



CONTACTOR, AC-3, 18.5KW/400V, 1NO+1NC,
AC 42V 50HZ, 3-POLE,
SZ S0 SCREW TERMINAL

General technical data:

| | | |
|---|----|----------------------------|
| product brand name | | SIRIUS |
| Size of the contactor | | S0 |
| Product extension | | |
| • auxiliary switch | | Yes |
| • function module for communication | | No |
| 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 AC | | 8,3g / 5 ms, 5,3g / 10 ms |
| • at sine pulse | | |
| • at AC | | 13,5g / 5 ms, 8,3g / 10 ms |
| Impulse voltage resistance / rated value | kV | 6 |
| Insulation voltage / rated value | V | 690 |

| | | |
|---|-----------------|------------|
| Maximum permissible voltage for protective separation / between coil and main contacts / in accordance with EN 60947-1 | V | 400 |
| 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 |
| Connectable conductor cross-section / in main circuit | | |
| • at AC-1 | | |
| • at 40 °C / minimum permissible | mm ² | 10 |
| • at 60 °C / minimum permissible | mm ² | 10 |
| Operating current | | |
| • at AC-1 / up to 690 V | | |
| • at 40 °C ambient temperature / rated value | A | 50 |
| • at 60 °C ambient temperature / rated value | A | 42 |
| • at AC-2 / at 400 V / rated value | A | 38 |
| • at AC-3 | | |
| • at 400 V / rated value | A | 38 |
| • at 500 V / rated value | A | 32 |
| • at 690 V / rated value | A | 21 |
| • at AC-4 / at 400 V / rated value | A | 22 |
| Operational current / for ≥ 200000 operating cycles / at AC-4 | | |
| • at 400 V / rated value | A | 12 |
| • at 690 V / rated value | A | 12 |
| Operating current | | |
| • with 1 current path / at DC-1 | | |
| • at 24 V / rated value | A | 35 |
| • at 110 V / rated value | A | 4.5 |
| • at 220 V / rated value | A | 1 |
| • at 440 V / rated value | A | 0.4 |
| • at 600 V / rated value | A | 0.25 |
| • with 2 current paths in series / at DC-1 | | |
| • at 24 V / rated value | A | 35 |
| • at 110 V / rated value | A | 35 |
| • at 220 V / rated value | A | 5 |
| • at 440 V / rated value | A | 1 |
| • at 600 V / rated value | A | 0.8 |

| | | |
|--|----|------|
| <ul style="list-style-type: none"> • with 3 current paths in series / at DC-1 <ul style="list-style-type: none"> • at 24 V / rated value • at 110 V / rated value • at 220 V / rated value • at 440 V / rated value • at 600 V / rated value | A | 35 |
| | A | 35 |
| | A | 35 |
| | A | 2.9 |
| | A | 1.4 |
| Operating current | | |
| <ul style="list-style-type: none"> • with 1 current path / at DC-3 / at DC-5 <ul style="list-style-type: none"> • at 24 V / rated value • at 110 V / rated value • at 220 V / rated value • at 440 V / rated value • at 600 V / rated value • with 2 current paths in series / at DC-3 / at DC-5 <ul style="list-style-type: none"> • at 24 V / rated value • at 110 V / rated value • at 220 V / rated value • at 440 V / rated value • at 600 V / rated value • with 3 current paths in series / at DC-3 / at DC-5 <ul style="list-style-type: none"> • at 24 V / rated value • at 110 V / rated value • at 220 V / rated value • at 440 V / rated value • at 600 V / rated value | A | 20 |
| | A | 2.5 |
| | A | 1 |
| | A | 0.09 |
| | A | 0.06 |
| | A | 35 |
| | A | 15 |
| | A | 3 |
| | A | 0.27 |
| | A | 0.16 |
| | A | 35 |
| | A | 35 |
| | A | 10 |
| | A | 0.6 |
| | A | 0.6 |
| Operating performance | | |
| • at AC-1 / at 230 V / rated value | kW | 16 |
| • at AC-1 / at 400 V / rated value | kW | 28 |
| • at AC-1 / at 690 V / rated value | kW | 48 |
| • at AC-2 <ul style="list-style-type: none"> • at 400 V / rated value | kW | 18.5 |
| • at AC-3 <ul style="list-style-type: none"> • at 230 V / rated value • at 400 V / rated value • at 690 V / rated value | kW | 11 |
| | kW | 18.5 |
| | kW | 18.5 |
| • at AC-4 <ul style="list-style-type: none"> • at 400 V / rated value | kW | 11 |
| Operating performance / for \geq 200000 operating cycles / at AC-4 | | |
| • at 400 V / rated value | kW | 6 |
| • at 690 V / rated value | kW | 10.3 |

| | | |
|--|-----|-------|
| Thermal short-time current / restricted to 10 s | A | 304 |
| Active power loss / at AC-3 / at 400 V / with rated Operating current value / per conductor | W | 3.8 |
| Off-load operating frequency • at AC | 1/h | 5,000 |
| Frequency of operation • with AC-1 / maximum | 1/h | 1,000 |
| • with AC-2 / maximum | 1/h | 750 |
| • with AC-3 / maximum | 1/h | 750 |
| • with AC-4 / maximum | 1/h | 250 |

Control circuit/ Control:

| | | |
|--|-----|-------------|
| Voltage type / of control feed voltage | | AC |
| Control supply voltage • at 50 Hz / at AC / rated value | V | 42 |
| Operating range factor control supply voltage rated value / of the magnet coil • at 50 Hz / for AC | | 0.8 ... 1.1 |
| Apparent pull-in power / of the solenoid / for AC | V·A | 77 |
| Apparent holding power / of the solenoid / for AC | V·A | 9.8 |
| 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 | 8 ... 40 |
| Opening delay • at AC | ms | 4 ... 16 |
| Arcing time | ms | 10 ... 10 |
| Residual current / of electronics / for control with signal <0> • at 230 V / with AC / maximum permissible | mA | 7 |
| • at 24 V / with DC / maximum permissible | mA | 16 |

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 • at AC-12 / maximum | A | 10 |
| • at AC-15 • at 230 V / rated value | A | 10 |

| | | |
|-------------------------------------|---|------|
| • at 400 V / rated value | A | 3 |
| • at 500 V / rated value | A | 2 |
| • at 690 V / rated value | A | 1 |
| Operating current / at DC-12 | | |
| • at 24 V / rated value | A | 10 |
| • at 48 V / rated value | A | 6 |
| • at 60 V / rated value | A | 6 |
| • at 110 V / rated value | A | 3 |
| • at 125 V / rated value | A | 2 |
| • at 220 V / rated value | A | 1 |
| • at 440 V / rated value | A | 0.3 |
| • at 600 V / rated value | A | 0.15 |
| Operating current / at DC-13 | | |
| • at 24 V / rated value | A | 10 |
| • at 48 V / rated value | A | 2 |
| • at 60 V / rated value | A | 2 |
| • at 110 V / rated value | A | 1 |
| • at 125 V / rated value | A | 0.9 |
| • at 220 V / rated value | A | 0.3 |
| • at 440 V / rated value | A | 0.14 |
| • at 600 V / rated value | A | 0.1 |

UL/CSA ratings:

| | | |
|--|----|-------------|
| yielded mechanical performance [hp] | | |
| • for single-phase squirrel cage motors | | |
| • at 110/120 V / rated value | hp | 3 |
| • at 230 V / rated value | hp | 5 |
| • for three-phase squirrel cage motors | | |
| • at 200/208 V / rated value | hp | 10 |
| • at 220/230 V / rated value | hp | 10 |
| • at 460/480 V / rated value | hp | 25 |
| • at 575/600 V / rated value | hp | 25 |
| Full-load current (FLA) / for 3-phase motor | | |
| • at 480 V / rated value | A | 34 |
| • at 600 V / rated value | A | 27 |
| Contact rating designation / for auxiliary contacts / according to UL | | A600 / Q600 |

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
- at type of coordination 2 / required

gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE:
100 A

gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE:
35A

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 |
| Mounting type | | screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022 |
| Mounting type / series installation | | Yes |
| Width | mm | 45 |
| Height | mm | 85 |
| Depth | mm | 97 |
| Distance, to be maintained, to the ranks assembly / sideways | mm | 0 |

Connections/ terminals:

| | | |
|---|--|---|
| Design of the electrical connection | | |
| • for main current circuit | | screw-type terminals |
| • for auxiliary and control current circuit | | screw-type terminals |
| • for main contacts / finely stranded / with conductor end processing | | 2x (1 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²), 1x 10 mm ² |
| • for AWG conductors / for main contacts | | 2x (16 ... 12), 2x (14 ... 8) |
| • for auxiliary contacts / finely stranded / with conductor end processing | | 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) |
| • for AWG conductors / for auxiliary contacts | | 2x (20 ... 16), 2x (18 ... 14) |

Safety related data:

| | | |
|---|-----|-----------|
| 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] / 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 |

Certificates/ approvals:

| | | |
|--------------------------|-----|---|
| General Product Approval | EMC | Functional Safety / Safety of Machinery |
|--------------------------|-----|---|



[Type Examination](#)

Declaration of Conformity

Test Certificates



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

Shipping Approval



Shipping Approval

other



[Environmental Confirmations](#)

Further information:

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

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

Industry Mall (Online ordering system)

<http://mall.industry.siemens.com/>

Cax online generator

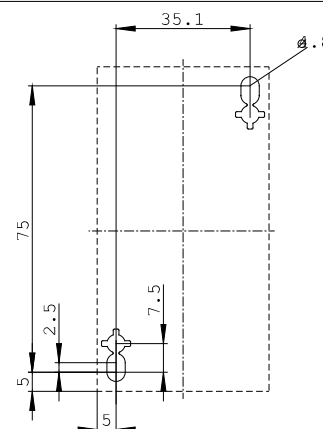
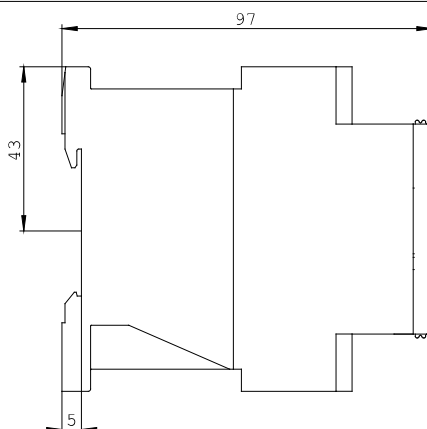
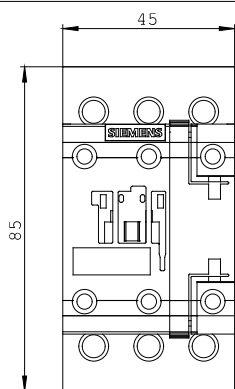
<http://www.siemens.com/cax>

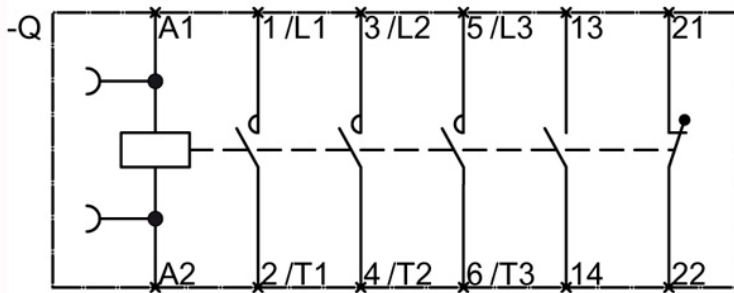
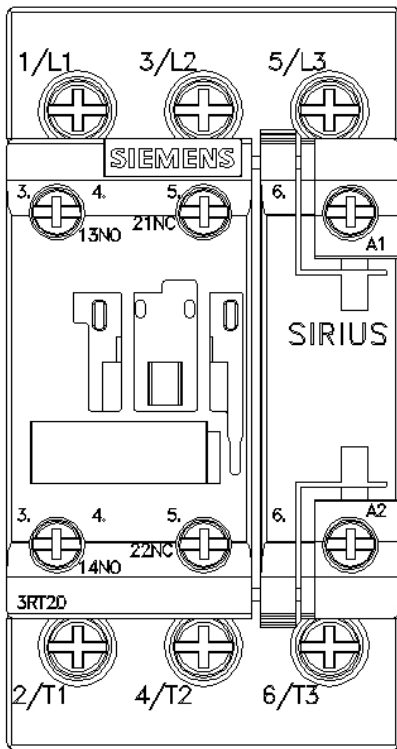
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3RT2028-1AD00/all>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RT2028-1AD00





last change:

Aug 4, 2014