



power contactor, AC-3, 9 A, 4 kW / 400 V, 4-pole, 110 V AC, 50 Hz / 120 V, 60 Hz, 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 | 0.3 W |
| • without load current share typical | 1.2 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 AC | 6,7g / 5 ms, 4,2g / 10 ms |
| shock resistance with sine pulse | |
| • at AC | 10,5g / 5 ms, 6,6g / 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 |
| Weight | 0.24 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 % |
| Environmental footprint | |

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| Environmental Product Declaration (EPD) | Yes |
| global warming potential [CO2 eq] total | 39.6 kg |
| global warming potential [CO2 eq] during manufacturing | 1.18 kg |
| global warming potential [CO2 eq] during operation | 38.5 kg |
| global warming potential [CO2 eq] after end of life | -0.155 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 | |
| <ul style="list-style-type: none"> at AC-1 up to 690 V <ul style="list-style-type: none"> at ambient temperature 40 °C rated value at ambient temperature 60 °C rated value at AC-2 at AC-3 at 400 V <ul style="list-style-type: none"> per NO contact rated value per NC contact rated value | 18 A 16 A 9 A 9 A |
| minimum cross-section in main circuit at maximum AC-1 rated value | 2.5 mm ² |
| operational 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 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 1 current path at DC-3 at DC-5 <ul style="list-style-type: none"> at 24 V per NC contact rated value at 24 V per NO contact rated value at 110 V per NC contact rated value at 110 V per NO contact rated value at 220 V per NC contact rated value at 220 V per NO contact rated value with 2 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> at 24 V per NC contact rated value at 24 V per NO contact rated value at 110 V per NC contact rated value at 110 V per NO contact rated value | 16 A 2.1 A 0.8 A 0.6 A 16 A 12 A 1.6 A 0.8 A 16 A 16 A 0.075 A 0.15 A 0.375 A 0.75 A 16 A 16 A 0.175 A 0.35 A |
| operating power at AC-2 at AC-3 | |
| <ul style="list-style-type: none"> at 230 V per NC contact rated value at 230 V per NO contact rated value at 400 V per NC contact rated value at 400 V per NO contact rated value | 2.2 kW 2.2 kW 4 kW 4 kW |
| short-time withstand current in cold operating state up to 40 °C | |
| <ul style="list-style-type: none"> limited to 1 s switching at zero current maximum limited to 5 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 30 s switching at zero current maximum limited to 60 s switching at zero current maximum | 110 A; Use minimum cross-section acc. to AC-1 rated value 110 A; Use minimum cross-section acc. to AC-1 rated value 86 A; Use minimum cross-section acc. to AC-1 rated value 66 A; Use minimum cross-section acc. to AC-1 rated value 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 | |
| <ul style="list-style-type: none"> at AC at DC | 10 000 1/h 10 000 1/h |
| operating frequency | |
| <ul style="list-style-type: none"> at AC-1 maximum | 1 000 1/h |

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| Control circuit/ Control | |
| type of voltage of the control supply voltage | AC |
| control supply voltage at AC | |
| • at 50 Hz rated value | 110 V |
| • at 60 Hz rated value | 120 V |
| operating range factor control supply voltage rated value of magnet coil at AC | |
| • at 50 Hz | 0.8 ... 1.1 |
| • at 60 Hz | 0.8 ... 1.1 |
| apparent pick-up power of magnet coil at AC | 31.7 VA |
| • at 60 Hz | 31.7 VA |
| inductive power factor with closing power of the coil | 0.81 |
| • at 60 Hz | 0.81 |
| apparent holding power of magnet coil at AC | 4.8 VA |
| • at 60 Hz | 4.8 VA |
| inductive power factor with the holding power of the coil | 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 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 |

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| | 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 | |
| <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 • for live parts <ul style="list-style-type: none"> — forwards — backwards — upwards — downwards — at the side | 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 6 mm 0 mm 0 mm 0 mm 0 mm 0 mm 6 mm |
| Connections/ Terminals | |
| type of electrical connection | |
| <ul style="list-style-type: none"> • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil | screw-type terminals screw-type terminals Screw-type terminals Screw-type terminals |
| type of connectable conductor cross-sections for main contacts | |
| <ul style="list-style-type: none"> • solid • solid or stranded • finely stranded with core end processing | 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm² 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm² 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²) |
| type of connectable conductor cross-sections | |
| <ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — solid — solid or stranded — finely stranded with core end processing • for AWG cables for auxiliary contacts | 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm² 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm² 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²) 2x (20 ... 16), 2x (18 ... 14), 2x 12 |
| AWG number as coded connectable conductor cross section for main contacts | 20 ... 12 |
| Safety related data | |
| product function | |
| <ul style="list-style-type: none"> • mirror contact according to IEC 60947-4-1 • positively driven operation according to IEC 60947-5-1 | Yes; with 3RH29 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 | |
| General Product Approval | |



[Confirmation](#)



| | | |
|-----|-------------------|-------------------|
| EMV | Test Certificates | Marine / Shipping |
|-----|-------------------|-------------------|



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Marine / Shipping

other



[Miscellaneous](#)

[Confirmation](#)

Railway

Environment

[Special Test Certificate](#)



[Environmental Confirmations](#)

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=3RT2516-1AK60>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2516-1AK60>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2516-1AK60>

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

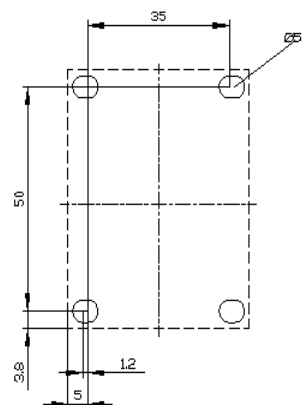
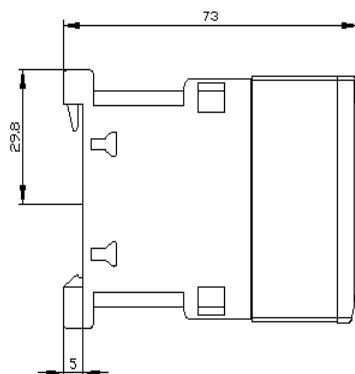
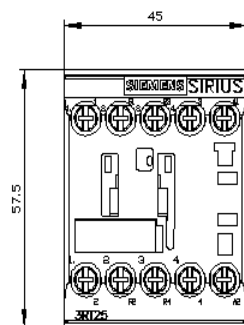
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2516-1AK60&lang=en

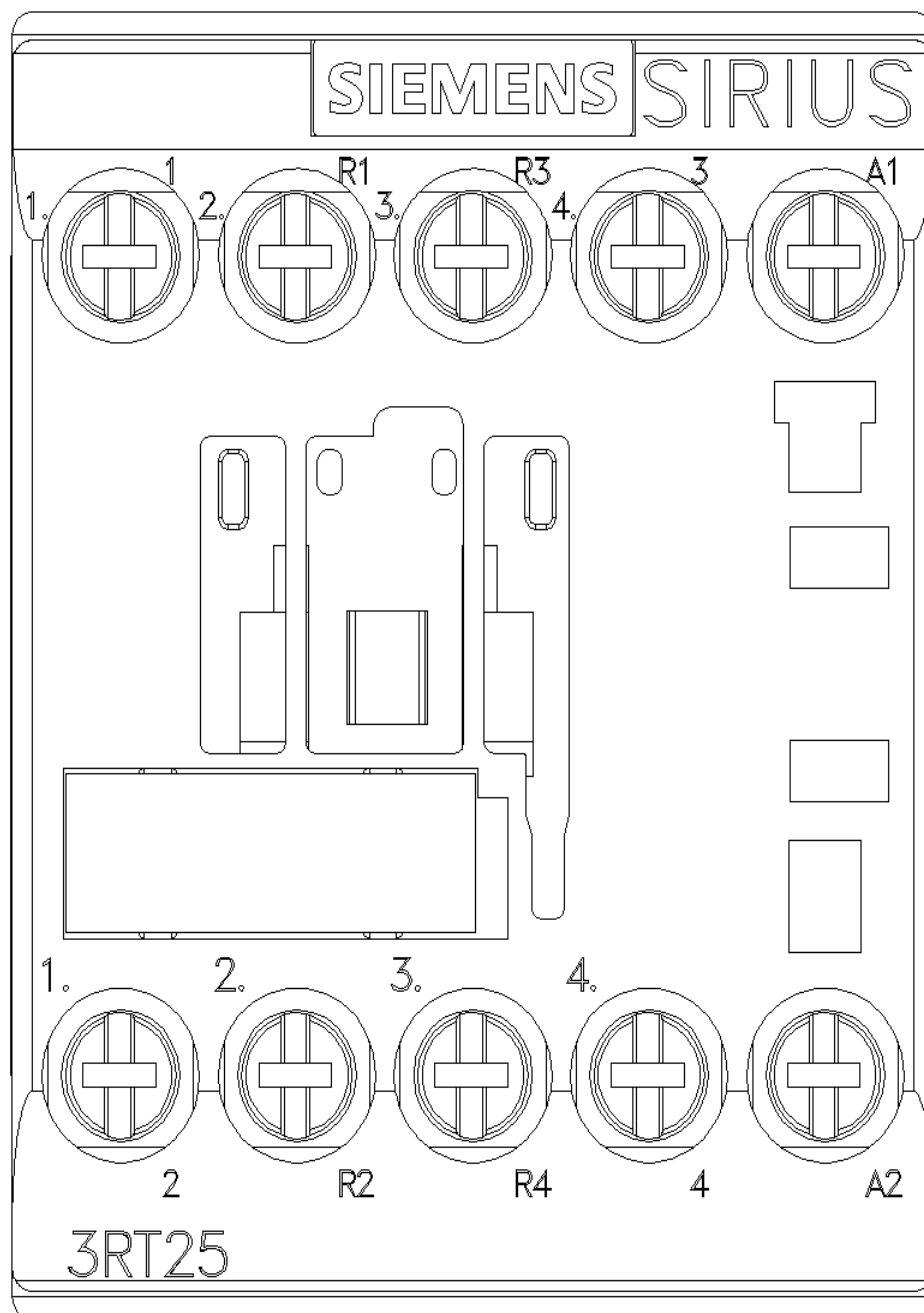
Characteristic: Tripping characteristics, I²t, Let-through current

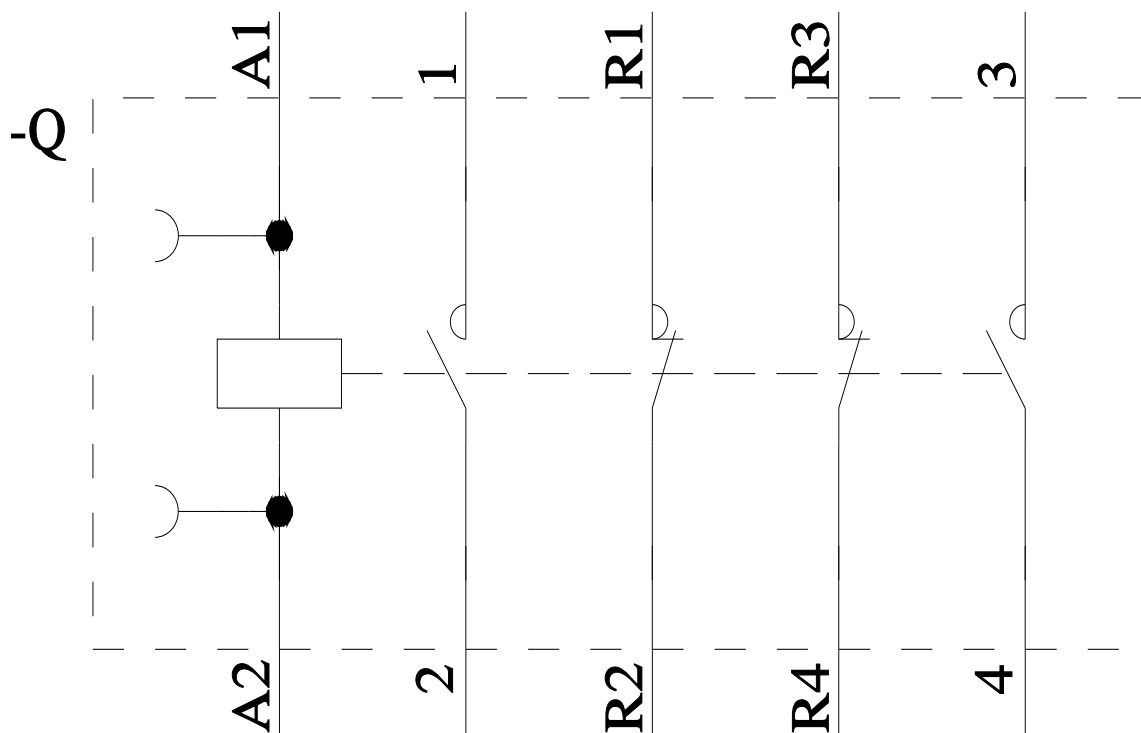
<https://support.industry.siemens.com/cs/ww/en/ps/3RT2516-1AK60/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2516-1AK60&objecttype=14&gridview=view1>







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