | | EMV | Test Certificates | | Maritime application |
|---|---|---|---|---|---|
| | | | Special Test Certificate | Type Test Certificates/Test Report | |

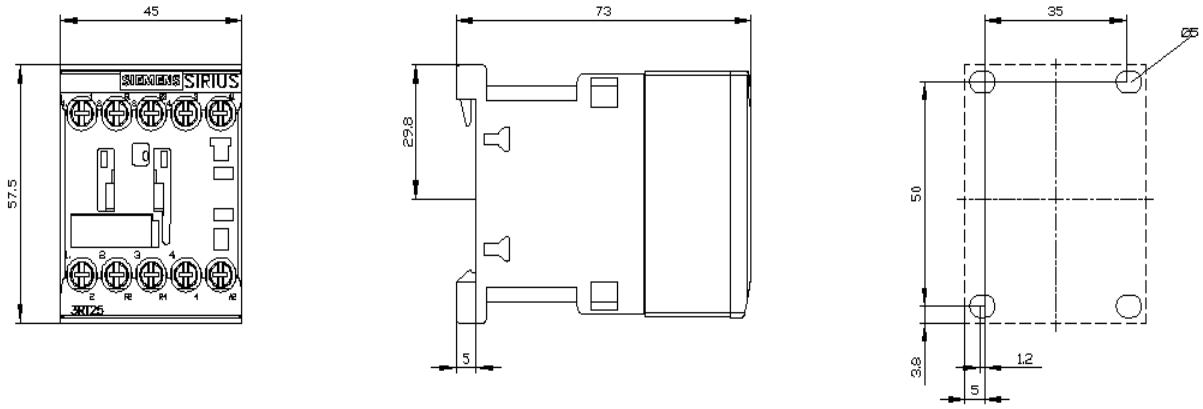
| Maritime application | | | | | other |
|---|---|---|---|---|---|
| | | | | | Confirmation |

| other | Railway |
|---|---|
| Miscellaneous | Special Test Certificate |

## Further information

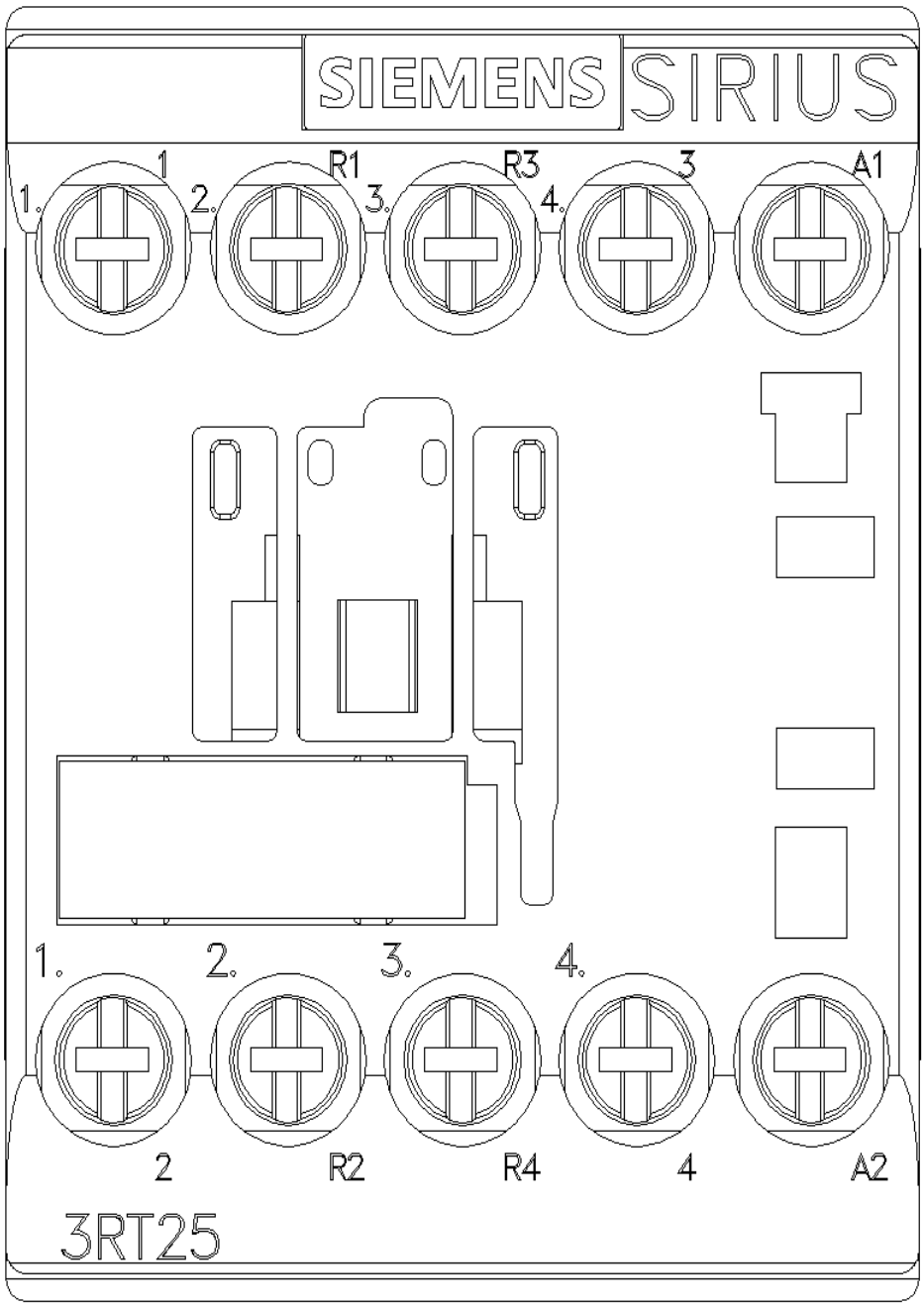
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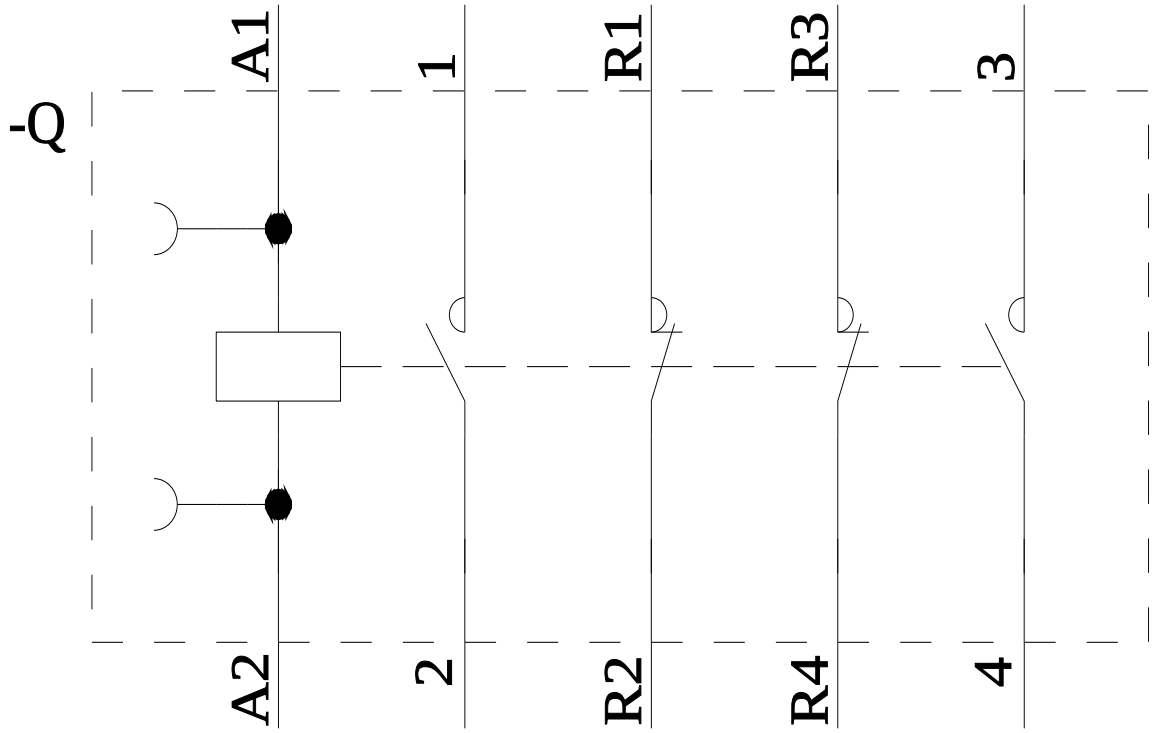


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**last modified:** 7/22/2026


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