










Solid-state contactor 1-phase 3RF2 AC 51 / 10 A / 40 °C 24-230 V / 24 V
DC Ring cable connection

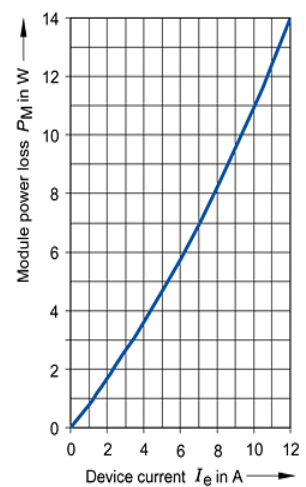
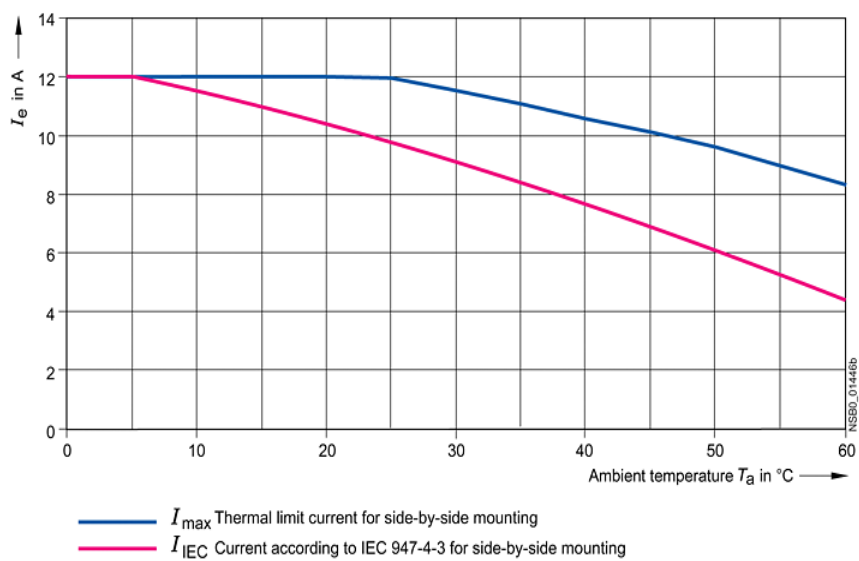
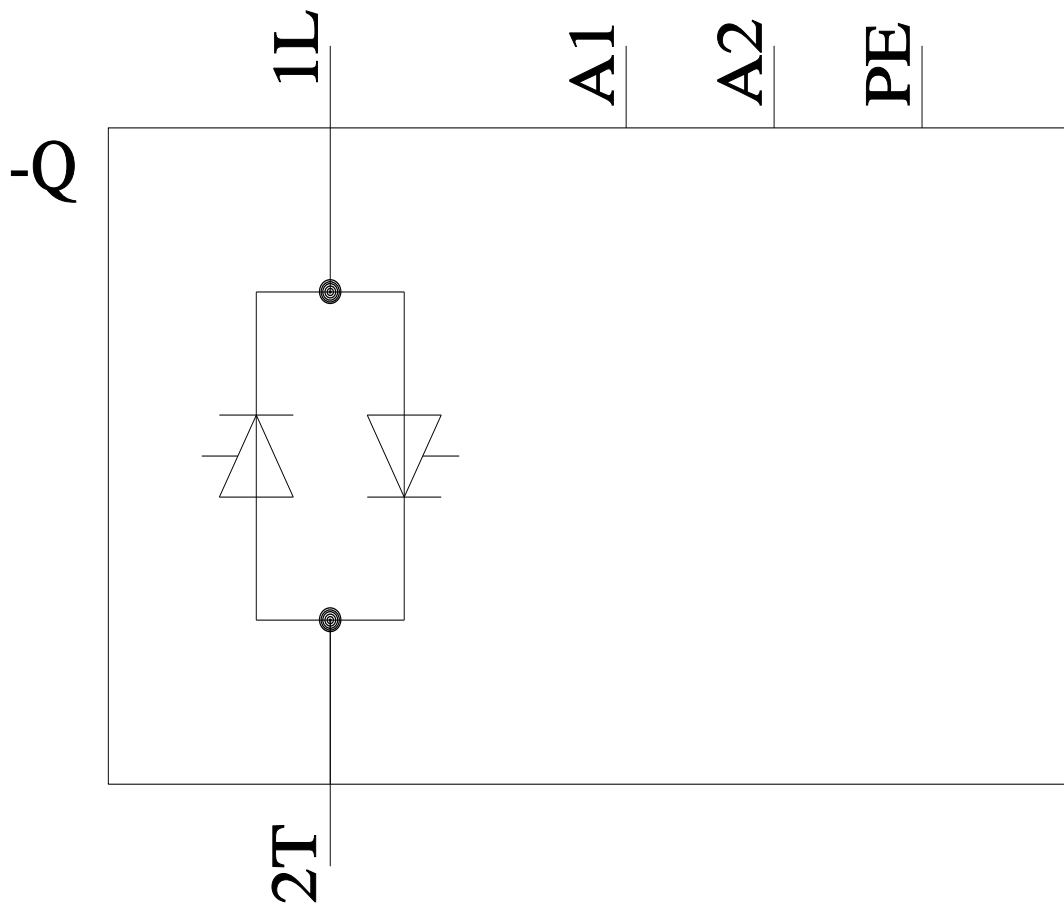
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|---|---|
| product brand name | SIRIUS |
| product designation | solid-state contactor |
| design of the product | single-phase |
| product type designation | 3RF23 |
| manufacturer's article number | |
| <ul style="list-style-type: none">• _1 of the accessories that can be ordered• _3 of the accessories that can be ordered• _4 of the accessories that can be ordered | 3RF2900-3PA88 3RF2900-0EA18 3RF2920-0GA13 |
| product designation | |
| <ul style="list-style-type: none">• _1 of the accessories that can be ordered• _3 of the accessories that can be ordered• _4 of the accessories that can be ordered | terminal cover converter load monitoring |
| General technical data | |
| product function | zero-point switching |
| power loss [W] for rated value of the current | |
| <ul style="list-style-type: none">• at AC in hot operating state• at AC in hot operating state per pole• without load current share typical | 11 W 11 W 0.4 W |
| insulation voltage rated value | 600 V |
| degree of pollution | 3 |
| type of voltage of the control supply voltage | DC |
| surge voltage resistance of main circuit rated value | 6 kV |
| shock resistance according to IEC 60068-2-27 | 15g / 11 ms |
| vibration resistance according to IEC 60068-2-6 | 2g |
| reference code according to IEC 81346-2 | Q |
| Substance Prohibitance (Date) | 05/28/2009 |
| Main circuit | |
| number of poles for main current circuit | 1 |
| number of NO contacts for main contacts | 1 |
| number of NC contacts for main contacts | 0 |
| operating voltage at AC | |
| <ul style="list-style-type: none">• at 50 Hz rated value• at 60 Hz rated value | 24 ... 230 V 24 ... 230 V |
| operating frequency rated value | 50 ... 60 Hz |
| operating range relative to the operating voltage at AC | |
| <ul style="list-style-type: none">• at 50 Hz• at 60 Hz | 20 ... 253 V 20 ... 253 V |
| operational current | |
| <ul style="list-style-type: none">• at AC-51 rated value• at AC-51 according to IEC 60947-4-3• according to UL 508 rated value | 10.5 A 7.5 A 9.6 A |

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| operational current minimum | 100 mA |
| rate of voltage rise at the thyristor for main contacts maximum permissible | 500 V/μs |
| blocking voltage at the thyristor for main contacts maximum permissible | 800 V |
| reverse current of the thyristor | 10 mA |
| derating temperature | 40 °C |
| surge current resistance rated value | 200 A |
| I ² t value maximum | 200 A ² ·s |
| Control circuit/ Control | |
| type of voltage of the control supply voltage | DC |
| control supply voltage 1 | 30 V |
| • at DC rated value | 15 ... 24 V |
| • at DC | |
| control supply voltage | 15 V |
| • at DC initial value for signal <1> detection | 5 V |
| • at DC full-scale value for signal<0> recognition | |
| control current at minimum control supply voltage | 13 mA |
| • at DC | 15 mA |
| control current at DC rated value | |
| ON-delay time | 1 ms; additionally max. one half-wave |
| OFF-delay time | 1 ms; additionally max. one half-wave |
| Auxiliary circuit | |
| number of NC contacts for auxiliary contacts | 0 |
| number of NO contacts for auxiliary contacts | 0 |
| number of CO contacts for auxiliary contacts | 0 |
| Installation/ mounting/ dimensions | |
| fastening method | screw fixing and snap-on mounting on standard mounting rail 35 mm according to IEC 60715 |
| • side-by-side mounting | Yes |
| design of the thread of the screw for securing the equipment | M4 |
| height | 95 mm |
| width | 22.5 mm |
| depth | 88 mm |
| Connections/ Terminals | |
| type of electrical connection | Ring cable lug connection ring terminal lug connection |
| • for main current circuit | |
| • for auxiliary and control circuit | |
| type of connectable conductor cross-sections | JIS C 2805 R 2-5, 5,5-5, 8-5, 14-5 DIN 46234 -5-2,5, -5-6, -5-10, -5-16, -5-25 |
| • for main contacts for JIS cable lug | |
| • for DIN cable lug for main contacts | |
| type of connectable conductor cross-sections | |
| • for auxiliary and control contacts | |
| — solid | 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²) |
| — finely stranded with core end processing | 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²) |
| — finely stranded without core end processing | 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²) |
| • at AWG cables for auxiliary and control contacts | 1x (AWG 20 ... 12) |
| tightening torque | 2 ... 2.5 N·m |
| • for main contacts with screw-type terminals | 0.5 ... 0.6 N·m |
| • for auxiliary and control contacts with screw-type terminals | |
| tightening torque [lbf·in] | 4.5 ... 5.3 lbf·in |
| • for auxiliary and control contacts with screw-type terminals | |
| design of the thread of the connection screw | M5 |
| • for main contacts | M3 |
| • of the auxiliary and control contacts | |
| stripped length of the cable | 10 mm |
| • for main contacts | 7 mm |
| • for auxiliary and control contacts | |
| Safety related data | |
| protection class IP on the front according to IEC 60529 | IP00; IP20 with cover |

| | | | | | |
|---|--|--|---|---|---|
| touch protection on the front according to IEC 60529 | | finger-safe, for vertical contact from the front with cover | | | |
| Ambient conditions | | | | | |
| installation altitude at height above sea level maximum | | 1 000 m | | | |
| ambient temperature | | | | | |
| • during operation | | -25 ... +60 °C | | | |
| • during storage | | -55 ... +80 °C | | | |
| Electromagnetic compatibility | | | | | |
| conducted interference | | | | | |
| • due to burst according to IEC 61000-4-4 | | 2 kV / 5 kHz behavior criterion 2 | | | |
| • due to conductor-earth surge according to IEC 61000-4-5 | | 2 kV behavior criterion 2 | | | |
| • due to conductor-conductor surge according to IEC 61000-4-5 | | 1 kV behavior criterion 2 | | | |
| • due to high-frequency radiation according to IEC 61000-4-6 | | 140 dBuV in the frequency range 0.15 ... 80 MHz, behavior criterion 1 | | | |
| field-based interference according to IEC 61000-4-3 | | 80 MHz ... 1 GHz 10 V/m, behavior criterion 1 | | | |
| electrostatic discharge according to IEC 61000-4-2 | | 4 kV contact discharging / 8 kV air discharging, behavior criterion 2 | | | |
| conducted HF interference emissions according to CISPR11 | | Class A for industrial environment | | | |
| field-bound HF interference emission according to CISPR11 | | Class B for the domestic, business and commercial environments | | | |
| Short-circuit protection, design of the fuse link | | | | | |
| manufacturer's article number | | | | | |
| • of gS fuse for semiconductor protection at NH design usable | | 3NE1813-0 | | | |
| • of full range R fuse link for semiconductor protection at cylindrical design usable | | 5SE1316 | | | |
| • of back-up R fuse link for semiconductor protection at NH design usable | | 3NE8015-1 | | | |
| • of back-up R fuse link for semiconductor protection at cylindrical design 10 x 38 mm usable | | 3NC1020 | | | |
| • of back-up R fuse link for semiconductor protection at cylindrical design 14 x 51 mm usable | | 3NC1430 | | | |
| • of back-up R fuse link for semiconductor protection at cylindrical design 22 x 58 mm usable | | 3NC2225 | | | |
| manufacturer's article number of the gG fuse | | | | | |
| • at NH design usable | | 3NA6803 | | | |
| • at cylindrical design 10 x 38 mm usable | | 3NW6001-1 ; These fuses have a smaller rated current than the semiconductor relays | | | |
| • at cylindrical design 14 x 51 mm usable | | 3NW6101-1 ; These fuses have a smaller rated current than the semiconductor relays | | | |
| manufacturer's article number | | | | | |
| • of NEOZED fuse usable | | 5SE2306 ; These fuses have a smaller rated current than the semiconductor relays | | | |
| Certificates/ approvals | | | | | |
| General Product Approval | | EMC | Declaration of Conformity | | |
|  | Confirmation |  |  |  |  |
| Declaration of Conformity | | Test Certificates | other | | |
|  | Type Test Certificates/Test Report | Confirmation | |  | |
| Further information | | | | | |
| Information on the packaging | | | | | |

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RF2310-3AA02&lang=en





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