



Power contactor, AC-3 65 A, 30 kW / 400 V 1 NO + 1 NC, 230 V AC, 50 Hz
3-pole, size S2 screw terminals

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|--|-----------------------------|
| product brand name | SIRIUS |
| product designation | Power contactor |
| product type designation | 3RT2 |
| 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 | 11.4 W |
| • at AC in hot operating state per pole | 3.8 W |
| • without load current share typical | 16 W |
| 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 safe isolation between coil and main contacts acc. 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 (switching 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 acc. to IEC 81346-2 | Q |
| Substance Prohibitance (Date) | 01.10.2014 |
| 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 acc. to IEC 60068-2-30 maximum | 95 % |

| Main circuit | |
|---|--------------------|
| number of poles for main current circuit | 3 |
| number of NO contacts for main contacts | 3 |
| operating voltage | |
| • at AC-3 rated value maximum | 690 V |
| • at AC-3e rated value maximum | 690 V |
| operational current | |
| • at AC-1 at 400 V at ambient temperature 40 °C rated value | 80 A |
| • at AC-1 | |
| — up to 690 V at ambient temperature 40 °C rated value | 80 A |
| — up to 690 V at ambient temperature 60 °C rated value | 70 A |
| • at AC-3 | |
| — at 400 V rated value | 65 A |
| — at 500 V rated value | 65 A |
| — at 690 V rated value | 47 A |
| • at AC-3e | |
| — at 400 V rated value | 65 A |
| — at 500 V rated value | 65 A |
| — at 690 V rated value | 47 A |
| • at AC-4 at 400 V rated value | 55 A |
| • at AC-5a up to 690 V rated value | 70.4 A |
| • at AC-5b up to 400 V rated value | 53.9 A |
| • at AC-6a | |
| — up to 230 V for current peak value n=20 rated value | 56.9 A |
| — up to 400 V for current peak value n=20 rated value | 56.9 A |
| — up to 500 V for current peak value n=20 rated value | 56.9 A |
| — up to 690 V for current peak value n=20 rated value | 47 A |
| • at AC-6a | |
| — up to 230 V for current peak value n=30 rated value | 38 A |
| — up to 400 V for current peak value n=30 rated value | 38 A |
| — up to 500 V for current peak value n=30 rated value | 38 A |
| — up to 690 V for current peak value n=30 rated value | 38 A |
| minimum cross-section in main circuit at maximum AC-1 rated value | 25 mm ² |
| operational current for approx. 200000 operating cycles at AC-4 | |
| • at 400 V rated value | 28 A |
| • at 690 V rated value | 22 A |
| operational current | |
| • at 1 current path at DC-1 | |
| — at 24 V rated value | 55 A |
| — at 110 V rated value | 4.5 A |
| — at 220 V rated value | 1 A |
| — at 440 V rated value | 0.4 A |
| — at 600 V rated value | 0.25 A |
| • with 2 current paths in series at DC-1 | |
| — at 24 V rated value | 55 A |
| — at 110 V rated value | 45 A |
| — at 220 V rated value | 5 A |
| — at 440 V rated value | 1 A |
| — at 600 V rated value | 0.8 A |
| • with 3 current paths in series at DC-1 | |

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| <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 600 V rated value | 55 A 55 A 45 A 2.9 A 1.4 A |
| <ul style="list-style-type: none"> ● at 1 current path at DC-3 at DC-5 <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 600 V rated value ● with 2 current paths in series at DC-3 at DC-5 <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 600 V rated value ● with 3 current paths in series at DC-3 at DC-5 <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 600 V rated value | 35 A 2.5 A 1 A 0.1 A 0.06 A 55 A 25 A 5 A 0.27 A 0.16 A 55 A 55 A 25 A 0.6 A 0.35 A |
| operating power <ul style="list-style-type: none"> ● at AC-2 at 400 V rated value ● at AC-3 <ul style="list-style-type: none"> — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value ● at AC-3e <ul style="list-style-type: none"> — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value | 30 kW 18.5 kW 30 kW 37 kW 37 kW 18.5 kW 30 kW 37 kW 37 kW |
| operating power for approx. 200000 operating cycles at AC-4 <ul style="list-style-type: none"> ● at 400 V rated value ● at 690 V rated value | 14.7 kW 20 kW |
| operating apparent power at AC-6a <ul style="list-style-type: none"> ● up to 230 V for current peak value n=20 rated value ● up to 400 V for current peak value n=20 rated value ● up to 500 V for current peak value n=20 rated value ● up to 690 V for current peak value n=20 rated value | 22.6 kVA 39.4 kVA 49.2 kVA 56.1 kVA |
| operating apparent power at AC-6a <ul style="list-style-type: none"> ● up to 230 V for current peak value n=30 rated value ● up to 400 V for current peak value n=30 rated value ● up to 500 V for current peak value n=30 rated value ● up to 690 V for current peak value n=30 rated value | 15.1 kVA 26.2 kVA 32.8 kVA 45.3 kVA |
| 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 | 1 055 A; Use minimum cross-section acc. to AC-1 rated value 730 A; Use minimum cross-section acc. to AC-1 rated value 520 A; Use minimum cross-section acc. to AC-1 rated value 336 A; Use minimum cross-section acc. to AC-1 rated value 272 A; Use minimum cross-section acc. to AC-1 rated value |
| 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 ● at AC-2 maximum | 800 1/h 400 1/h |

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| <ul style="list-style-type: none"> • at AC-3 maximum • at AC-3e maximum • at AC-4 maximum | 700 1/h 700 1/h 200 1/h |
| Control circuit/ Control | |
| type of voltage of the control supply voltage | AC |
| control supply voltage at AC <ul style="list-style-type: none"> • at 50 Hz rated value | 230 V |
| operating range factor control supply voltage rated value of magnet coil at AC <ul style="list-style-type: none"> • at 50 Hz | 0.8 ... 1.1 |
| apparent pick-up power of magnet coil at AC <ul style="list-style-type: none"> • at 50 Hz | 190 VA |
| inductive power factor with closing power of the coil <ul style="list-style-type: none"> • at 50 Hz | 0.72 |
| apparent holding power of magnet coil at AC <ul style="list-style-type: none"> • at 50 Hz | 16 VA |
| inductive power factor with the holding power of the coil <ul style="list-style-type: none"> • at 50 Hz | 0.37 |
| closing delay <ul style="list-style-type: none"> • at AC | 10 ... 80 ms |
| opening delay <ul style="list-style-type: none"> • at AC | 10 ... 18 ms |
| arcing time | 10 ... 20 ms |
| control version of the switch operating mechanism | Standard A1 - A2 |
| 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 <ul style="list-style-type: none"> • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value | 10 A 3 A 2 A 1 A |
| operational current at DC-12 <ul style="list-style-type: none"> • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value | 10 A 6 A 6 A 3 A 2 A 1 A 0.15 A |
| operational current at DC-13 <ul style="list-style-type: none"> • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value | 10 A 2 A 2 A 1 A 0.9 A 0.3 A 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 3-phase AC motor <ul style="list-style-type: none"> • at 480 V rated value • at 600 V rated value | 65 A 52 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 | 5 hp 10 hp |

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| <ul style="list-style-type: none"> for 3-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 | 20 hp 20 hp 50 hp 50 hp |
| contact rating of auxiliary contacts according to UL | A600 / P600 |
| Short-circuit protection | |
| 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 | gG: 250 A (690 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, 80 kA) gG: 125A (690V,100kA), aM: 63A (690V,100kA), BS88: 100A (415V,80kA) gG: 10 A (500 V, 1 kA) |
| 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 standard mounting rail according to DIN EN 60715 |
| <ul style="list-style-type: none"> side-by-side mounting | Yes |
| height | 114 mm |
| width | 55 mm |
| depth | 130 mm |
| required spacing | |
| <ul style="list-style-type: none"> with side-by-side mounting <ul style="list-style-type: none"> forwards upwards downwards at the side for grounded parts <ul style="list-style-type: none"> forwards upwards at the side downwards for live parts <ul style="list-style-type: none"> forwards upwards downwards at the side | 10 mm 10 mm 10 mm 0 mm 10 mm 10 mm 6 mm 10 mm 10 mm 10 mm 10 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 | |
| <ul style="list-style-type: none"> for main contacts <ul style="list-style-type: none"> solid or stranded finely stranded with core end processing at AWG cables for main contacts | 2x (1 ... 35 mm²), 1x (1 ... 50 mm²) 2x (1 ... 25 mm²), 1x (1 ... 35 mm²) 2x (18 ... 2), 1x (18 ... 1) |
| connectable conductor cross-section for main contacts | |
| <ul style="list-style-type: none"> finely stranded with core end processing | 1 ... 35 mm² |
| connectable conductor cross-section for auxiliary contacts | |
| <ul style="list-style-type: none"> solid or stranded finely stranded with core end processing | 0.5 ... 2.5 mm² 0.5 ... 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 or stranded | 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²) |

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| — finely stranded with core end processing | 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) |
| • at AWG cables for auxiliary contacts | 2x (20 ... 16), 2x (18 ... 14) |
| AWG number as coded connectable conductor cross section | |
| • for main contacts | 18 ... 1 |
| • for auxiliary contacts | 20 ... 14 |
| Safety related data | |
| product function | |
| • mirror contact acc. to IEC 60947-4-1 | Yes |
| • positively driven operation acc. to IEC 60947-5-1 | No |
| 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 % |
| failure rate [FIT] with low demand rate acc. to SN 31920 | 100 FIT |
| protection class IP on the front acc. to IEC 60529 | IP20 |
| touch protection on the front acc. to IEC 60529 | finger-safe, for vertical contact from the front |
| suitability for use | |
| • safety-related switching OFF | Yes |
| Certificates/ approvals | |
| General Product Approval | |





[Confirmation](#)




[KC](#)



| EMC | Functional Safety/Safety of Machinery | Declaration of Conformity | Test Certificates | | |
|---|--|---|--|--|--|
|  | Type Examination Certificate |  | UK Declaration of Conformity | Type Test Certificates/Test Report | Special Test Certificate |
| RCM | | EG-Konf. | | | |

Marine / Shipping



| Marine / Shipping | other | Railway | Dangerous Good | |
|---|------------------------------|------------------------------|-------------------------------------|---------------------------------------|
|  | Confirmation | Confirmation | Vibration and Shock | Transport Information |
| RMRS | | | | |

Further information

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=3RT2037-1AP00>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2037-1AP00>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2037-1AP00>

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

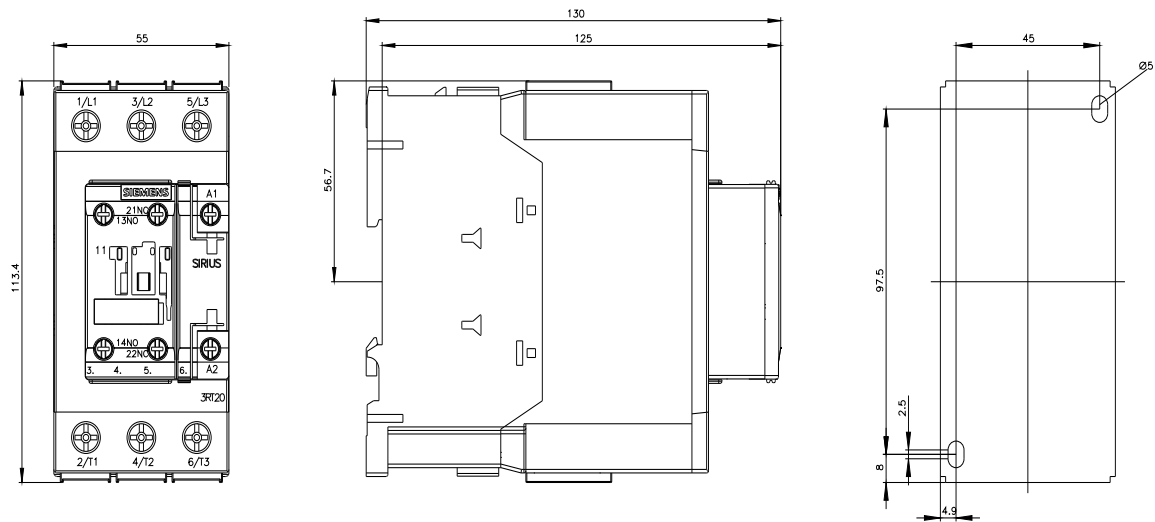
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2037-1AP00&lang=en

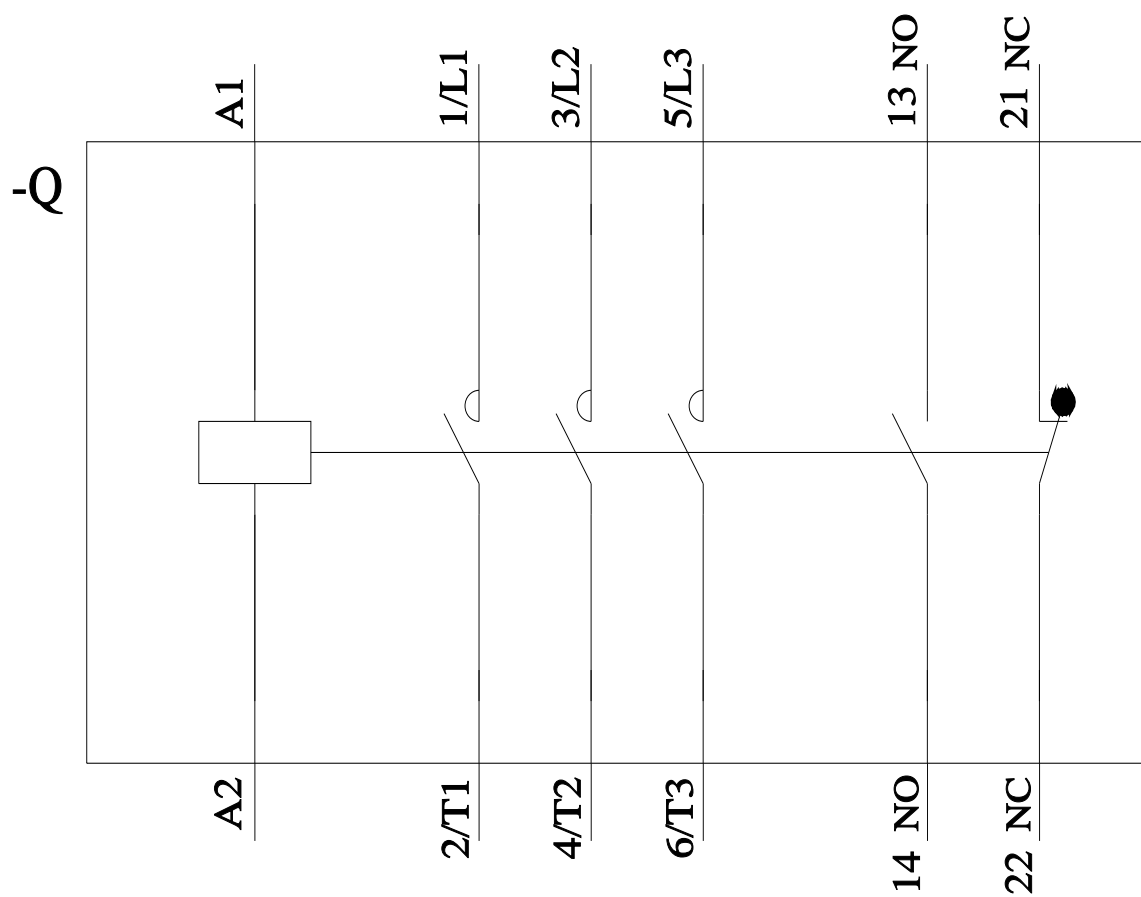
Characteristic: Tripping characteristics, I^2t , Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2037-1AP00/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2037-1AP00&objecttype=14&gridview=view1>





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