SIEMENS

Product data sheet 3RT2015-1BB42



CONTACTOR, AC-3, 3KW/400V, 1NC, DC 24V, 3-POLE, SZ S00 SCREW TERMINAL

| General technical data: | | |
|--|----|----------------------------|
| product brand name | | SIRIUS |
| Size of the contactor | | S00 |
| 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 |
| during operating | °C | -25 +60 |
| Shock resistance | | |
| at rectangular impulse | | |
| • at DC | | 6,7g / 5 ms, 4,2g / 10 ms |
| at sine pulse | | |
| • at DC | | 10,5g / 5 ms, 6,6g / 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 | | 30,000,000 |

- of the contactor with added auxiliary switch block / typical
- of the contactor with added electronics-compatible auxiliary switch block / typical

| 10,000,000 |
|------------|
| 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 | Α | 18 |
| • at 60 °C ambient temperature / rated value | Α | 16 |
| • at AC-2 / at 400 V / rated value | Α | 7 |
| • at AC-3 / at 400 V / rated value | Α | 7 |
| • at AC-4 / at 400 V / rated value | Α | 6.5 |
| Operating current | | |
| • with 1 current path / at DC-1 | | |
| • at 24 V / rated value | Α | 15 |
| • at 110 V / rated value | Α | 1.5 |
| • with 2 current paths in series / at DC-1 | | |
| • at 24 V / rated value | Α | 15 |
| • at 110 V / rated value | Α | 8.4 |
| • with 3 current paths in series / at DC-1 | | |
| • at 24 V / rated value | Α | 15 |
| • at 110 V / rated value | Α | 15 |
| with 1 current path / at DC-3 / at DC-5 | | |
| • at 24 V / rated value | Α | 15 |
| • at 110 V / rated value | Α | 0.1 |
| • with 2 current paths in series / at DC-3 / at DC-5 | | |
| • at 24 V / rated value | Α | 15 |
| • at 110 V / rated value | Α | 0.25 |
| • with 3 current paths in series / at DC-3 / at DC-5 | | |
| • at 24 V / rated value | Α | 15 |
| • at 110 V / rated value | Α | 15 |
| Service power | | |
| • at AC-2 / at 400 V / rated value | kW | 3 |
| • at AC-3 / at 400 V / rated value | kW | 3 |
| • at AC-4 / at 400 V / rated value | kW | 3 |
| Active power loss / per conductor / typical | W | 0.4 |
| Off-load operating frequency | | |
| • at AC | 1/h | 10,000 |

| • at DC | 1/h | 10,000 |
|---|-----|--------|
| Frequency of operation / at AC-1 / according to IEC 60947-6-2 | 1/h | 1,000 |
| Frequency of operation / at AC-2 / according to IEC 60947-6-2 | 1/h | 750 |
| Frequency of operation / at AC-3 / according to IEC 60947-6-2 | 1/h | 750 |
| Frequency of operation / at AC-4 / according to IEC 60947-6-2 | 1/h | 250 |

| Control circuit: | | |
|--|----|---------|
| Type of voltage / of the controlled supply voltage | | DC |
| Operating range factor control supply voltage rated value / of the magnet coil | | |
| • for DC | | 0.8 1.1 |
| Pull-in power / of the solenoid / for DC | W | 4 |
| Holding power / of the solenoid / for DC | W | 4 |
| Closing delay | | |
| • at DC | ms | 30 100 |
| Opening delay | | |
| • at DC | ms | 7 13 |
| Arcing time | ms | 10 15 |

| 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 | | 0 |
| Operating current / of the auxiliary contacts | | |
| • at AC-12 / maximum | Α | 10 |
| • at AC-15 | | |
| • at 230 V | Α | 10 |
| • at 400 V | Α | 3 |
| • at DC-12 | | |
| • at 48 V | Α | 6 |
| • at 60 V | Α | 6 |
| • at 110 V | Α | 3 |
| • at 220 V | Α | 1 |
| • at DC-13 | | |
| • at 24 V | Α | 10 |
| • at 48 V | Α | 2 |
| • at 60 V | Α | 2 |
| • at 110 V | А | 1 |
| • at 220 V | Α | 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: 35 A |
| • at type of coordination 2 / required | gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 20A |

| 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 |
| 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 | 57.5 |
| Depth | mm | 73 |
| 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 (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm² |
| • finely stranded | |
| with conductor end processing | 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) |
| • for AWG conductors / for main contacts | 2x (20 16), 2x (18 14), 2x 12 |
| for auxiliary contacts | |
| • solid | 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 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), 2x 12 |

Certificates/approvals:

General Product Approval

Functional Safety / Safety of Machinery Declaration of Conformity















Test Certificates

Special Test Certificate Type Test
Certificates/Test
Report

Shipping Approval















Shipping Approval

other









| UL/CSA ratings: | | |
|---|----|-------------|
| yielded mechanical performance (hp) | | |
| for single-phase squirrel cage motors | | |
| • at 110/120 V / rated value | hp | 0.25 |
| • at 230 V / rated value | hp | 0.75 |
| • for three-phase squirrel cage motors | | |
| • at 200/208 V / rated value | hp | 1.5 |
| • at 220/230 V / rated value | hp | 2 |
| • at 460/480 V / rated value | hp | 3 |
| • at 575/600 V / rated value | hp | 5 |
| Operating current (FLA) / for three-phase squirrel cage motors | | |
| • at 480 V / rated value | Α | 4.8 |
| • at 600 V / rated value | Α | 6.1 |
| Contact rating designation / for auxiliary contacts / according to UL | | A600 / Q600 |

| Sicherheitsrelevante Kenngrößen: | | |
|--|---|-----------|
| 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 | а | 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:

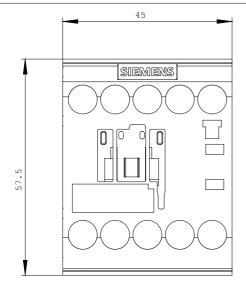
http://www.siemens.com/cax

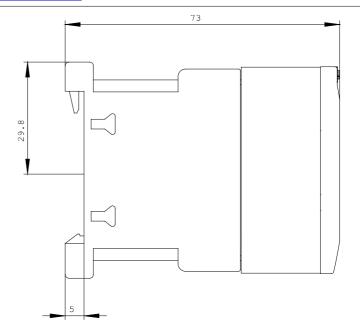
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

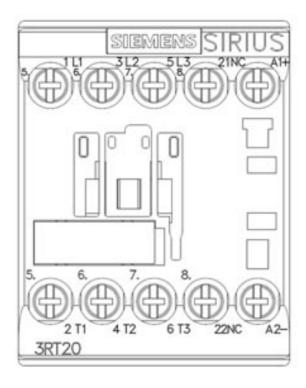
http://support.automation.siemens.com/WW/view/en/3RT2015-1BB42/all

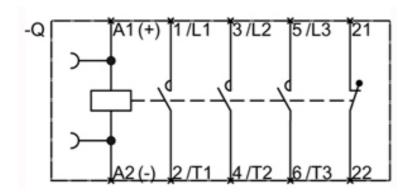
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RT2015-1BB42









last change: Nov 6, 2012