

Reference: 3RT2037-1AL20

CONTACTOR,AC3:30KW/400V, 1NO
+1NC, 230V AC 50/60HZ, 3-POLE, SIZE
S2, SCREW TERMINAL

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| product brand name | SIRIUS |
| Product designation | 3RT2 contactor |
| General technical data: | |
| Size of contactor | S2 |
| Product extension | |
| function module for communication | No |
| Auxiliary switch | Yes |
| Insulation voltage | |
| rated value | 690 V |
| Degree of pollution | 3 |
| Surge voltage resistance rated value | 6 kV |
| maximum permissible voltage for safe isolation | |
| between coil and main contacts acc. to EN 60947-1 | 400 V |
| Protection class IP | |
| on the front | IP20 |
| of the terminal | IP00 |
| Shock resistance | |
| at rectangular impulse | |
| — at AC | 11.8g / 5 ms, 7.4g / 10 ms |
| with sine pulse | |
| — at AC | 18.5g / 5 ms, 11.6g / 10 ms |

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| Mechanical service life (switching cycles) | |
| of contactor typical | 10 000 000 |
| of the contactor with atd> | 5 000 000 |
| of the contactor with atd> | 10 000 000 |
| 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 NO contacts for main contacts | 3 |
| Number of NC contacts for main contacts | 0 |
| Operating voltage | |
| at AC-3 rated value maximum | 690 V |
| Operating 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-2 at 400 V rated value | 65 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 |
| Connectable conductor cross-section in main circuit at AC-1 | |
| at 60 °C minimum permissible | 25 mm ² |
| at 40 °C minimum permissible | 25 mm ² |
| Operating current for approx. 200000 operating cycles at AC-4 | |
| at 400 V rated value | 28 A |
| at 690 V rated value | 22 A |
| Operating 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 |

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| — 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 | |
| — at 24 V rated value | 55 A |
| — at 110 V rated value | 55 A |
| — at 220 V rated value | 45 A |
| — at 440 V rated value | 2.9 A |
| — at 600 V rated value | 1.4 A |
| Operating current | |
| at 1 current path at DC-3 at DC-5 | |
| — at 24 V rated value | 35 A |
| — at 110 V rated value | 2.5 A |
| — at 220 V rated value | 1 A |
| — at 440 V rated value | 0.1 A |
| — at 600 V rated value | 0.06 A |
| with 2 current paths in series at DC-3 at DC-5 | |
| — at 110 V rated value | 25 A |
| — at 220 V rated value | 5 A |
| — at 24 V rated value | 55 A |
| — at 440 V rated value | 0.27 A |
| — at 600 V rated value | 0.16 A |
| with 3 current paths in series at DC-3 at DC-5 | |
| — at 110 V rated value | 55 A |
| — at 220 V rated value | 25 A |
| — at 24 V rated value | 55 A |
| — at 440 V rated value | 0.6 A |
| — at 600 V rated value | 0.35 A |
| Operating power | |
| at AC-1 | |
| — at 230 V rated value | 30 kW |
| — at 230 V at 60 °C rated value | 26 kW |
| — at 400 V rated value | 53 kW |

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| — at 400 V at 60 °C rated value | 46 kW |
| — at 690 V rated value | 91 kW |
| — at 690 V at 60 °C rated value | 79 kW |
| at AC-2 at 400 V rated value | 30 kW |
| at AC-3 | |
| — at 230 V rated value | 18.5 kW |
| — at 400 V rated value | 30 kW |
| — at 500 V rated value | 37 kW |
| — at 690 V rated value | 37 kW |
| Operating power for approx. 200000 operating cycles at AC-4 | |
| at 400 V rated value | 14.7 kW |
| at 690 V rated value | 20 kW |
| Thermal short-time current limited to 10 s | 520 A |
| Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor | 3.8 W |
| No-load switching frequency | |
| at AC | 5 000 1/h |
| Operating frequency | |
| at AC-1 maximum | 800 1/h |
| at AC-2 maximum | 400 1/h |
| at AC-3 maximum | 700 1/h |
| at AC-4 maximum | 200 1/h |
| Control circuit/ Control: | |
| Type of voltage of the control supply voltage | AC |
| Control supply voltage at AC | |
| at 50 Hz rated value | 230 V |
| at 60 Hz rated value | 230 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 | |
| at 50 Hz | 210 V·A |
| at 60 Hz | 188 V·A |
| Apparent holding power of magnet coil at AC | |
| at 50 Hz | 17.2 V·A |
| at 60 Hz | 16.5 V·A |
| Closing delay | |

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| at AC | 10 ... 80 ms |
| Opening delay | |
| at AC | 10 ... 18 ms |
| Arcing time | 10 ... 20 ms |
| Auxiliary circuit: | |
| Number of NC contacts | |
| for auxiliary contacts | |
| — instantaneous contact | 1 |
| Number of NO contacts | |
| for auxiliary contacts | |
| — instantaneous contact | 1 |
| Operating current at AC-12 maximum | 10 A |
| Operating current at AC-15 | |
| at 230 V rated value | 10 A |
| at 400 V rated value | 3 A |
| at 500 V rated value | 2 A |
| at 690 V rated value | 1 A |
| Operating 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 |
| Operating 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: | |
| Full-load current (FLA) for three-phase AC motor | |
| at 480 V rated value | 65 A |
| at 600 V rated value | 52 A |

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| Yielded mechanical performance [hp] | |
| for single-phase AC motor | |
| — at 110/120 V rated value | 5 hp |
| — at 230 V rated value | 10 hp |
| for three-phase AC motor | |
| — at 200/208 V rated value | 20 hp |
| — at 220/230 V rated value | 20 hp |
| — at 460/480 V rated value | 50 hp |
| — at 575/600 V rated value | 50 hp |
| Contact rating of auxiliary contacts according to UL | A600 / P600 |
| Short-circuit protection | |
| Design of the fuse link | |
| for short-circuit protection of the main circuit | |
| — with type of coordination 1 required | gL/gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 250 A |
| — with type of assignment 2 required | gL/gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 125 A |
| for short-circuit protection of the auxiliary switch required | fuse gL/gG: 10 A |
| 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 |
| Mounting type | screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022 |
| Side-by-side mounting | Yes |
| Height | 114 mm |
| Witd> | 55 mm |
| Depth | 130 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 | 10 mm |
| — Backwards | 0 mm |
| — upwards | 50 mm |
| — at the side | 6 mm |
| — downwards | 50 mm |

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| for live parts | |
| — forwards | 10 mm |
| — Backwards | 0 mm |
| — upwards | 50 mm |
| — downwards | 50 mm |
| — at the side | 6 mm |
| Connections/Terminals: | |
| Type of electrical connection | |
| for main current circuit | screw-type terminals |
| for auxiliary and control current circuit | screw-type terminals |
| Type of connectable conductor cross-sections | |
| for main contacts | |
| — single or multi-stranded | 2x (1 ... 35 mm ²), 1x (1 ... 50 mm ²) |
| — finely stranded with core end processing | 2x (1 ... 25 mm ²), 1x (1 ... 35 mm ²) |
| at AWG conductors for main contacts | 2x (18 ... 2), 1x (18 ... 1) |
| Type of connectable conductor cross-sections | |
| for auxiliary contacts | |
| — single or multi-stranded | 2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²) |
| — finely stranded with core end processing | 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) |
| at AWG conductors for auxiliary contacts | 2x (20 ... 16), 2x (18 ... 14) |
| Safety related data: | |
| 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 % |
| Product function | |
| Mirror contact acc. to IEC 60947-4-1 | Yes |
| positively driven operation acc. to IEC 60947-5-1 | No |
| T1 value for proof test interval or service life acc. to IEC 61508 | 20 y |