SIEMENS

Data sheet 3RQ1000-1GB00



Positively driven coupling relay in industrial enclosure 2 NO contacts / 1 NC contact 24 V DC SIL 2 / PL c screw terminal

| product brand name | SIRIUS |
|---|--|
| product designation | force-guided coupling relay |
| design of the product | fail-safe up to SIL 2/PL c |
| product type designation | 3RQ1 |
| General technical data | |
| consumed active power | 0.9 W |
| insulation voltage for overvoltage category III according to IEC 60664 with degree of pollution 3 rated value | 300 V |
| degree of pollution | 3 |
| surge voltage resistance rated value | 4 kV |
| protection class IP | IP20 |
| shock resistance | |
| • according to IEC 60068-2-27 | 11g / 15 ms |
| vibration resistance | |
| • according to IEC 60068-2-6 | 10 55 Hz: 0.35 mm |
| operating frequency maximum | 360 1/h |
| switching behavior | monostable |
| mechanical service life (operating cycles) typical | 10 000 000 |
| thermal current of the switching element with contacts maximum | 5 A |
| reference code according to IEC 81346-2 | K |
| Substance Prohibitance (Date) | 05/31/2018 |
| Product Function | |
| suitability for operation device connector 3ZY12 | Yes |
| Control circuit/ Control | |
| control supply voltage 1 | |
| at DC rated value | 24 V |
| • at DC | 24 24 V |
| operating range factor control supply voltage rated value at DC | |
| • initial value | 0.8 |
| full-scale value | 1.2 |
| ON-delay time | |
| at AC maximum | 15 ms |
| • at DC maximum | 15 ms |
| OFF-delay time | 35 ms |
| design of the relay operating mechanism | poled |
| product component plug-in socket | No |
| Short-circuit protection | |
| design of the fuse link for short-circuit protection of the auxiliary switch required | NO: fuse gL/gG: 6 A; NC: fuse gL/gG: 4 A |

| Auxiliary circuit | |
|--|--|
| material of switching contacts | AgNi + Au flash |
| number of NC contacts for auxiliary contacts | 1 |
| number of NO contacts for auxiliary contacts | 2 |
| number of CO contacts for auxiliary contacts | 0 |
| type of voltage | DC |
| ampacity of the output relay at AC-15 | |
| • at 250 V at 50/60 Hz | 2 A |
| ampacity of the output relay at DC-13 | |
| • at 24 V | 2 A |
| • at 125 V | 0.2 A |
| • at 250 V | 0.1 A |
| Electromagnetic compatibility | 0.171 |
| EMC emitted interference according to IEC 60947-1 | ambience A (industrial sector) |
| EMC immunity according to IEC 60947-1 | corresponds to degree of severity 3 |
| conducted interference | Corresponds to degree or severity 3 |
| due to burst according to IEC 61000-4-4 | 2 kV |
| due to burst according to IEC 01000-4-4 due to conductor-earth surge according to IEC 61000-4-5 | |
| due to conductor-earth surge according to IEC due to conductor-conductor surge according to IEC | 2 kV (line to ground) 1 kV (line to line) |
| 61000-4-5 | i kv (mic to mic) |
| field-based interference according to IEC 61000-4-3 | 10 V/m |
| electrostatic discharge according to IEC 61000-4-2 | 4 kV contact discharging, 8 kV air discharging |
| Safety related data | |
| Safety Integrity Level (SIL) according to IEC 61508 | 2 |
| SIL Claim Limit (subsystem) according to EN 62061 | 2 |
| performance level (PL) according to EN ISO 13849-1 | С |
| PFHD | |
| with high demand rate according to IEC 61508 | 6E-7 1/h |
| with low demand rate according to IEC 61508 | 0.004 1/h |
| hardware fault tolerance according to IEC 61508 | 0 |
| | IEC 60947-1 / IEC 61000-6-2 / IEC 61000-6-4 |
| electromagnetic compatibility | 120 00047 17120 01000 0 27120 01000 0 4 |
| Connections/ Terminals | 120 00047 177120 01000 0 27120 01000 0 4 |
| Connections/ Terminals product component removable terminal for auxiliary and | Yes |
| Connections/ Terminals product component removable terminal for auxiliary and control circuit | Yes |
| Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection | Yes screw-type terminals |
| Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection wire length at DC maximum | Yes |
| Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection wire length at DC maximum type of connectable conductor cross-sections | Yes screw-type terminals 2 000 m |
| Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection wire length at DC maximum type of connectable conductor cross-sections • solid | Yes screw-type terminals 2 000 m 1x (0.5 4 mm²), 2x (0.5 2.5 mm²) |
| Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection wire length at DC maximum type of connectable conductor cross-sections • solid • finely stranded with core end processing | Yes screw-type terminals 2 000 m 1x (0.5 4 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) |
| connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection wire length at DC maximum type of connectable conductor cross-sections • solid • finely stranded with core end processing • for AWG cables solid | Yes screw-type terminals 2 000 m 1x (0.5 4 mm²), 2x (0.5 2.5 mm²) |
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| product component removable terminal for auxiliary and control circuit type of electrical connection wire length at DC maximum type of connectable conductor cross-sections | Yes screw-type terminals 2 000 m 1x (0.5 4 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 0.5 4 mm² 4 mm² 0.5 mm² 12 20 12 20 12 20 0.6 0.8 N·m 10 mm any screw and snap-on mounting onto 35 mm DIN rail 100 mm |
| connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection wire length at DC maximum type of connectable conductor cross-sections | Yes screw-type terminals 2 000 m 1x (0.5 4 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14) 0.5 4 mm² 4 mm² 0.5 mm² 12 20 12 20 0.6 0.8 N·m 10 mm any screw and snap-on mounting onto 35 mm DIN rail 100 mm 17.5 mm |
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• during transport -40 ... +80 °C relative humidity during operation 10 ... 95 %

Certificates/ approvals

General Product Approval





Confirmation







EMC

Declaration of Conformity

Marine / Shipping

other









Confirmation

Further information

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

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

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RQ1000-1GB00

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RQ1000-1GB00}$

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

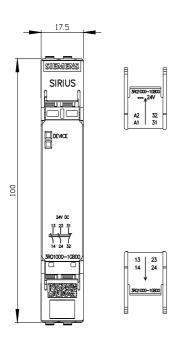
https://support.industry.siemens.com/cs/ww/en/ps/3RQ1000-1GB00

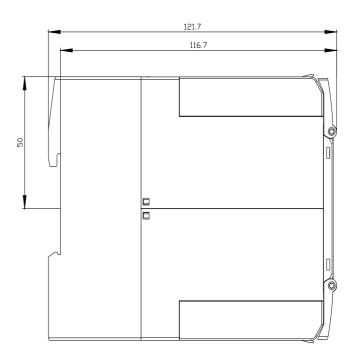
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

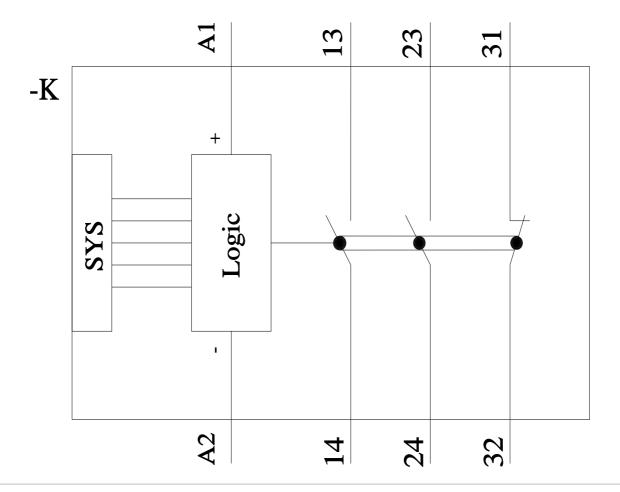
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RQ1000-1GB00&lang=en

Characteristic: Derating

https://support.industry.siemens.com/cs/ww/en/ps/3RQ1000-1GB00/manual







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