



SEMI-COND. CONTACTOR 3RF2,1-PH. AC51 20A 40
DEGREE C 48-600 V / 4-30 V DC SCREW CONNECTION
BLOCKING VOLTAGE 1200 V

General technical data:

| | |
|---|-------------------------------|
| product brand name | SIRIUS |
| product designation | solid-state contactor |
| Product function | zero-point switching |
| Number of poles / for main current circuit | 1 |
| Protection class IP | IP20 |
| Product designation / _1 / of the accessories that can be ordered | terminal cover |
| Manufacturer article number / _1 / of the accessories that can be ordered | 3RF2900-3PA88 |
| Product designation / _3 / of the accessories that can be ordered | converter |
| Manufacturer article number / _3 / of the accessories that can be ordered | 3RF2900-0EA18 |
| Product designation / _4 / of the accessories that can be ordered | load monitoring |
| Manufacturer article number / _4 / of the accessories that can be ordered | 3RF2920-0GA16 |
| Product designation / _5 / of the accessories that can be ordered | load monitoring, basis |
| Manufacturer article number / _5 / of the accessories that can be ordered | 3RF2920-0FA08 |
| Ambient temperature | |

| | | |
|--|----|-------------|
| • during operating | °C | -25 ... +60 |
| • during storage | °C | -55 ... +80 |
| Installation altitude / at a height over sea level / maximum | m | 1,000 |
| Resistance against vibration / according to IEC 60068-2-6 | | 2g |
| Resistance against shock / according to IEC 60068-2-27 | | 15g / 11 ms |
| Item designation | | |
| • according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 | | K |
| • according to DIN EN 61346-2 | | Q |
| Number of NC contacts / for auxiliary contacts | | 0 |
| Number of NO contacts / for auxiliary contacts | | 0 |
| Number of change-over switches / for auxiliary contacts | | 0 |

| | | |
|---|-------------------|------------|
| Main circuit: | | |
| Number of NO contacts / for main contacts | | 1 |
| Number of NC contacts / for main contacts | | 0 |
| Operating current | | |
| • at AC-1 / at 400 V / rated value | A | 20 |
| • at AC-51 / rated value | A | 20 |
| Operating current / minimum | mA | 500 |
| Operating voltage | | |
| • at 50 Hz / at AC / rated value | V | 48 ... 600 |
| • at 60 Hz / at AC / rated value | V | 48 ... 600 |
| Working area related to the operating voltage | | |
| • at 50 Hz / for AC | V | 40 ... 660 |
| • at 60 Hz / for AC | V | 40 ... 660 |
| Operating frequency | | |
| • rated value | Hz | 50 ... 60 |
| Insulation voltage / rated value | V | 600 |
| Voltage slew rate / at the thyristor / for main contacts / maximum permissible | V/μs | 1,000 |
| Block voltage / at the thyristor / for main contacts / maximum permissible | V | 1,200 |
| Reverse current / of the thyristor | mA | 10 |
| Derating temperature | °C | 40 |
| Active power loss / total / typical | W | 20 |
| Resistance against the impulse current / rated value | A | 600 |
| I²t-level / maximum | A ² ·s | 1,800 |

| | | |
|---|--|----|
| Control circuit: | | |
| Type of voltage / of the controlled supply voltage | | DC |

| | | |
|---|---|----|
| Control supply voltage / 1 • for DC • initial rated value • final rated value | V | 4 |
| | V | 30 |
| | | |
| Control supply voltage • for DC / final value for signal<0>-recognition | V | 1 |
| Control current • for DC / rated value | mA | 20 |
| Fuse assignments | https://www.automation.siemens.com/cd-static/material/info/3RF21_eng.pdf | |

| Installation/mounting/dimensions: | | |
|--|-----|--|
| Type of mounting | | screw and snap-on mounting onto 35 mm standard mounting rail |
| Type of fixing/fixation / series installation | | Yes |
| Design of the thread / of the screw for fastening of the operating resource | | M4 |
| Tightening torque / of the screw for fastening of the operating resource | N·m | 1.5 |
| Width | mm | 22.5 |
| Height | mm | 100 |
| Depth | mm | 140.5 |

| Connections: | | |
|---|--------|---|
| Design of the electrical connection / for main current circuit | | screw-type terminals |
| Design of the thread / of the connection screw / for main contacts | | M4 |
| Tightening torque / for main contacts • with screw-type terminals | N·m | 2 ... 2.5 |
| Tightening torque (lbf·in) / for main contacts • with screw-type terminals | lbf·in | 18 ... 22 |
| Type of the connectable conductor cross-section • for main contacts • solid • finely stranded • with conductor end processing • for AWG conductors • for main contacts • for auxiliary and control contacts • for auxiliary and control contacts • solid • finely stranded | | 2x (1.5 ... 2.5 mm²), 2x (2.5 ... 6 mm²) 2x (1 ... 2.5 mm²), 2x (2.5 ... 6 mm²), 1x 10 mm² 2x (14 ... 10) 1x (AWG 20 ... 12) 1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.0 mm²) |

| | | |
|--|-----------------|--|
| <ul style="list-style-type: none"> • with conductor end processing • without conductor final cutting | | 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²) |
| Conductor cross section that can be connected | | |
| <ul style="list-style-type: none"> • for main contacts <ul style="list-style-type: none"> • solid • stranded wire <ul style="list-style-type: none"> • with conductor end processing • for auxiliary and control contacts <ul style="list-style-type: none"> • solid • stranded wire <ul style="list-style-type: none"> • with conductor end processing / • without conductor final cutting | mm ² | 1.5 ... 6 |
| | mm ² | 1 ... 10 |
| | mm ² | 0.5 ... 2.5 |
| | mm ² | 0.5 ... 2.5 |
| | mm ² | 0.5 ... 2.5 |
| AWG number / as coded connectable conductor cross-section / for main contacts | | 10 ... 14 |
| Design of the electrical connection / for auxiliary and control current circuit | | screw-type terminals |
| Design of the thread / of the connection screw / of the auxiliary and control pins | | M3 |
| AWG number / as coded connectable conductor cross-section | | |
| <ul style="list-style-type: none"> • for auxiliary and control contacts | | 20 ... 12 |
| Skinning length / of the cable / for main contacts | mm | 7 |
| Skinning length / of the cable / for auxiliary and control contacts | mm | 7 |
| Tightening torque / for auxiliary and control contacts | | |
| <ul style="list-style-type: none"> • with screw-type terminals | N·m | 0.5 ... 0.6 |
| Tightening torque (lbf·in) / for auxiliary and control contacts | | |
| <ul style="list-style-type: none"> • with screw-type terminals | lbf·in | 4.5 ... 5.3 |

Certificates/approvals:

| General Product Approval | EMC | Declaration of Conformity | Test Certificates | other |
|---|---|---|---|---|
|  GOST |  UL |  C-TICK |  EG-Konf. | Special Test Certificate Environmental Confirmations |

Further information:

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

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

Industry Mall (Online ordering system)

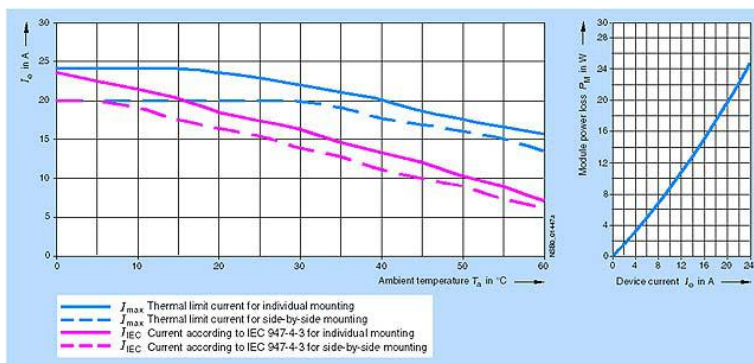
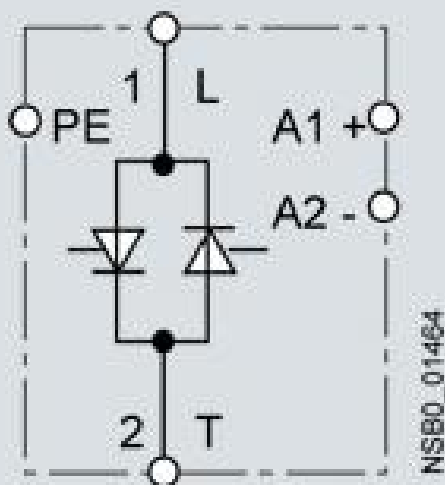
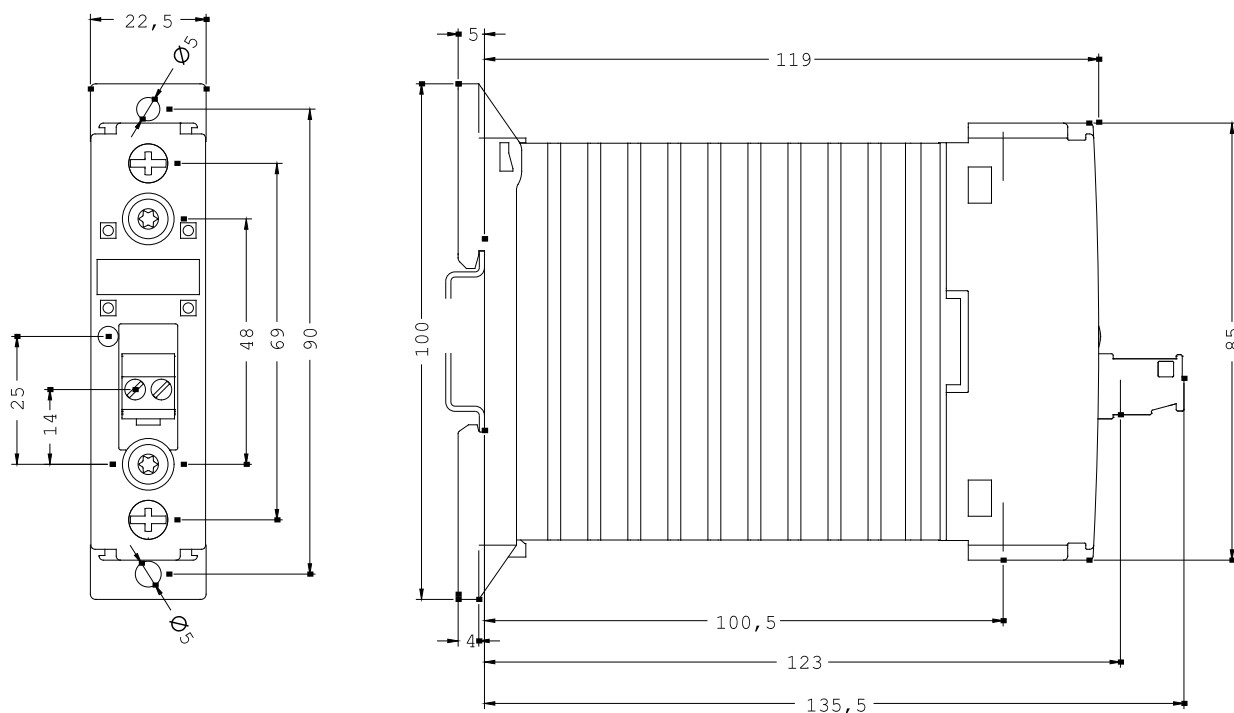
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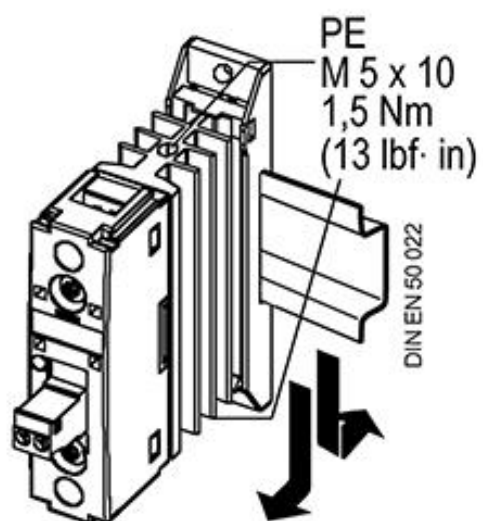
CAX-Online-Generator

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

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

<http://support.automation.siemens.com/WW/view/en/3RF2320-1AA45/all>





last change:

Feb 4, 2013