SIEMENS

## Product data sheet 3RT2025-1AN60


CONTACTOR, AC-3, 7.5KW/400V, 1NO+1NC,
AC 200V 50HZ, 200...220V 60HZ, 3-POLE,
SZ S0 SCREW TERMINAL

| General technical data: | | |
|---|---|---|
| **Product brand name** | | SIRIUS |
| **Size of the contactor** | | S0 |
| **Product extension / auxiliary switch** | | Yes |
| **Protection class IP / on the front** | | IP20 |
| **Protection against electrical shock** | | finger-safe |
| **Degree of pollution** | | 3 |
| **Installation altitude / at a height over sea level / maximum** | m | 2,000 |
| **Ambient temperature / during storage** | °C | -55 … 80 |
| **Ambient temperature / during operating** | °C | -25 … 60 |
| **Shock resistance** | | |
| • at rectangular impulse | | |
| • at AC | | 7,5g / 5 ms, 4,7g / 10 ms |
| • at sine pulse | | |
| • at AC | | 11,8g / 5 ms, 7,4g / 10 ms |
| **Impulse voltage resistance / rated value** | kV | 6 |
| **Insulation voltage / rated value** | V | 690 |
| **Mechanical operating cycles as operating time** | | |
| • of the contactor / typical | | 10,000,000 |
| • of the contactor with added auxiliary switch block / typical | | 10,000,000 |

| | | |
|---|---|---|
| • of the contactor with added electronics-compatible auxiliary switch block / typical | | 5,000,000 |

| **Main circuit:** | | |
|---|---|---|
| **Number of NC contacts / for main contacts** | | 0 |
| **Number of NO contacts / for main contacts** | | 3 |
| **Operating current** | | |
| • at AC-1 / at 400 V | | |
| • at 40 °C ambient temperature / rated value | A | 40 |
| • at 60 °C ambient temperature / rated value | A | 35 |
| • at AC-2 / at 400 V / rated value | A | 17 |
| • at AC-3 / at 400 V / rated value | A | 17 |
| • at AC-4 / at 400 V / rated value | A | 15.5 |
| **Operating current** | | |
| • with 1 current path / at DC-1 | | |
| • at 24 V / rated value | A | 35 |
| • at 110 V / rated value | A | 4.5 |
| • with 2 current paths in series / at DC-1 | | |
| • at 24 V / rated value | A | 35 |
| • at 110 V / rated value | A | 35 |
| • with 3 current paths in series / at DC-1 | | |
| • at 24 V / rated value | A | 35 |
| • at 110 V / rated value | A | 35 |
| • with 1 current path / at DC-3 / at DC-5 | | |
| • at 24 V / rated value | A | 20 |
| • at 110 V / rated value | A | 2.5 |
| • with 2 current paths in series / at DC-3 / at DC-5 | | |
| • at 24 V / rated value | A | 35 |
| • at 110 V / rated value | A | 15 |
| • with 3 current paths in series / at DC-3 / at DC-5 | | |
| • at 24 V / rated value | A | 35 |
| • at 110 V / rated value | A | 35 |
| **Service power** | | |
| • at AC-2 / at 400 V / rated value | kW | 7.5 |
| • at AC-3 / at 400 V / rated value | kW | 7.5 |
| • at AC-4 / at 400 V / rated value | kW | 7.5 |
| **Active power loss / per conductor / typical** | W | 0.9 |
| **Off-load operating frequency** | | |
| • at AC | 1/h | 5,000 |
| • at DC | 1/h | 1,500 |

| | | |
|---|---|---|
| **Frequency of operation** | | |
| • at AC-1 / according to IEC 60947-6-2 / maximum | 1/h | 1,000 |
| • at AC-2 / according to IEC 60947-6-2 / maximum | 1/h | 1,000 |
| • at AC-3 / according to IEC 60947-6-2 / maximum | 1/h | 1,000 |
| • at AC-4 / according to IEC 60947-6-2 / maximum | 1/h | 300 |

## Control circuit:

| | | |
|---|---|---|
| **Type of voltage / of the controlled supply voltage** | | AC |
| **Control supply voltage / 1** | | |
| • at 50 Hz / for AC / rated value | V | 200 |
| • at 60 Hz / for AC / rated value | V | 220 |
| **Working range factor supply voltage rated value / of the magnet coil** | | |
| • at 50 Hz / for AC | | 0.8 … 1.1 |
| • at 60 Hz / for AC | | 0.85 … 1.1 |
| **Apparent pull-in power / of the solenoid / for AC** | V·A | 73 |
| **Apparent holding power / of the solenoid / for AC** | V·A | 8.5 |
| **Inductive power factor** | | |
| • with the pull-in power of the coil | | 0.82 |
| • with the pull-in power of the coil | | 0.25 |
| **Closing delay** | | |
| • at AC | ms | 9 … 38 |
| **Opening delay** | | |
| • at AC | ms | 4 … 16 |
| **Arcing time** | ms | 10 … 10 |

## Auxiliary circuit:

| | | |
|---|---|---|
| **Contact reliability / of the auxiliary contacts** | | 1 faulty switching per 100 million (17 V, 1 mA) |
| **Number of NC contacts / for auxiliary contacts / instantaneous switching** | | 1 |
| **Number of NO contacts / for auxiliary contacts / instantaneous switching** | | 1 |
| **Operating current / of the auxiliary contacts** | | |
| • at AC-12 / maximum | A | 10 |
| • at AC-15 | | |
| • at 230 V | A | 6 |
| • at 400 V | A | 3 |
| • at DC-12 | | |
| • at 48 V | A | 6 |
| • at 60 V | A | 6 |
| • at 110 V | A | 3 |

| | | |
|---|---|---|
| • at 220 V | A | 1 |
| • at DC-13 | | |
| • at 24 V | A | 6 |
| • at 48 V | A | 2 |
| • at 60 V | A | 2 |
| • at 110 V | A | 1 |
| • at 220 V | A | 0.3 |

## Short-circuit:

| | | |
|---|---|---|
| **Design of the fuse link** | | |
| • for short-circuit protection of the auxiliary switch / required | | fuse gL/gG: 10 A |
| • for short-circuit protection of the main circuit | | |
| • with type of assignment 1 / required | | gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 63 A |
| • at type of coordination 2 / required | | gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 25A |

## Installation/mounting/dimensions:

| | | |
|---|---|---|
| **Built in orientation** | | vertical |
| **Type of mounting** | | screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022 |
| **Type of fixing/fixation / series installation** | | Yes |
| **Width** | mm | 45 |
| **Height** | mm | 85 |
| **Depth** | mm | 97 |
| **Distance, to be maintained, to the ranks assembly / sidewards** | mm | 0 |
| **Distance, to be maintained, to earthed part / sidewards** | mm | 6 |

## Connections:

| | | |
|---|---|---|
| **Design of the electrical connection** | | |
| • for main current circuit | | screw-type terminals |
| • for auxiliary and control current circuit | | screw-type terminals |
| **Type of the connectable conductor cross-section** | | |
| • for main contacts | | |
| • solid | | 2x (1 ... 2.5 mm²), 2x (2.5 ... 10 mm²) |
| • stranded | | 2x (1 ... 2.5 mm²), 2x (2.5 ... 10 mm²) |
| • finely stranded | | |
| • with conductor end processing | | 2x (1 ... 2.5 mm2), 2x (2.5 ... 6 mm2), 1x 10 mm2 |
| • for AWG conductors / for main contacts | | 2x (16 ... 12), 2x (14 ... 8) |
| • for auxiliary contacts | | |
| • solid | | 2x (0.5 ... 1.5 mm2), 2x (0.75 ... 2.5 mm2) |
| • finely stranded | | |

| | | |
|---|---|---|
| • with conductor end processing | | 2x (0.5 ... 1.5 mm2), 2x (0.75 ... 2.5 mm2) |
| • for AWG conductors / for auxiliary contacts | | 2x (20 ... 16), 2x (18 ... 14) |

## Certificates/approvals:

| General Product Approval | | | | Test Certificates |
|---|---|---|---|---|
| CQC | CSA | ROSTEST | UL | Manufacturer |

| Shipping Approval | | | | | |
|---|---|---|---|---|---|
| ABS | DNV | GL | LRS | PRS | RINA |

| Shipping Approval | other | |
|---|---|---|
| RMRS | Manufacturer | VDE |

## UL/CSA ratings:

| | | |
|---|---|---|
| **yielded mechanical performance (hp)** | | |
| • for single-phase squirrel cage motors | | |
| • at 110/120 V / rated value | hp | 1 |
| • at 230 V / rated value | hp | 3 |
| • for three-phase squirrel cage motors | | |
| • at 200/208 V / rated value | hp | 3 |
| • at 220/230 V / rated value | hp | 5 |
| • at 460/480 V / rated value | hp | 10 |
| • at 575/600 V / rated value | hp | 15 |
| **Operating current (FLA) / for three-phase squirrel cage motors** | | |
| • at 480 V / rated value | A | 14 |
| • at 600 V / rated value | A | 17 |
| **Contact rating designation / for auxiliary contacts / according to UL** | | A600 / Q600 |

## Safety:related Parameter:

| | | |
|---|---|---|
| **B10 value / with high demand rate** | | |
| • according to SN 31920 | | 1,000,000 |
| **T1 value / for proof test interval or service life** | | |
| • according to IEC 61508 | a | 20 |
| **Proportion of dangerous failures** | | |
| • with low demand rate / according to SN 31920 | % | 40 |
| • with high demand rate / according to SN 31920 | % | 73 |
| **Failure rate (FIT value) / with low demand rate** | | |

| | | |
|---|---|---|
| • according to SN 31920 | FIT | 100 |
| **Product function** | | |
| • mirror contact to IEC 60947-4-1 | | Yes |
| • positively driven operation to IEC 60947-5-1 | | No |

## Further information:

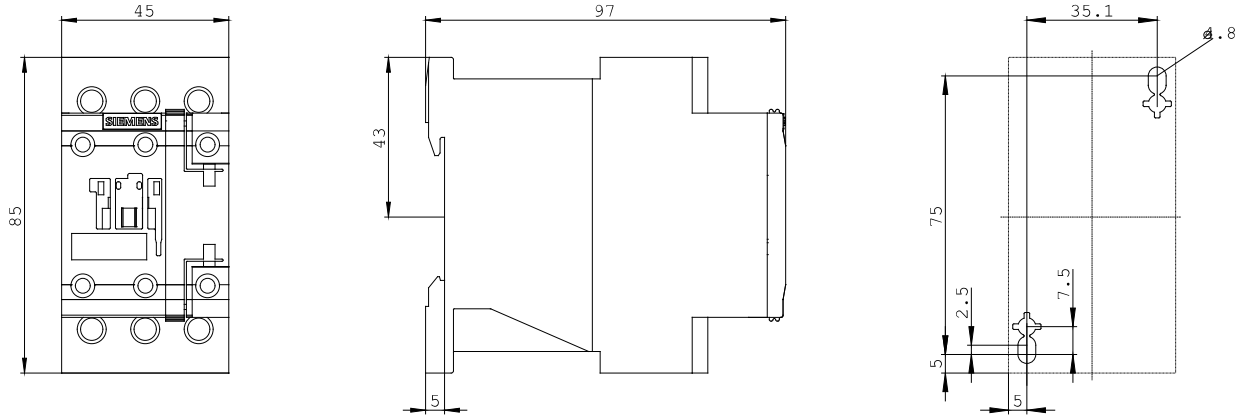
**Information- and Downloadcenter (Catalogs, Brochures,…)**
http://www.siemens.com/industrial-controls/catalogs

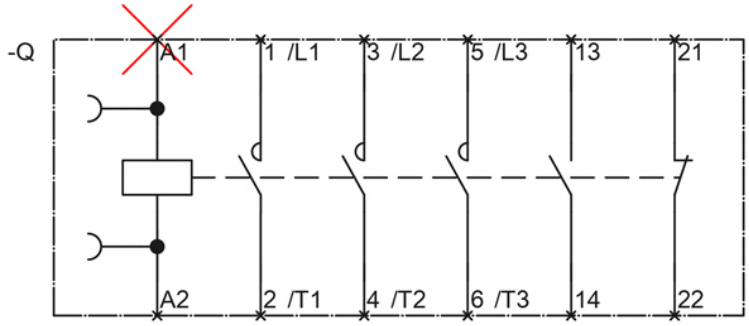
**Industry Mall (Online ordering system)**
http://www.siemens.com/industrial-controls/mall

**Cax online generator:**
http://www.siemens.com/cax

**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
http://support.automation.siemens.com/WW/view/en/3RT2025-1AN60/all

**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)**
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RT2025-1AN60



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