



Digital monitoring relay for residual current monitoring with residual-current transformer 3UL23 for IO-Link Setting range 0.03 A to 40 A separate for warning threshold and switch-off value ON delay and tripping delay 0 to 999.9 s Shutdown hysteresis up to 50% Warning hysteresis 5% fixed Width 22.5mm, 2 change-over contacts with or without fault buffer spring-type connection system

| | |
|---|--|
| product brand name | SIRIUS |
| product designation | Residual current monitoring relay with digital setting |
| product type designation | 3UG4 |
| General technical data | |
| product function | for three-phase supplies |
| design of the display | LCD |
| insulation voltage | |
| • rated value | 300 V |
| • for overvoltage category III according to IEC 60664 | |
| — with degree of pollution 3 rated value | 300 V |
| degree of pollution | 3 |
| type of voltage of the control supply voltage | DC |
| surge voltage resistance rated value | 4 kV |
| protection class IP | |
| • of the enclosure | IP20 |
| • of the terminal | IP20 |
| shock resistance according to IEC 60068-2-27 | sinusoidal half-wave 15g / 11 ms |
| vibration resistance according to IEC 60068-2-6 | 1 ... 6 Hz: 15 mm, 6 ... 500 Hz: 2g |
| mechanical service life (operating cycles) typical | 10 000 000 |
| electrical endurance (operating cycles) at AC-15 at 230 V typical | 100 000 |
| thermal current of the switching element with contacts maximum | 5 A |
| reference code according to IEC 81346-2 | K |
| relative repeat accuracy | 1 % |
| Substance Prohibitance (Date) | 02/14/2013 |
| Product Function | |
| product function | |
| • residual current display | Yes |
| • error memory | Yes |
| • overcurrent detection 1 phase | Yes |
| • undercurrent detection 1 phase | No |
| • adjustable open/closed-circuit current principle | Yes |
| • external reset | Yes |
| Control circuit/ Control | |
| control supply voltage at DC | |
| • rated value | 24 ... 24 V |
| operating range factor control supply voltage rated value at DC | |
| • initial value | 0.85 |
| • full-scale value | 1.1 |

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| Measuring circuit | |
| type of current for monitoring | AC |
| measurable current | 10 mA ... 43 A |
| measurable line frequency | 16 ... 400 Hz |
| adjustable operating delay time | 0 ... 999.9 s |
| adjustable current response value current | |
| • 1 | 30 mA ... 40 A |
| • 2 | 30 mA ... 40 A |
| adjustable response delay time | 0 ... 999.9 s |
| adjustable response delay time when starting | 0 ... 999.9 s |
| buffering time in the event of power failure minimum | 10 ms |
| accuracy of digital display | +/-1 digit |
| Precision | |
| relative metering precision | 5 % |
| temperature drift per °C | 0.1 %/°C |
| 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 NC contacts for auxiliary contacts | 0 |
| number of NC contacts delayed switching | 0 |
| number of NO contacts for auxiliary contacts | 0 |
| number of NO contacts delayed switching | 0 |
| number of CO contacts | |
| • for auxiliary contacts | 2 |
| • delayed switching | 2 |
| operating frequency with 3RT2 contactor maximum | 5 000 1/h |
| Main circuit | |
| type of voltage | DC |
| operating voltage rated value | 24 ... 24 V |
| operating frequency rated value | 16 ... 400 Hz |
| ampacity of the output relay at AC-15 | |
| • at 250 V at 50/60 Hz | 3 A |
| • at 400 V at 50/60 Hz | 0 A |
| ampacity of the output relay at DC-13 | |
| • at 24 V | 1 A |
| • at 125 V | 0.2 A |
| • at 250 V | 0.1 A |
| ampacity of the semiconductor output in SIO mode | 200 mA |
| operational current at 17 V minimum | 5 mA |
| continuous current of the DIAZED fuse link of the output relay | 4 A |
| Electromagnetic compatibility | |
| conducted interference | |
| • due to burst according to IEC 61000-4-4 | 2 kV |
| • due to conductor-earth surge according to IEC 61000-4-5 | 2 kV |
| • due to conductor-conductor surge according to IEC 61000-4-5 | 1 kV |
| field-based interference according to IEC 61000-4-3 | 10 V/m |
| electrostatic discharge according to IEC 61000-4-2 | 4 kV contact discharge / 8 kV air discharge |
| Galvanic isolation | |
| design of the electrical isolation | galvanic isolation |
| galvanic isolation | |
| • between input and output | Yes |

| | |
|---|--|
| • between the outputs | Yes |
| • between the voltage supply and other circuits | No |
| Connections/ Terminals | |
| product component removable terminal for auxiliary and control circuit | Yes |
| type of electrical connection | spring-loaded terminals |
| type of connectable conductor cross-sections | |
| • solid | 2x (0.25 ... 1.5 mm ²) |
| • finely stranded with core end processing | 2 x (0.25 ... 1.5 mm ²) |
| • finely stranded without core end processing | 2x (0.25 ... 1.5 mm ²) |
| • for AWG cables solid | 2x (24 ... 16) |
| • for AWG cables stranded | 2x (24 ... 16) |
| connectable conductor cross-section | |
| • solid | 0.25 ... 1.5 mm ² |
| • finely stranded with core end processing | 0.25 ... 1.5 mm ² |
| • finely stranded without core end processing | 0.25 mm ² |
| AWG number as coded connectable conductor cross section | |
| • solid | 24 ... 16 |
| • stranded | 24 ... 16 |
| Installation/ mounting/ dimensions | |
| mounting position | any |
| fastening method | screw and snap-on mounting onto 35 mm DIN rail |
| height | 103 mm |
| width | 22.5 mm |
| depth | 91 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 | 0 mm |
| — backwards | 0 mm |
| — upwards | 0 mm |
| — at the side | 0 mm |
| — downwards | 0 mm |
| • for live parts | |
| — forwards | 0 mm |
| — backwards | 0 mm |
| — upwards | 0 mm |
| — downwards | 0 mm |
| — at the side | 0 mm |
| Ambient conditions | |
| installation altitude at height above sea level maximum | 2 000 m |
| ambient temperature | |
| • during operation | -25 ... +60 °C |
| • during storage | -40 ... +85 °C |
| • during transport | -40 ... +85 °C |
| Certificates/ approvals | |
| General Product Approval | |
| EMC | |



[Confirmation](#)

[Manufacturer Declaration](#)



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|---------------------------|-------------------|-------------------|-------|
| Declaration of Conformity | Test Certificates | Marine / Shipping | other |
|---------------------------|-------------------|-------------------|-------|

Railway

[Vibration and Shock](#)

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=3UG4825-2CA40>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4825-2CA40>

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

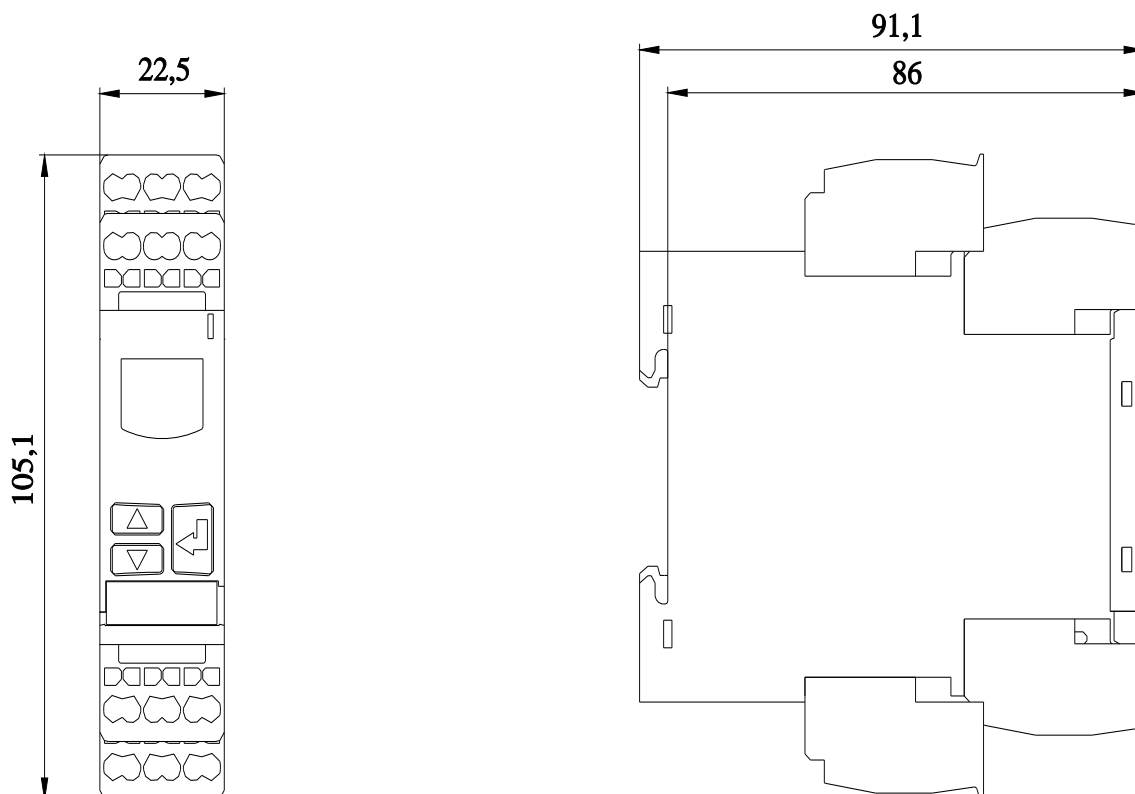
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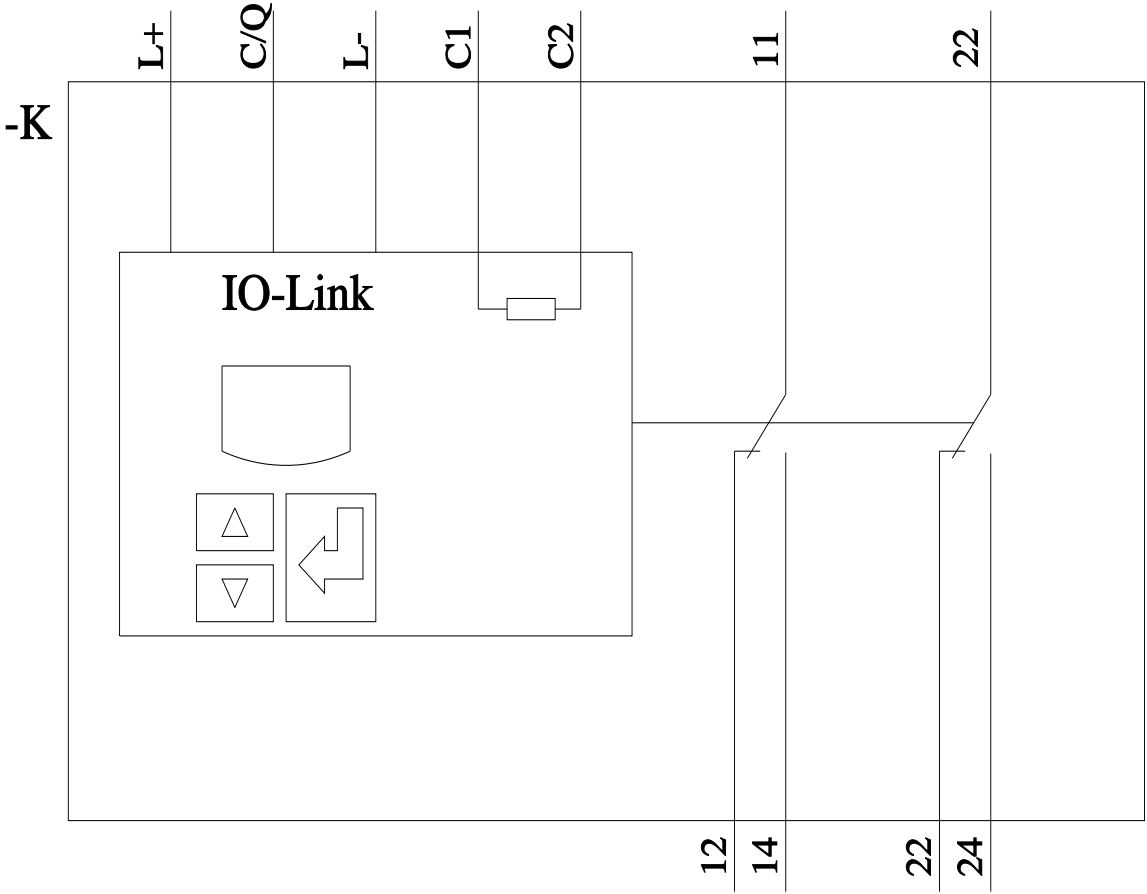
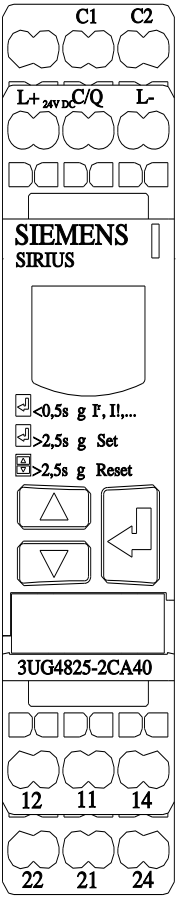
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4825-2CA40&lang=en

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4825-2CA40/manual>





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