SIEMENS

## Data sheet 3RR2441-2AA40




Current monitoring relay for IO-Link, can be mounted to Contactor 3RT2, Size S00 Apparant/active current monitoring 1.6-16 A, 20-400 Hz, 3-phase Supply voltage 24 V DC 1 change-over contact Monitoring for Current overshoot and undershoot Current asymmetry Phase failure, Cable break Phase sequence, Residual current Blocking current, Switching cycle and Operating hours counter Warning and alarm thresholds Auto-reset or manual reset ON delay 0-9999.9 s OFF delay 0-9999.9 s Reclosing delay 0-300 min spring-type connection system

| | |
|---|---|
| **product brand name** | SIRIUS |
| **product designation** | Monitoring relays |
| **design of the product** | digitally adjustable, 3-phase current monitoring, IO-Link |
| **product type designation** | 3RR22 |
| **General technical data** | |
| **size of contactor can be combined company-specific** | S00 |
| **product function** | current monitoring |
| **operating apparent power rated value** | 2.5 V·A |
| **insulation voltage for overvoltage category III according to IEC 60664** | |
| ● with degree of pollution 3 rated value | 690 V |
| type of voltage of the operating voltage for actuation | DC |
| **surge voltage resistance rated value** | 6 kV |
| **consumed current** | |
| ● at 24 V | 90 mA |
| ● at 240 V | 12 mA |
| **protection class IP** | |
| ● on the front | IP20 |
| ● of the terminal | IP20 |
| **shock resistance** | 15 g / 11 ms |
| **vibration resistance** | 10 ... 55 Hz / 0.35 mm |
| **mechanical service life (operating cycles) typical** | 10 000 000 |
| electrical endurance (operating cycles) at AC-15 at 230 V typical | 100 000 |
| **reference code according to IEC 81346-2** | K |
| **relative repeat accuracy** | 2 % |
| **Substance Prohibitance (day/month/year)** | 10/01/2009 |
| **SVHC substance name** | Lead CAS-No. 7439-92-1<br>Lead monoxide (lead oxide) CAS-No. 1317-36-8<br>2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5<br>Melamine CAS-No. 108-78-1 |
| **Net Weight** | 0.235 kg |
| **Control circuit/ Control** | |
| **control supply voltage at DC rated value** | 24 V |
| **Supply voltage** | |
| **type of voltage of the supply voltage** | DC |
| **supply voltage 1 at DC rated value** | 24 V |
| **relative negative tolerance of the supply voltage** | 25 % |
| **relative positive tolerance of the supply voltage** | 25 % |
| **Measuring circuit** | |


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|---|---|
| **type of current for monitoring** | AC |
| **adjustable current response value current** | |
| ● 1 | 1.6 ... 16 A |
| ● 2 | 1.6 ... 16 A |
| **adjustable response delay time** | |
| ● when starting | 0 ... 999.9 s |
| ● with lower or upper limit violation | 0 ... 999.9 s |
| **adjustable switching hysteresis for measured current value** | 0.1 ... 3 A |
| **accuracy of digital display** | +/-1 digit |
| **Precision** | |
| **temperature drift per °C** | 0.1 %/°C |
| **Short-circuit protection** | |
| design of the fuse link for short-circuit protection of the auxiliary switch required | fuse gG: 4 A |
| **Communication/ Protocol** | |
| protocol is supported IO-Link protocol | Yes |
| **IO-Link transfer rate** | COM2 (38,4 kBaud) |
| **point-to-point cycle time between master and IO-Link device minimum** | 10 ms |
| **type of voltage supply via input/output link master** | Yes |
| **data volume** | |
| ● of the address range of the inputs with cyclical transfer total | 4 byte |
| ● of the address range of the outputs with cyclical transfer total | 2 byte |
| **Auxiliary circuit** | |
| **number of CO contacts** | |
| ● for auxiliary contacts | 1 |
| ● delayed switching | 1 |
| **operational current of auxiliary contacts at AC-15** | |
| ● at 24 V | 3 A |
| ● at 230 V | 3 A |
| **operational current of auxiliary contacts at DC-13** | |
| ● at 24 V | 1 A |
| ● at 125 V | 0.2 A |
| ● at 250 V | 0.1 A |
| **contact rating of auxiliary contacts according to UL** | B300 / R300 |
| **Main circuit** | |
| operating power rated value | 2.5 W |
| **ampacity of the semiconductor output in SIO mode** | 200 mA |
| **operational current at 17 V minimum** | 5 mA |
| **Electromagnetic compatibility** | |
| EMC emitted interference according to IEC 60947-1 | ambience A (industrial sector) |
| EMC immunity according to IEC 60947-1 | ambience A (industrial sector) |
| **Safety related data** | |
| **product function suitable for safety function** | No |
| Electrical Safety | |
| **protection class IP on the front according to IEC 60529** | IP20 |
| **Connections/ Terminals** | |
| **product component removable terminal for main circuit** | No |
| **product component removable terminal for auxiliary and control circuit** | Yes |
| **type of electrical connection** | spring-type terminals |
| ● for main current circuit | spring-loaded terminals |
| ● for auxiliary and control circuit | spring-loaded terminals |
| type of connectable conductor cross-sections for main contacts | |
| ● solid | 1x (0.5 ... 4 mm²) |
| ● finely stranded with core end processing | 1x (0.5 ... 2.5 mm²) |
| ● finely stranded without core end processing | 1x (0.5 ... 2.5 mm²) |
| **connectable conductor cross-section for main contacts** | |


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| | |
|---|---|
| ● solid or stranded | 0.5 ... 4 mm² |
| ● finely stranded with core end processing | 2.5 mm² |
| ● finely stranded without core end processing | 0.5 ... 2.5 mm² |
| **type of connectable conductor cross-sections** | |
| ● for auxiliary contacts | |
| — solid | 1x (0.5 ... 4 mm²), 2x (0.5 ... 2.5 mm²) |
| — finely stranded with core end processing | 2x (0.25 ... 1.5 mm²) |
| — finely stranded without core end processing | 2x (0.25 ... 1.5 mm²) |
| ● for AWG cables for auxiliary contacts | 2x (24 ... 16) |
| **AWG number as coded connectable conductor cross section for main contacts** | 20 ... 12 |
| tightening torque with screw-type terminals | 0.8 ... 1.2 N·m |
| **Installation/ mounting/ dimensions** | |
| **mounting position** | any |
| **fastening method** | direct mounting |
| **height** | 90 mm |
| **width** | 45 mm |
| **depth** | 80 mm |
| **required spacing** | |
| ● with side-by-side mounting | |
| — forwards | 0 mm |
| — backwards | 0 mm |
| — upwards | 0 mm |
| — downwards | 0 mm |
| — at the side | 0 mm |
| ● for grounded parts | |
| — forwards | 6 mm |
| — backwards | 0 mm |
| — upwards | 0 mm |
| — at the side | 6 mm |
| — downwards | 0 mm |
| ● for live parts | |
| — forwards | 6 mm |
| — backwards | 0 mm |
| — upwards | 0 mm |
| — downwards | 0 mm |
| — at the side | 6 mm |
| **Ambient conditions** | |
| installation altitude at height above sea level maximum | 2 000 m |
| **ambient temperature** | |
| ● during operation | -25 ... +60 °C |
| ● during storage | -40 ... +80 °C |

**Approvals Certificates**

| Environment | General Product Approval | | | | |
|---|---|---|---|---|---|
| Environmental Confirmations | CCC | cULus | EAC | Manufacturer Declaration | CE EG-Konf. |

| General Product Approval | EMV | Test Certificates | | Maritime application | |
|---|---|---|---|---|---|
| UKCA | RCM | Type Test Certificates/Test Report | Special Test Certificate | ABS | BUREAU VERITAS |

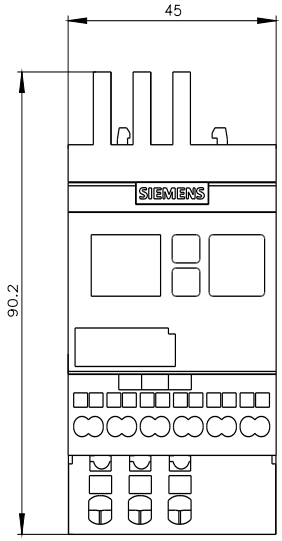
| Maritime application | other |
|---|---|

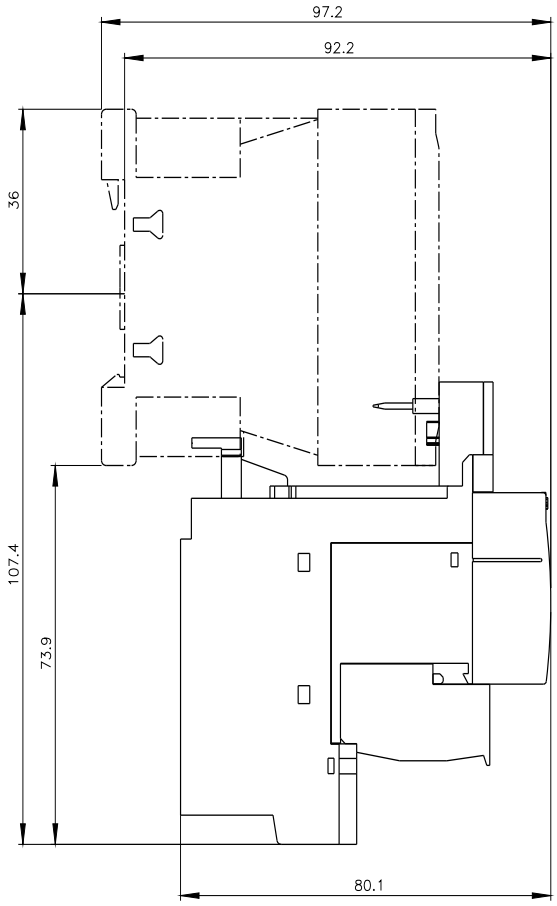

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Confirmation

## Further information

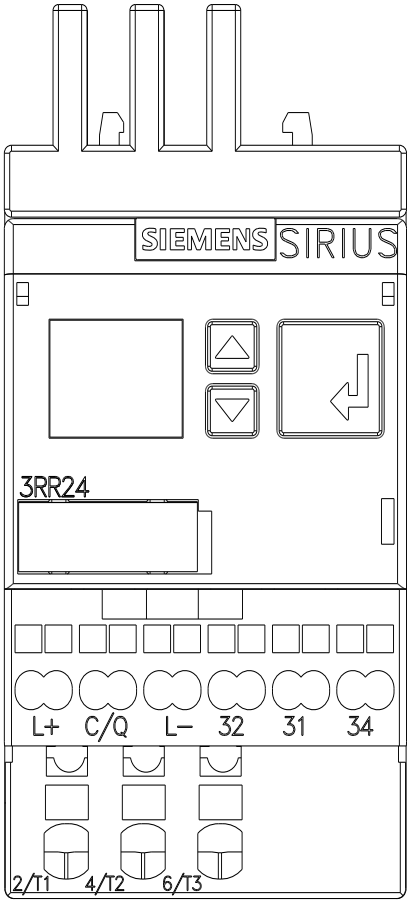
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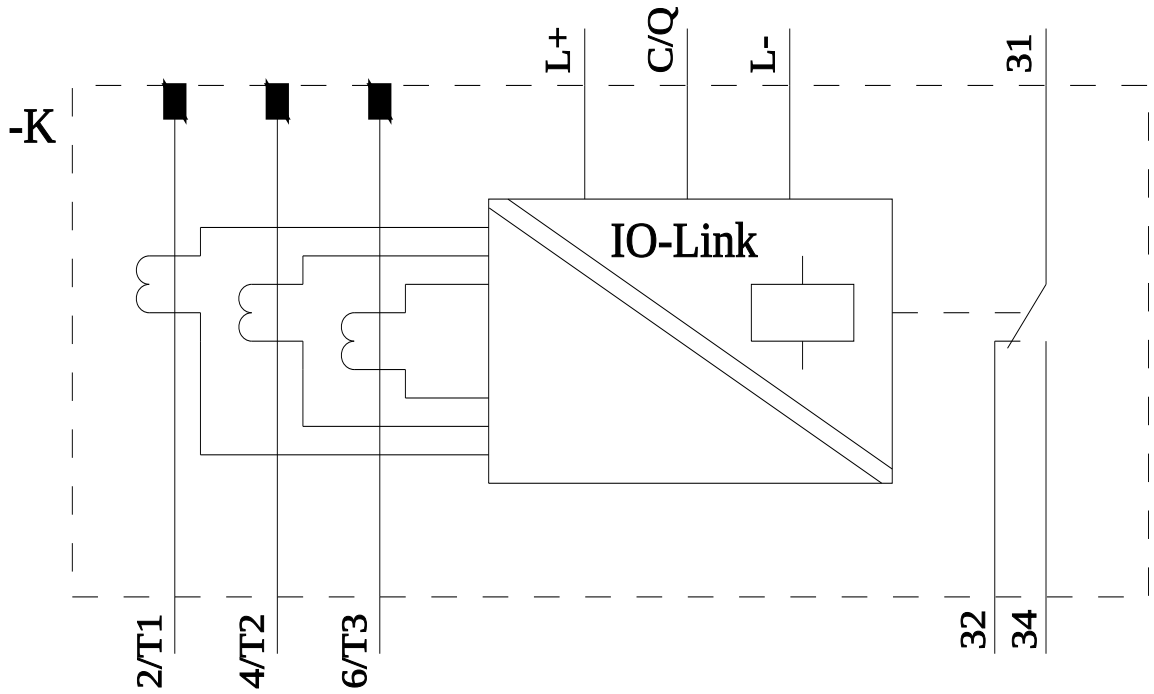




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