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## Data sheet 3RT1275-6AP36



vacuum contactor AC-3e/AC-3 400 A, 200 kW / 400 V, 3-pole, Uc: 220-240 V AC(50-60 Hz) / DC drive: conventional auxiliary contacts 2 NO + 2 NC main circuit: busbar control and auxiliary circuit: screw terminal

| | |
|---|---|
| **product brand name** | SIRIUS |
| **product designation** | Power contactor |
| **product type designation** | 3RT12 |
| **General technical data** | |
| **size of contactor** | S12 |
| **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 | 63 W |
| ● at AC in hot operating state per pole | 21 W |
| ● without load current share typical | 10 W |
| **type of calculation of power loss current-dependent** | quadratic |
| **insulation voltage** | |
| ● of main circuit with degree of pollution 3 rated value | 1 000 V |
| ● of auxiliary circuit with degree of pollution 3 rated value | 500 V |
| **surge voltage resistance** | |
| ● of main circuit rated value | 8 kV |
| ● of auxiliary circuit rated value | 6 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 | 8,5 g / 5 ms, 4,2 g / 10 ms |
| ● at DC | 8,5 g / 5 ms, 4,2 g / 10 ms |
| **shock resistance with sine pulse** | |
| ● at AC | 13,4 g / 5 ms, 6,5 g / 10 ms |
| ● at DC | 13,4 g / 5 ms, 6,5 g / 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 (day/month/year)** | 05/01/2012 |
| **SVHC substance name** | Lead CAS-No. 7439-92-1 |
| **Net Weight** | 10.5 kg |
| **Ambient conditions** | |
| installation altitude at height above sea level maximum | 2 000 m |
| **ambient temperature** | |
| ● during operation | -25 ... +60 °C |


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| ● during storage | -55 ... +80 °C |
| **relative humidity minimum** | 10 % |
| **relative humidity at 55 °C according 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 |
| **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 |
| **operational current** | |
| ● at AC-1 at 400 V at ambient temperature 40 °C rated value | 610 A |
| ● at AC-1 | |
| — up to 690 V at ambient temperature 40 °C rated value | 610 A |
| — up to 690 V at ambient temperature 60 °C rated value | 550 A |
| ● at AC-3 | |
| — at 400 V rated value | 400 A |
| — at 500 V rated value | 400 A |
| — at 690 V rated value | 400 A |
| ● at AC-3e | |
| — at 400 V rated value | 400 A |
| — at 500 V rated value | 400 A |
| — at 690 V rated value | 400 A |
| ● at AC-4 at 400 V rated value | 350 A |
| ● at AC-6a | |
| — up to 230 V for current peak value n=20 rated value | 400 A |
| — up to 400 V for current peak value n=20 rated value | 400 A |
| — up to 500 V for current peak value n=20 rated value | 400 A |
| — up to 690 V for current peak value n=20 rated value | 400 A |
| ● at AC-6a | |
| — up to 230 V for current peak value n=30 rated value | 293 A |
| — up to 400 V for current peak value n=30 rated value | 293 A |
| — up to 500 V for current peak value n=30 rated value | 293 A |
| — up to 690 V for current peak value n=30 rated value | 293 A |
| minimum cross-section in main circuit at maximum AC-1 rated value | 370 mm² |
| **operational current for approx. 200000 operating cycles at AC-4** | |
| ● at 400 V rated value | 175 A |
| ● at 690 V rated value | 175 A |
| **operating power** | |
| ● at AC-3 | |
| — at 230 V rated value | 132 kW |
| — at 400 V rated value | 200 kW |
| — at 500 V rated value | 250 kW |
| — at 690 V rated value | 400 kW |
| ● at AC-3e | |
| — at 230 V rated value | 132 kW |
| — at 400 V rated value | 200 kW |
| — at 500 V rated value | 250 kW |
| — at 690 V rated value | 400 kW |
| **operating power for approx. 200000 operating cycles at AC-4** | |
| ● at 400 V rated value | 98 kW |
| ● at 690 V rated value | 172 kW |
| **operating apparent power at AC-6a** | |
| ● up to 230 V for current peak value n=20 rated value | 150 kVA |


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| ● up to 400 V for current peak value n=20 rated value | 270 kVA |
| ● up to 500 V for current peak value n=20 rated value | 340 kVA |
| ● up to 690 V for current peak value n=20 rated value | 470 kVA |
| **operating apparent power at AC-6a** | |
| ● up to 230 V for current peak value n=30 rated value | 110 kVA |
| ● up to 400 V for current peak value n=30 rated value | 200 kVA |
| ● up to 500 V for current peak value n=30 rated value | 250 kVA |
| ● up to 690 V for current peak value n=30 rated value | 350 kVA |
| ● up to 1000 V for current peak value n=30 rated value | 500 kVA |
| **no-load switching frequency** | |
| ● at AC | 2 000 1/h |
| ● at DC | 2 000 1/h |
| **operating frequency** | |
| ● at AC-1 maximum | 700 1/h |
| ● at AC-2 maximum | 250 1/h |
| ● at AC-3 maximum | 750 1/h |
| ● at AC-3e | |
| — maximum | 750 1/h |
| ● at AC-4 maximum | 250 1/h |
| **Control circuit/ Control** | |
| **type of voltage of the control supply voltage** | AC/DC |
| **control supply voltage at AC** | |
| ● at 50 Hz rated value | 220 ... 240 V |
| ● at 60 Hz rated value | 220 ... 240 V |
| **control supply voltage at DC rated value** | 220 ... 240 V |
| **operating range factor control supply voltage rated value of magnet coil at DC** | |
| ● initial value | 0.8 |
| ● full-scale value | 1.1 |
| **operating range factor control supply voltage rated value of magnet coil at AC** | |
| ● at 50 Hz | 0.8 ... 1.1 |
| ● at 60 Hz | 0.8 ... 1.1 |
| **design of the surge suppressor** | with varistor |
| **apparent pick-up power** | |
| **● at minimum rated control supply voltage at AC** | |
| — at 50 Hz | 700 V·A |
| — at 60 Hz | 700 V·A |
| **● at maximum rated control supply voltage at AC** | |
| — at 60 Hz | 830 V·A |
| — at 50 Hz | 830 V·A |
| **apparent pick-up power of magnet coil at AC** | |
| ● at 50 Hz | 830 V·A |
| ● at 60 Hz | 830 V·A |
| **inductive power factor with closing power of the coil** | |
| ● at 50 Hz | 0.9 |
| ● at 60 Hz | 0.9 |
| **apparent holding power** | |
| ● at minimum rated control supply voltage at DC | 8.5 V·A |
| ● at maximum rated control supply voltage at DC | 10 V·A |
| **apparent holding power** | |
| **● at minimum rated control supply voltage at AC** | |
| — at 50 Hz | 7.6 V·A |
| — at 60 Hz | 7.6 V·A |
| **● at maximum rated control supply voltage at AC** | |
| — at 50 Hz | 9.2 V·A |
| — at 60 Hz | 9.2 V·A |
| **inductive power factor with the holding power of the coil** | |
| ● at 50 Hz | 0.9 |


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| ● at 60 Hz | 0.9 |
| **closing power of magnet coil at DC** | 920 W |
| **holding power of magnet coil at DC** | 10 W |
| **closing delay** | |
| ● at AC | 45 ... 100 ms |
| ● at DC | 45 ... 100 ms |
| **opening delay** | |
| ● at AC | 60 ... 100 ms |
| ● at DC | 60 ... 100 ms |
| **arcing time** | 10 ... 15 ms |
| **control version of the switch operating mechanism** | Standard A1 - A2 |
| **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** | |
| ● 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** | |
| **full-load current (FLA) for 3-phase AC motor** | |
| ● at 480 V rated value | 361 A |
| ● at 600 V rated value | 382 A |
| **yielded mechanical performance [hp]** | |
| ● for 3-phase AC motor | |
| — at 200/208 V rated value | 125 hp |
| — at 220/230 V rated value | 150 hp |
| — at 460/480 V rated value | 300 hp |
| — at 575/600 V rated value | 400 hp |
| **contact rating of auxiliary contacts according to UL** | A600 / Q600 |
| **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: 800 A (690 V, 100 kA) |
| — with type of coordination 2 required | gG: 800 A (690 V, 50 kA), aM: 630 A (690 V, 50 kA), BS88: 800 A (415 V, 50 kA) |
| ● for short-circuit protection of the auxiliary switch required | gG: 10 A (500 V, 1 kA) |
| **Installation/ mounting/ dimensions** | |


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| **mounting position** | +/-22,5° 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 fixing |
| **height** | 217 mm |
| **width** | 160 mm |
| **depth** | 225 mm |
| **required spacing** | |
| ● with side-by-side mounting | |
| — forwards | 20 mm |
| — upwards | 10 mm |
| — downwards | 10 mm |
| — at the side | 0 mm |
| ● for grounded parts | |
| — forwards | 20 mm |
| — upwards | 10 mm |
| — at the side | 10 mm |
| — downwards | 10 mm |
| ● for live parts | |
| — forwards | 20 mm |
| — upwards | 10 mm |
| — downwards | 10 mm |
| — at the side | 10 mm |
| **Connections/ Terminals** | |
| **type of electrical connection** | |
| ● for main current circuit | Connection bar |
| ● for auxiliary and control circuit | screw-type terminals |
| ● at contactor for auxiliary contacts | Screw-type terminals |
| ● of magnet coil | screw terminal |
| **width of connection bar** | 25 mm |
| **thickness of connection bar** | 6 mm |
| **diameter of holes** | 11 mm |
| **number of holes** | 1 |
| **type of connectable conductor cross-sections** | |
| ● for AWG cables for main contacts | 2/0 ... 500 kcmil |
| **connectable conductor cross-section for main contacts** | |
| ● stranded | 70 ... 240 mm² |
| **connectable conductor cross-section for auxiliary contacts** | |
| ● solid or stranded | 0.5 ... 4 mm² |
| ● finely stranded with core end processing | 0.5 ... 2.5 mm² |
| **type of connectable conductor cross-sections** | |
| ● for auxiliary contacts | |
| — solid | 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), max. 2x (0.75 ... 4 mm²) |
| — solid or stranded | 2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²), max. 2x (0,75 ... 4 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), 1x 12 |
| **AWG number as coded connectable conductor cross section for auxiliary contacts** | 18 ... 14 |
| **Safety related data** | |
| **product function** | |
| ● **mirror contact according to IEC 60947-4-1** | Yes |
| ● **positively driven operation according to IEC 60947-5-1** | No |
| 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** | |

| **Environment** | **General Product Approval** |
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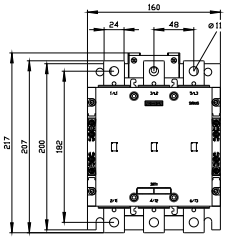
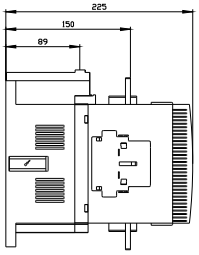
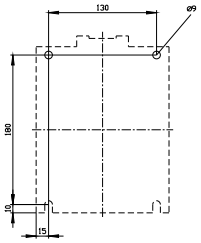
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| Environmental Confirmations | | | | | |

| General Product Approval | EMV | Functional Saftey | Test Certificates | | Maritime application |
|---|---|---|---|---|---|
| | | Type Examination Certificate | Type Test Certificates/Test Report | Special Test Certificate | |

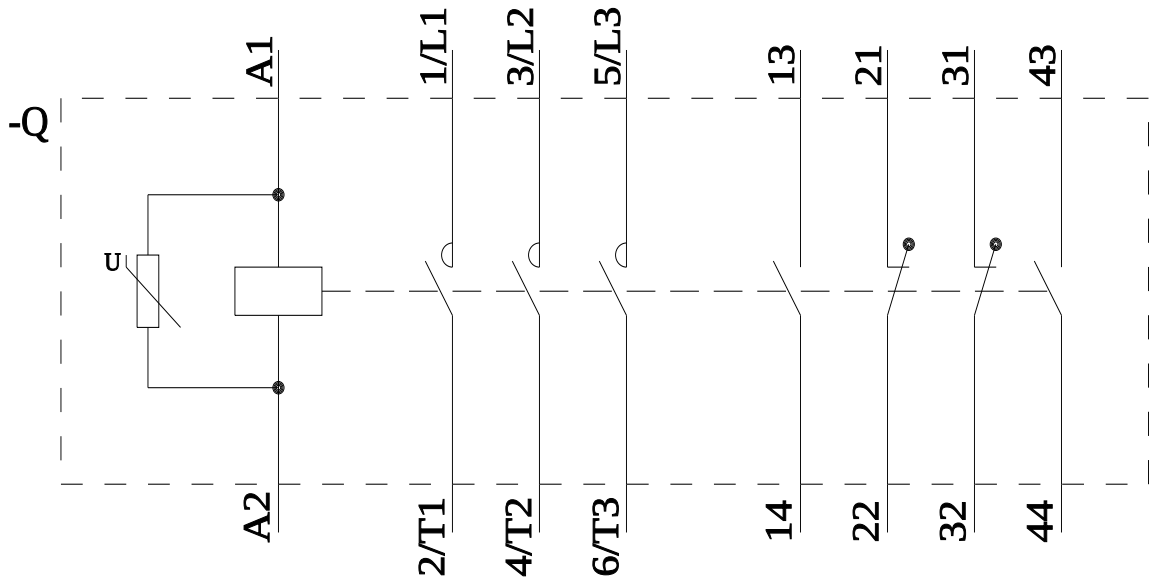
| Maritime application | other | | | | Railway |
|---|---|---|---|---|---|
| | Miscellaneous | Confirmation | Confirmation | | Special Test Certificate |

## 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=3RT1275-6AP36
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
https://support.industry.siemens.com/cs/ww/en/ps/3RT1275-6AP36
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**
https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1275-6AP36&lang=en
**Cax online generator**
https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1275-6AP36
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