



Contactor 42...48 V AC/DC AC3 2 kW 400 V AC (50...60 Hz) / DC operation
auxiliary contacts 2 NO + 2 NC, 3-pole, size S12 bar connections conventional
operating mechan. screw terminal

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| product brand name | SIRIUS |
| product designation | Power contactor |
| product type designation | 3RT5 |
| General technical data | |
| size of contactor | S12 |
| product extension auxiliary switch | Yes |
| power loss [W] for rated value of the current | |
| • at AC in hot operating state per pole | 55 W |
| • without load current share typical | 10 W |
| type of calculation of power loss depending on pole | quadratic |
| insulation voltage rated value | 1 000 V |
| degree of pollution | 3 |
| surge voltage resistance rated value | 8 kV |
| maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 | 690 V |
| shock resistance at rectangular impulse | |
| • at AC | 8,5g / 5 ms, 4,2g / 10 ms |
| • at DC | 8,5g / 5 ms, 4,2g / 10 ms |
| shock resistance with sine pulse | |
| • at AC | 13,4g / 5 ms, 6,5g / 10 ms |
| • at DC | 13,4g / 5 ms, 6,5g / 10 ms |
| mechanical service life (operating cycles) | |
| • of contactor typical | 10 000 000 |
| • of the contactor with added auxiliary switch block typical | 10 000 000 |
| Substance Prohibition (Date) | 03/01/2017 |
| SVHC substance name | Lead - 7439-92-1 |
| Net Weight | 10.39 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 |
| Main circuit | |
| number of poles for main current circuit | 3 |
| number of NO contacts for main contacts | 3 |
| number of NC contacts for main contacts | 0 |
| operating voltage | |
| • at AC-3 rated value maximum | 1 000 V |
| • at AC-3e rated value maximum | 1 000 V |

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| 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-3 <ul style="list-style-type: none"> — at 400 V rated value — at 690 V rated value ● at AC-3e <ul style="list-style-type: none"> — at 400 V rated value — at 690 V rated value — at 1000 V rated value | 610 A 550 A 500 A 450 A 500 A 450 A 180 A |
| connectable conductor cross-section in main circuit at AC-1 | |
| <ul style="list-style-type: none"> ● at 60 °C minimum permissible ● at 40 °C minimum permissible | 370 mm ² 370 mm ² |
| operational current for approx. 200000 operating cycles at AC-4 | |
| <ul style="list-style-type: none"> ● at 400 V rated value ● at 690 V rated value | 175 A 150 A |
| operating power | |
| <ul style="list-style-type: none"> ● at AC-1 <ul style="list-style-type: none"> — at 230 V at 60 °C rated value — at 400 V at 60 °C rated value — at 690 V at 60 °C 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 — at 1000 V rated value | 151 kW 362 kW 624 kW 160 kW 291 kW 355 kW 400 kW 160 kW 250 kW 355 kW 400 kW 250 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 | 98 kW 148 kW |
| no-load switching frequency | |
| <ul style="list-style-type: none"> ● at AC ● at DC | 2 000 1/h 2 000 1/h |
| operating frequency | |
| <ul style="list-style-type: none"> ● at AC-1 maximum ● at AC-3 maximum ● at AC-3e maximum ● at AC-4 maximum | 500 1/h 420 1/h 420 1/h 130 1/h |
| Control circuit/ Control | |
| type of voltage of the control supply voltage | AC/DC |
| control supply voltage at AC | |
| <ul style="list-style-type: none"> ● at 50 Hz rated value ● at 60 Hz rated value | 42 ... 48 V 42 ... 48 V |
| control supply voltage at DC rated value | 42 ... 48 V |
| operating range factor control supply voltage rated value of magnet coil at DC | |
| <ul style="list-style-type: none"> ● initial value ● full-scale value | 0.8 1.1 |
| 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 |

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| <ul style="list-style-type: none"> • at 60 Hz | 0.8 ... 1.1 |
| design of the surge suppressor | with varistor |
| apparent pick-up power of magnet coil at AC | |
| <ul style="list-style-type: none"> • at 50 Hz | 830 VA |
| <ul style="list-style-type: none"> • at 60 Hz | 830 VA |
| inductive power factor with closing power of the coil | |
| <ul style="list-style-type: none"> • at 50 Hz | 0.9 |
| <ul style="list-style-type: none"> • at 60 Hz | 0.9 |
| apparent holding power of magnet coil at AC | |
| <ul style="list-style-type: none"> • at 50 Hz | 9.2 VA |
| <ul style="list-style-type: none"> • at 60 Hz | 9.2 VA |
| inductive power factor with the holding power of the coil | |
| <ul style="list-style-type: none"> • at 50 Hz | 0.9 |
| <ul style="list-style-type: none"> • at 60 Hz | 0.9 |
| closing power of magnet coil at DC | 920 W |
| holding power of magnet coil at DC | 10 W |
| Auxiliary circuit | |
| number of NC contacts for auxiliary contacts instantaneous contact | 2 |
| number of NO contacts for auxiliary contacts instantaneous contact | 2 |
| operational current at AC-12 maximum | 10 A |
| operational current at AC-15 | |
| <ul style="list-style-type: none"> • at 230 V rated value | 6 A |
| <ul style="list-style-type: none"> • at 400 V rated value | 3 A |
| operational current at DC-12 | |
| <ul style="list-style-type: none"> • at 24 V rated value | 6 A |
| <ul style="list-style-type: none"> • at 110 V rated value | 3 A |
| <ul style="list-style-type: none"> • at 220 V rated value | 1 A |
| operational current at DC-13 | |
| <ul style="list-style-type: none"> • at 24 V rated value | 6 A |
| <ul style="list-style-type: none"> • at 110 V rated value | 1 A |
| <ul style="list-style-type: none"> • at 220 V rated value | 0.3 A |
| UL/CSA ratings | |
| yielded mechanical performance [hp] for 3-phase AC motor at 460/480 V rated value | 400 hp |
| 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 | fuse gL/gG: 630 A |
| <ul style="list-style-type: none"> — with type of coordination 2 required | fuse gL/gG: 500 A |
| <ul style="list-style-type: none"> • for short-circuit protection of the auxiliary switch required | fuse gL/gG: 10 A |
| Installation/ mounting/ dimensions | |
| mounting position | with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back |
| fastening method side-by-side mounting | Yes |
| fastening method | screw fixing |
| height | 214 mm |
| width | 160 mm |
| depth | 225 mm |
| Connections/ Terminals | |
| type of electrical connection | |
| <ul style="list-style-type: none"> • for main current circuit | screw-type terminals |
| <ul style="list-style-type: none"> • for auxiliary and control circuit | screw-type terminals |
| type of connectable conductor cross-sections | |
| <ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — finely stranded with core end processing | 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) |
| <ul style="list-style-type: none"> • for AWG cables for auxiliary contacts | 2x (20 ... 16), 2x (18 ... 14), 1x 12 |
| Safety related data | |
| product function mirror contact according to IEC 60947-4-1 | Yes |

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| Electrical Safety | |
| protection class IP on the front according to IEC 60529 | IP00; IP20 with box terminal/cover |
| touch protection on the front according to IEC 60529 | finger-safe, for vertical contact from the front with box terminal/cover |
| Approvals Certificates | |
| General Product Approval | EMV |



[Confirmation](#)



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| Maritime application | other | Environment |
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[CCS \(China Classification Society\)](#)

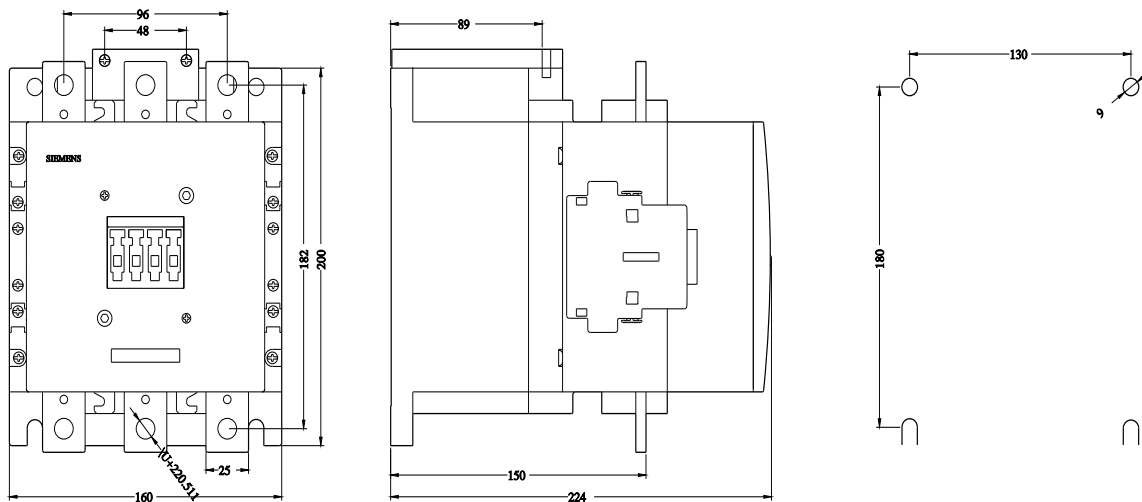


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[Environmental Confirmations](#)

Further information

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
<https://support.industry.siemens.com/cs/products?pnid=16027&lc=en-CN>



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