



power contactor, AC-3, 35 A, 18.5 kW / 400 V, 4-pole, 110 V AC, 50 Hz, main contacts: 2 NO + 2 NC, auxiliary contacts: 1 NO + 1 NC, screw terminal, size: S2

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| product brand name | SIRIUS |
| product designation | contactor |
| product type designation | 3RT25 |
| General technical data | |
| size of contactor | S2 |
| 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 | 2.2 W |
| • without load current share typical | 6.5 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 | 11.8g / 5 ms, 7.4g / 10 ms |
| shock resistance with sine pulse | |
| • at AC | 18.5g / 5 ms, 11.6g / 10 ms |
| mechanical service life (operating cycles) | |
| • of contactor typical | 10 000 000 |
| • 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) | 10/01/2014 |
| Weight | 1.149 kg |
| Ambient conditions | |
| installation altitude at height above sea level maximum | 2 000 m |
| ambient temperature | |
| • during operation | -40 ... +70 °C |
| • during storage | -55 ... +80 °C |
| relative humidity minimum | 10 % |
| relative humidity at 55 °C according to IEC 60068-2-30 maximum | 95 % |
| Main circuit | |

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| 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 | 60 A 55 A 35 A 35 A |
| minimum cross-section in main circuit at maximum AC-1 rated value | 16 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 — at 440 V per NC contact rated value — at 440 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 — at 220 V per NC contact rated value — at 220 V per NO contact rated value — at 440 V per NC contact rated value — at 440 V per NO contact rated value | 55 A 4.5 A 1 A 0.4 A 55 A 45 A 5 A 1 A 35 A 35 A 1.25 A 2.5 A 0.5 A 1 A 0.045 A 0.1 A 55 A 55 A 12.5 A 25 A 2.5 A 5 A 0.135 A 0.27 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 | 11 kW 11 kW 18.5 kW 18.5 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 | 546 A; Use minimum cross-section acc. to AC-1 rated value 443 A; Use minimum cross-section acc. to AC-1 rated value 334 A; Use minimum cross-section acc. to AC-1 rated value 241 A; Use minimum cross-section acc. to AC-1 rated value 196 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 | 2.2 W |
| power loss [W] at AC-3e at 400 V for rated value of the operational current per conductor | 2.2 W |
| no-load switching frequency | |
| <ul style="list-style-type: none"> ● at AC | 5 000 1/h |
| operating frequency | |
| <ul style="list-style-type: none"> ● at AC-1 maximum | 1 200 1/h |

Control circuit/ Control

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| type of voltage of the control supply voltage | AC |
| control supply voltage at AC | |
| • at 50 Hz rated value | 110 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 | 190 VA |
| • at 50 Hz | 190 VA |
| inductive power factor with closing power of the coil | 0.72 |
| • at 50 Hz | 0.72 |
| apparent holding power of magnet coil at AC | 16 VA |
| • at 50 Hz | 16 VA |
| inductive power factor with the holding power of the coil | 0.37 |
| • at 50 Hz | 0.37 |
| closing delay | |
| • at AC | 10 ... 80 ms |
| opening delay | |
| • at AC | 10 ... 18 ms |
| arcing time | 10 ... 20 ms |
| control version of the switch operating mechanism | AC |
| Auxiliary circuit | |
| number of NC contacts for auxiliary contacts instantaneous contact | 1 |
| number of NO contacts for auxiliary contacts instantaneous contact | 1 |
| operational current at AC-12 maximum | 10 A |
| operational 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 |
| operational 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 |
| 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 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 | |
| yielded mechanical performance [hp] | |
| • for 3-phase AC motor at 460/480 V rated value | 20 hp |
| contact rating of auxiliary contacts according to UL | A600 / P600 |
| Short-circuit protection | |
| design of the miniature circuit breaker for short-circuit protection of the auxiliary circuit up to 230 V | C characteristic: 10 A; 0.4 kA |
| design of the fuse link | |
| • for short-circuit protection of the main circuit | |
| — with type of coordination 1 required | gG: 125 A (690 V, 100 kA) |
| — with type of coordination 2 required | gG: 63 A (690 V, 100 kA) |
| • for short-circuit protection of the auxiliary switch required | gG: 10 A (690 V, 1 kA) |
| 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 | 114 mm |
| width | 75 mm |
| depth | 130 mm |
| required spacing | |
| <ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards 0 mm — backwards 0 mm — upwards 0 mm — downwards 0 mm — at the side 0 mm • for grounded parts <ul style="list-style-type: none"> — forwards 0 mm — backwards 0 mm — upwards 50 mm — at the side 10 mm — downwards 50 mm • for live parts <ul style="list-style-type: none"> — forwards 0 mm — backwards 0 mm — upwards 50 mm — downwards 50 mm — at the side 10 mm | |

Connections/ Terminals

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| 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 | <p>screw-type terminals</p> <p>screw-type terminals</p> <p>Screw-type terminals</p> <p>Screw-type terminals</p> |
| type of connectable conductor cross-sections | |
| <ul style="list-style-type: none"> • for main contacts <ul style="list-style-type: none"> — solid 2x (1 ... 35 mm²), 1x (1 ... 50 mm²) — solid or stranded 2x (1 ... 35 mm²), 1x (1 ... 50 mm²) — finely stranded with core end processing 2x (1 ... 25 mm²), 1x (1 ... 35 mm²) • for AWG cables for main contacts 2x (18 ... 2), 1x (18 ... 1) | |
| type of connectable conductor cross-sections | |
| <ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — solid 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²) — solid or stranded 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 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) | |
| AWG number as coded connectable conductor cross section for main contacts | 18 ... 1 |
| AWG number as coded connectable conductor cross section for auxiliary contacts | 20 ... 14 |

Safety related data

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| 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 | <p>Yes</p> <p>No</p> |
| 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



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| EMV | Test Certificates | Maritime application | | | |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  | Type Test Certificates/Test Report | Special Test Certificate |  |  |  |
| Maritime application | | | other | | |
|  |  |  |  |  | Confirmation |
| Railway | Dangerous goods | Environment | | | |
| Special Test Certificate | Transport Information | Environmental Confirmations | | | |

Further information

Information on the packaging

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

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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=3RT2535-1AF00>

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2535-1AF00>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2535-1AF00>

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

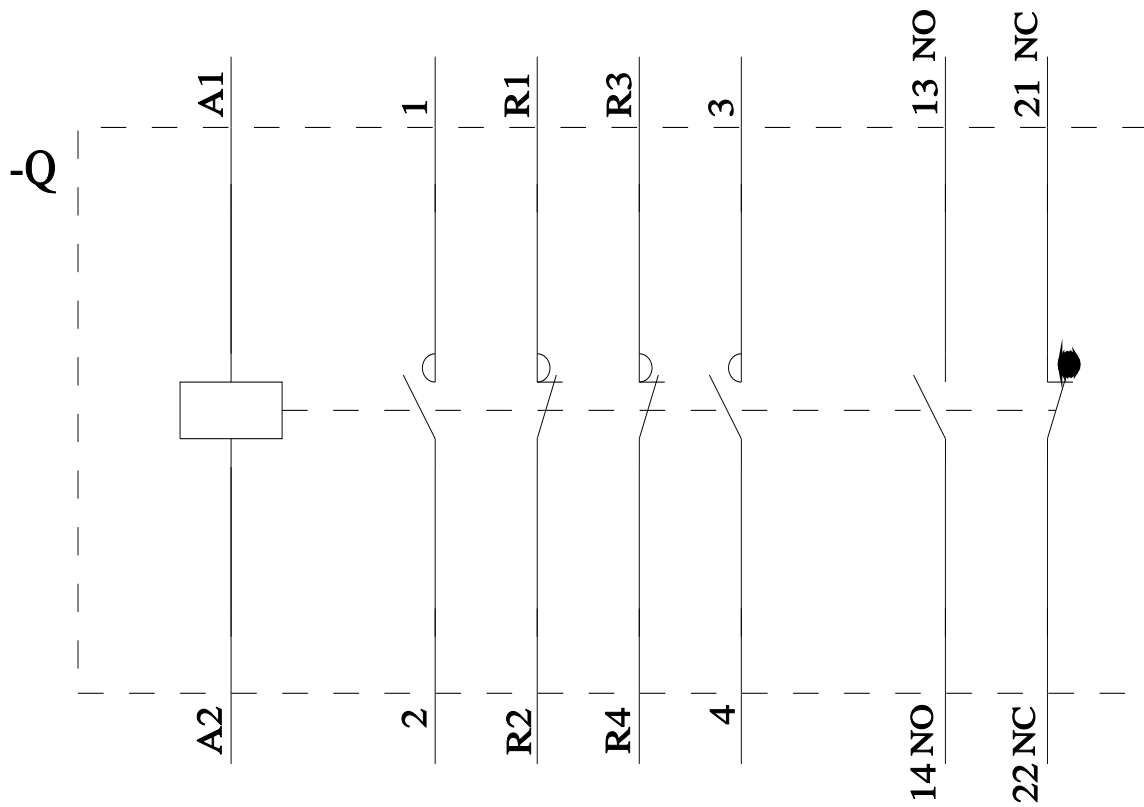
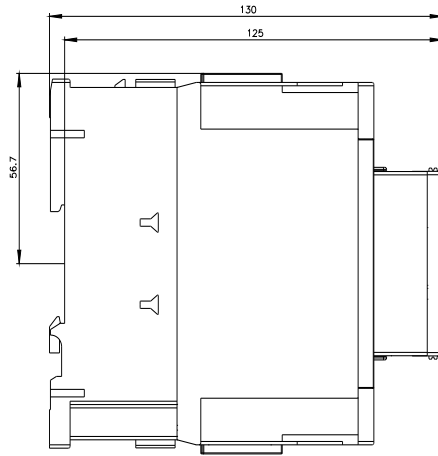
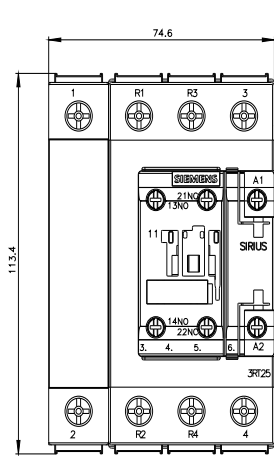
https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2535-1AF00&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2535-1AF00/char>

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

<https://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2535-1AF00&objecttype=14&gridview=view1>



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