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## Data sheet 3RT6024-1AC20




Contactor AC 24 V 50/60 HZ AC3 5.5 kW 400 V AUX contacts 1 NO +1 NC 3-pole, size S0 screw terminal

| | |
|---|---|
| **product brand name** | SIRIUS |
| **product designation** | Power contactor |
| **product type designation** | 3RT6 |
| **General technical data** | |
| **size of contactor** | S0 |
| product extension auxiliary switch | Yes |
| **power loss [W] for rated value of the current** | |
| ● at AC in hot operating state per pole | 0.5 W |
| ● without load current share typical | 1.97 W |
| **type of calculation of power loss current-dependent** | quadratic |
| **insulation voltage rated value** | 690 V |
| **degree of pollution** | 3 |
| **surge voltage resistance 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 | 7,5 g / 5 ms, 4,7 g / 10 ms |
| **shock resistance with sine pulse** | |
| ● at AC | 11,8 g / 5 ms, 7,4 g / 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 Prohibitance (day/month/year)** | 05/01/2012 |
| **Net Weight** | 0.39 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 | 690 V |
| ● at AC-3e rated value maximum | 690 V |
| **operational current** | |
| ● at AC-1 up to 690 V | |
| — at ambient temperature 40 °C rated value | 40 A |


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| — at ambient temperature 60 °C rated value | 35 A |
| ● at AC-3 | |
| — at 400 V rated value | 12 A |
| — at 690 V rated value | 9 A |
| ● at AC-3e | |
| — at 400 V rated value | 12 A |
| — at 690 V rated value | 9 A |
| **connectable conductor cross-section in main circuit at AC-1** | |
| ● at 60 °C minimum permissible | 10 mm² |
| ● at 40 °C minimum permissible | 10 mm² |
| **operational current for approx. 200000 operating cycles at AC-4** | |
| ● at 400 V rated value | 5.5 A |
| ● at 690 V rated value | 5.5 A |
| **operating power** | |
| ● at AC-1 | |
| — at 230 V rated value | 13.3 kW |
| — at 230 V at 60 °C rated value | 13.3 kW |
| — at 400 V at 60 °C rated value | 23 kW |
| — at 690 V at 60 °C rated value | 40 kW |
| ● at AC-3 | |
| — at 230 V rated value | 3 kW |
| — at 400 V rated value | 5.5 kW |
| — at 690 V rated value | 7.5 kW |
| ● at AC-3e | |
| — at 230 V rated value | 3 kW |
| — at 400 V rated value | 5.5 kW |
| — at 690 V rated value | 7.5 kW |
| **operating power for approx. 200000 operating cycles at AC-4** | |
| ● at 400 V rated value | 2.6 kW |
| ● at 690 V rated value | 4.6 kW |
| short-time withstand current in cold operating state up to 40 °C limited to 10 s switching at zero current maximum | 110 A |
| **no-load switching frequency** | |
| ● at AC | 5 000 1/h |
| **operating frequency** | |
| ● at AC-1 maximum | 1 000 1/h |
| ● at AC-3 maximum | 1 000 1/h |
| ● at AC-3e maximum | 1 000 1/h |
| ● at AC-4 maximum | 300 1/h |
| **Control circuit/ Control** | |
| **type of voltage of the control supply voltage** | AC |
| **control supply voltage at AC** | |
| ● at 50 Hz rated value | 24 V |
| ● at 60 Hz rated value | 24 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 | 68 V·A |
| ● at 60 Hz | 67 V·A |
| **inductive power factor with closing power of the coil** | |
| ● at 50 Hz | 0.72 |
| ● at 60 Hz | 0.74 |
| **apparent holding power of magnet coil at AC** | |
| ● at 50 Hz | 7.9 V·A |
| ● at 60 Hz | 6.5 V·A |


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| **inductive power factor with the holding power of the coil** | |
| ● at 50 Hz | 0.25 |
| ● at 60 Hz | 0.28 |
| **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 | 10 A |
| ● at 400 V rated value | 3 A |
| ● at 690 V rated value | 1 A |
| **operational current at DC-12** | |
| ● at 24 V rated value | 6 A |
| ● at 110 V rated value | 3 A |
| ● at 220 V rated value | 1 A |
| **operational current at DC-13** | |
| ● at 24 V rated value | 6 A |
| ● at 110 V rated value | 1 A |
| ● at 220 V rated value | 0.3 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 | 7.5 hp |
| **Short-circuit protection** | |
| **design of the fuse link** | |
| ● for short-circuit protection of the main circuit | |
| — with type of coordination 1 required | gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 63 A |
| — with type of coordination 2 required | gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 25 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 |
| 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** | 85 mm |
| **width** | 45 mm |
| **depth** | 97 mm |
| **required spacing** | |
| ● with side-by-side mounting | |
| — at the side | 0 mm |
| **Connections/ Terminals** | |
| **type of electrical connection** | |
| ● for main current circuit | screw-type terminals |
| ● for auxiliary and control circuit | screw-type terminals |
| type of connectable conductor cross-sections for main contacts | |
| ● solid or stranded | 2x (1 ... 2.5 mm²), 2x (2.5 ... 10 mm²) |
| ● finely stranded with core end processing | 2x (1 ... 2.5 mm²), 2x (2.5 ... 6 mm²), 1x 10 mm² |
| **type of connectable conductor cross-sections** | |
| ● for auxiliary contacts | |
| — 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) |
| **Safety related data** | |
| product function mirror contact according to IEC 60947-4-1 | Yes |
| 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** | |

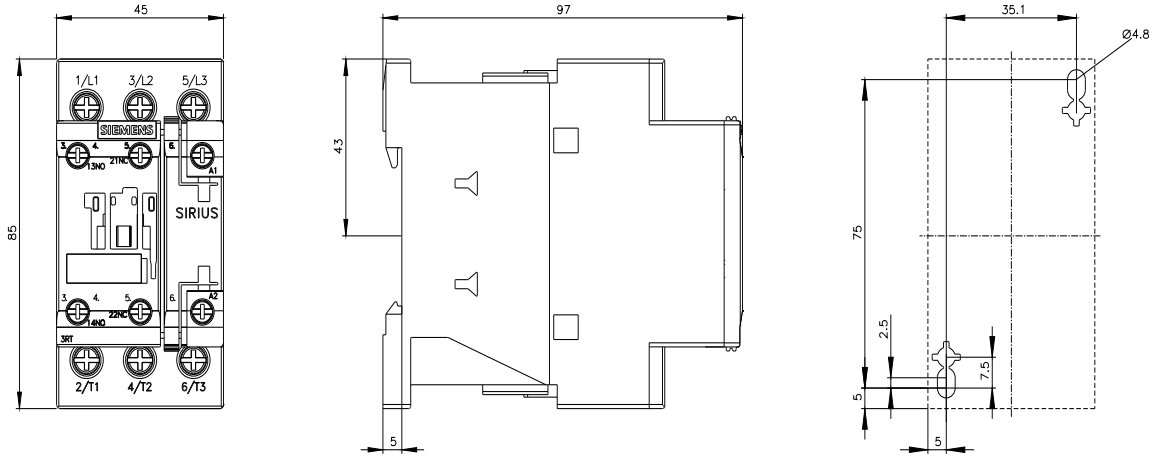

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| General Product Approval | | | | | EMV |
|---|---|---|---|---|---|
| CCC | Confirmation | UL | EAC | CE EG-Konf. | RCM |

| Maritime application | | other | | Environment |
|---|---|---|---|---|
| LRS | CCS (China Classification Society) | Confirmation | 产品合格 QC PASS | Environmental Confirmations |

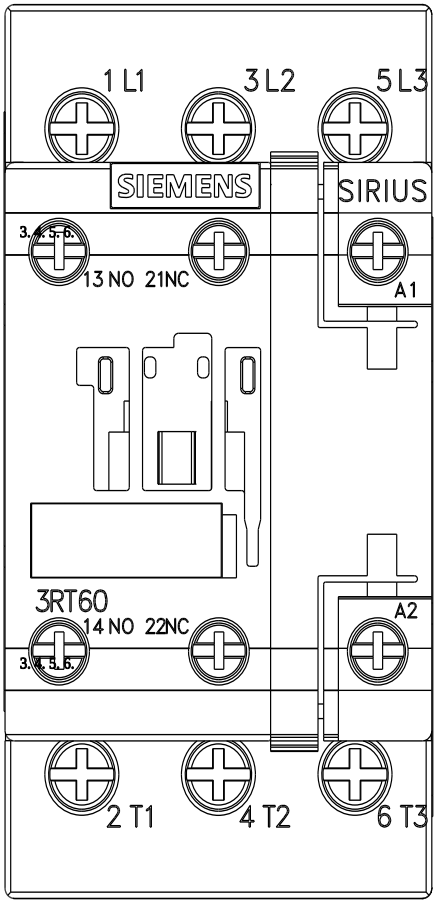
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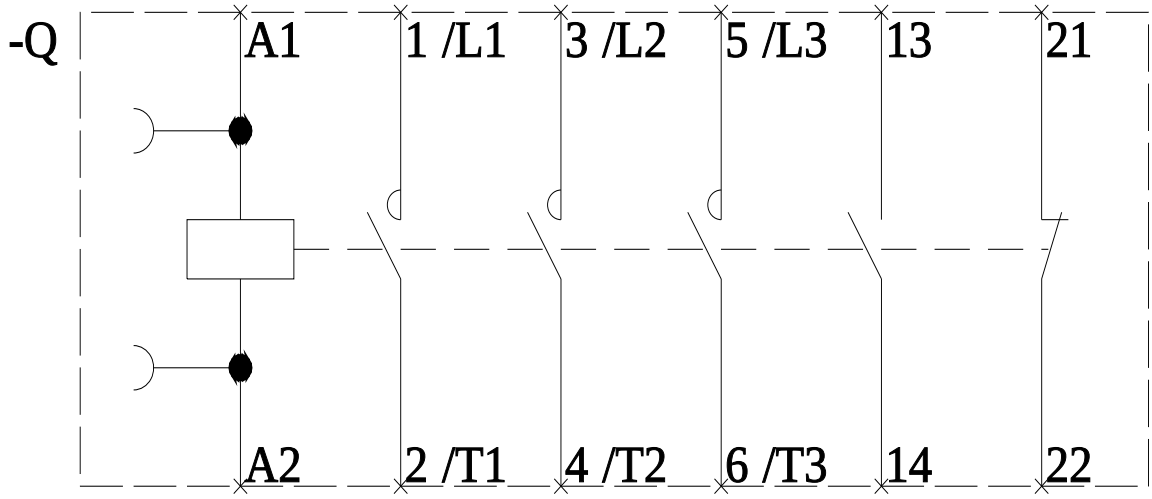
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