Data sheet



Contactor AC3: 250 kW / 400 V 3-pole Size S12 Coil AC 50/60Hz and DC 96...127 V x (0,8...1,1) auxiliary contacts: 2 NO + 2 NC permanently mounted (SUVA) Main: busbar connections coil and auxilliary: screw terminal

Figure similar

| Product brand name | SIRIUS |
|--------------------------|-----------------|
| Product designation | Power contactor |
| Product type designation | 3RT1 |

| General technical data | |
|---|---------|
| Size of contactor | S12 |
| Product extension | |
| function module for communication | No |
| Auxiliary switch | Yes |
| Insulation voltage | |
| rated value | 1 000 V |
| Degree of pollution | 3 |
| Surge voltage resistance rated value | 8 kV |
| maximum permissible voltage for safe isolation | |
| between coil and main contacts acc. to EN | 690 V |
| 60947-1 | |
| Protection class IP | |
| • on the front | IP00 |

| of the terminal | IP00 |
|--|----------------------------|
| 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 (switching cycles) | |
| of contactor typical | 10 000 000 |
| of the contactor with added electronics- compatible auxiliary switch block typical | 5 000 000 |
| of the contactor with added auxiliary switch block typical | 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 poles for main current circuit | 3 |
| Number of NO contacts for main contacts | 3 |
| Operating voltage | |
| at AC-3 rated value maximum | 1 000 V |
| Operating 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 |
| — up to 1000 V at ambient temperature 40 $^{\circ}\text{C}$ rated value | 200 A |
| — up to 1000 V at ambient temperature 60 °C rated value | 200 A |
| • at AC-2 at 400 V rated value | 500 A |
| • at AC-3 | |
| — at 400 V rated value | 500 A |
| — at 500 V rated value | 500 A |
| — at 690 V rated value | 450 A |
| — at 1000 V rated value | 180 A |
| | |

| Connectable conductor cross-section in main circuit | |
|--|---------|
| at AC-1 • at 60 °C minimum permissible | 370 mm² |
| • at 40 °C minimum permissible | 370 mm² |
| Operating current for approx. 200000 operating | |
| cycles at AC-4 | |
| • at 400 V rated value | 175 A |
| • at 690 V rated value | 150 A |
| Operating current | |
| • at 1 current path at DC-1 | |
| — at 24 V rated value | 400 A |
| — at 110 V rated value | 33 A |
| — at 220 V rated value | 3.8 A |
| — at 440 V rated value | 0.9 A |
| — at 600 V rated value | 0.6 A |
| with 2 current paths in series at DC-1 | |
| — at 24 V rated value | 400 A |
| — at 110 V rated value | 400 A |
| — at 220 V rated value | 400 A |
| — at 440 V rated value | 4 A |
| — at 600 V rated value | 2 A |
| with 3 current paths in series at DC-1 | |
| — at 24 V rated value | 400 A |
| — at 110 V rated value | 400 A |
| — at 220 V rated value | 400 A |
| — at 440 V rated value | 11 A |
| — at 600 V rated value | 5.2 A |
| Operating current | |
| • at 1 current path at DC-3 at DC-5 | |
| — at 24 V rated value | 400 A |
| — at 110 V rated value | 3 A |
| — at 220 V rated value | 0.6 A |
| — at 440 V rated value | 0.18 A |
| — at 600 V rated value | 0.125 A |
| • with 2 current paths in series at DC-3 at DC-5 | |
| — at 24 V rated value | 400 A |
| — at 110 V rated value | 400 A |
| — at 220 V rated value | 2.5 A |
| — at 440 V rated value | 0.65 A |
| — at 600 V rated value | 0.37 A |
| • with 3 current paths in series at DC-3 at DC-5 | |
| — at 24 V rated value | 400 A |
| | |

| 400 A |
|---|
| 400 A |
| 1.4 A |
| 0.75 A |
| |
| |
| 208 kW |
| 362 kW |
| 362 kW |
| 610 kW |
| 624 kW |
| 329 kW |
| 250 kW |
| |
| 160 kW |
| 250 kW |
| 315 kW |
| 400 kW |
| 250 kW |
| |
| 98 kW |
| 148 kW |
| 4 000 A |
| 55 W |
| |
| |
| |
| 500 1/h |
| |
| 200 1/h |
| 200 1/h 200 1/h |
| 200 1/h 200 1/h 200 1/h |
| 200 1/h 200 1/h |
| 200 1/h 200 1/h 200 1/h |
| 200 1/h 200 1/h 200 1/h |
| 200 1/h 200 1/h 200 1/h 130 1/h |
| 200 1/h 200 1/h 200 1/h 130 1/h |
| 200 1/h 200 1/h 200 1/h 130 1/h AC/DC |
| 200 1/h 200 1/h 200 1/h 130 1/h AC/DC 96 127 V 96 127 V |
| 200 1/h 200 1/h 200 1/h 130 1/h AC/DC |
| 200 1/h 200 1/h 200 1/h 130 1/h AC/DC 96 127 V 96 127 V |
| |

| • 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 of magnet coil at AC | |
| ● at 50 Hz | 750 V·A |
| Inductive power factor with closing power of the coil | |
| ● at 50 Hz | 0.8 |
| Apparent holding power of magnet coil at AC | |
| ● at 50 Hz | 7 V·A |
| Inductive power factor with the holding power of the | |
| coil | |
| ● at 50 Hz | 0.8 |
| Closing power of magnet coil at DC | 800 W |
| Holding power of magnet coil at DC | 3.6 W |
| Closing delay | |
| • at AC | 60 75 ms |
| • at DC | 60 75 ms |
| Opening delay | |
| • at AC | 115 130 ms |
| • at DC | 115 130 ms |
| Recovery time after power failure typical | 2 s |
| Arcing time | 10 15 ms |
| Control version of the switch operating mechanism | Fail-safe PLC input (F-PLC-IN) |
| Auxiliary circuit | |
| Number of NC contacts | |
| • for auxiliary contacts | |
| — instantaneous contact | 2 |
| Number of NO contacts | |
| • for auxiliary contacts | |
| — instantaneous contact | 2 |
| Operating current at AC-12 maximum | 10 A |
| Operating 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 |
| 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 | 477 A |
| • at 600 V rated value | 472 A |
| Yielded mechanical performance [hp] | |
| for three-phase AC motor | |
| — at 200/208 V rated value | 150 hp |
| — at 220/230 V rated value | 200 hp |
| — at 460/480 V rated value | 400 hp |
| — at 575/600 V rated value | 500 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 | Fuse gG: 630 A |
| — with type of assignment 2 required | Fuse gG: 500 A |
| for short-circuit protection of the auxiliary switch required | fuse gG: 10 A |

| 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 fixing |
| Side-by-side mounting | Yes |
| Height | 214 mm |
| Width | 160 mm |

| Depth | 225 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 | |
| at AWG conductors for main contacts | 2/0 500 kcmil |
| 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) |
| single or multi-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) |
| at AWG conductors for auxiliary contacts | 2x (20 16), 2x (18 14), 1x 12 |

| Safety related data | |
|--|--|
| Safety device type acc. to IEC 61508-2 | Type B |
| B10 value | |
| with high demand rate acc. to SN 31920 | 1 000 000 |
| Safety Integrity Level (SIL) acc. to IEC 61508 | 2 |
| SIL Claim Limit (subsystem) acc. to EN 62061 | 2 |
| Performance level (PL) acc. to EN ISO 13849-1 | C |
| Category acc. to EN ISO 13849-1 | 2 |
| Stop category acc. to DIN EN 60204-1 | 0 |
| 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- | No |
| 1 | |
| PFHD with high demand rate acc. to EN 62061 | 0.00000045 1/h |
| PFDavg with low demand rate acc. to IEC 61508 | 0.007 |
| MTBF | 75 y |
| Hardware fault tolerance acc. to IEC 61508 | 0 |
| T1 value for proof test interval or service life acc. to IEC 61508 | 20 y |
| Protection against electrical shock | finger-safe when touched vertically from front acc. to IEC 60529 |

Certificates/approvals

General Product Approval

Functional Safety/Safety of Machinery

Declaration of Conformity









Type Examination Certificate



| Test | Marine / | other |
|--------------|----------|-------|
| Certificates | Shipping | |

Special Test Certificate



Confirmation

Miscellaneous

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

http://www.siemens.com/industrial-controls/catalogs

Industry Mall (Online ordering system)

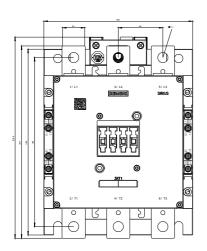
 $\underline{\text{https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT1076-6SF36-3PA0}$

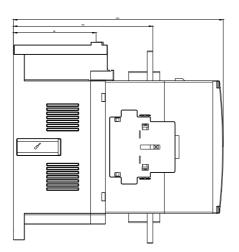
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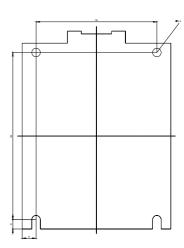
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1076-6SF36-3PA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RT1076-6SF36-3PA0

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1076-6SF36-3PA0&lang=en







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