



Digital monitoring relay cos phi and current monitoring for IO-Link 90...690 V AC, 0.2...10 A Overshoot and undershoot ON-delay time Tripping delay time Hysteresis 0.1 to 3.0 A 2 change-over contacts, spring-type connection system

|  |   |
|--|---|
| product brand name   | SIRIUS  |
| product designation  | Cos phi monitoring relay with digital setting |
| product type designation   | 3UG4  |
| <b>General technical data</b>  |   |
| product function   | Active power monitoring relay                 |
| design of the display  | LCD   |
| insulation voltage for overvoltage category III according to IEC 60664 | 690 V   |
| • with degree of pollution 2 rated value                               | 2   |
| degree of pollution  | 6 kV  |
| surge voltage resistance rated value                                   | IP20  |
| protection class IP  | sinusoidal half-wave 15g / 11 ms              |
| shock resistance according to IEC 60068-2-27                           | 1 ... 6 Hz: 15 mm, 6 ... 500 Hz: 2g           |
| vibration resistance according to IEC 60068-2-6                        | 10 000 002                                    |
| mechanical service life (operating cycles) typical                     | 100 000                                       |
| electrical endurance (operating cycles) at AC-15 at 230 V typical      | 5 A   |
| thermal current of the switching element with contacts maximum         | K   |
| reference code according to IEC 81346-2                                | 1 %   |
| relative repeat accuracy   | 05/01/2012                                    |
| Substance Prohibitance (Date)  |   |
| <b>Product Function</b>  |   |
| product function   | Yes   |
| • overcurrent detection 1 phase  | Yes   |
| • undercurrent detection 1 phase                                       | Yes   |
| • adjustable open/closed-circuit current principle                     | Yes   |
| • external reset   | Yes   |
| <b>Control circuit/ Control</b>  |   |
| type of voltage of the control supply voltage                          | DC  |
| control supply voltage at AC   | 0 ... 0 V                                     |
| • at 50 Hz rated value   | 0 ... 0 V                                     |
| • at 60 Hz rated value   | 24 ... 24 V                                   |
| control supply voltage at DC   | 0 ... 0 Hz                                    |
| • rated value  |   |
| supply voltage frequency for auxiliary and control circuit rated value |   |
| operating range factor control supply voltage rated value at DC        | 0.75  |
| • initial value  | 1.25  |
| • full-scale value   |   |
| <b>Supply voltage</b>  |   |

|   |   |
|---|---|
| supply voltage frequency rated value  | 60 Hz                                       |
| <b>Measuring circuit</b>  |   |
| <b>type of current for monitoring</b>   | AC  |
| <b>measurable current</b>   | 0.2 ... 10 A                                |
| <b>adjustable current response value current</b>                              |   |
| • 1   | 0.2 ... 10 A                                |
| • 2   | 0.2 ... 10 A                                |
| <b>adjustable response delay time</b>   |   |
| • when starting   | 0 ... 999.9 s                               |
| • with lower or upper limit violation   | 0 ... 999.9 s                               |
| <b>adjustable switching hysteresis for measured current value</b>             | 0 ... 3 000 mA                              |
| <b>accuracy of digital display</b>  | +/-1 digit                                  |
| <b>Precision</b>  |   |
| <b>relative metering precision</b>  | 10 %  |
| <b>Communication/ Protocol</b>  |   |
| protocol is supported IO-Link protocol  | Yes   |
| <b>IO-Link transfer rate</b>  | COM2 (38,4 kBaud)                           |
| <b>point-to-point cycle time between master and IO-Link device minimum</b>    | 10 ms                                       |
| <b>type of voltage supply via input/output link master data volume</b>        | Yes   |
| • 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                                      |
| <b>Auxiliary circuit</b>  |   |
| <b>control supply voltage rated value</b>                                     | 30 ... 18                                   |
| number of NC contacts delayed switching                                       | 0   |
| number of NO contacts delayed switching                                       | 0   |
| number of CO contacts delayed switching                                       | 2   |
| <b>operating frequency with 3RT2 contactor maximum</b>                        | 5 000 1/h                                   |
| <b>Main circuit</b>   |   |
| <b>number of poles for main current circuit</b>                               | 1   |
| operating voltage rated value   | 90 ... 690 V                                |
| <b>ampacity of the output relay at AC-15</b>                                  |   |
| • at 250 V at 50/60 Hz  | 3 A   |
| • at 400 V at 50/60 Hz  | 3 A   |
| <b>ampacity of the output relay at DC-13</b>                                  |   |
| • at 24 V   | 1 A   |
| • at 125 V  | 0.2 A                                       |
| • at 250 V  | 0.1 A                                       |
| <b>ampacity of the semiconductor output in SIO mode</b>                       | 200 mA                                      |
| <b>operational current at 17 V minimum</b>                                    | 10 mA                                       |
| <b>continuous current of the DIAZED fuse link of the output relay</b>         | 4 A   |
| <b>Electromagnetic compatibility</b>  |   |
| <b>conducted interference</b>   |   |
| • 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  |
| <b>field-based interference according to IEC 61000-4-3</b>                    | 10 V/m                                      |
| <b>electrostatic discharge according to IEC 61000-4-2</b>                     | 6 kV contact discharge / 8 kV air discharge |
| <b>Galvanic isolation</b>   |   |
| <b>galvanic isolation</b>   |   |
| • between input and output  | Yes   |
| • between the outputs   | Yes   |
| • between the voltage supply and other circuits                               | Yes   |
| <b>Connections/ Terminals</b>   |   |
| <b>product component removable terminal for auxiliary and control circuit</b> | Yes   |

|   |   |
|---|---|
| <b>type of electrical connection</b>  | spring-loaded terminals   |
| <b>type of connectable conductor cross-sections</b>   |   |
| <ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded with core end processing</li> <li>• finely stranded without core end processing</li> <li>• at AWG cables solid</li> <li>• at AWG cables stranded</li> </ul> | 2x (0.25 ... 1.5 mm <sup>2</sup> )<br>2 x (0.25 ... 1.5 mm <sup>2</sup> )<br>2x (0.25 ... 1.5 mm <sup>2</sup> )<br>2x (24 ... 16)<br>2x (24 ... 16) |
| <b>connectable conductor cross-section</b>  |   |
| <ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded with core end processing</li> <li>• finely stranded without core end processing</li> </ul>  | 0.25 ... 1.5 mm <sup>2</sup><br>0.25 ... 1.5 mm <sup>2</sup><br>0.25 ... 1.5 mm <sup>2</sup>  |
| <b>AWG number as coded connectable conductor cross section</b>  |   |
| <ul style="list-style-type: none"> <li>• solid</li> <li>• stranded</li> </ul>   | 24 ... 16<br>20 ... 14  |

### Installation/ mounting/ dimensions

|  |  |
|--|--|
| <b>mounting position</b>   | any  |
| <b>fastening method</b>  | snap-on mounting   |
| <b>height</b>  | 103 mm   |
| <b>width</b>   | 22.5 mm  |
| <b>depth</b>   | 91 mm  |
| <b>required spacing</b>  |  |
| <ul style="list-style-type: none"> <li>• with side-by-side mounting           <ul style="list-style-type: none"> <li>— forwards</li> <li>— backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> <li>• for grounded parts           <ul style="list-style-type: none"> <li>— forwards</li> <li>— backwards</li> <li>— upwards</li> <li>— at the side</li> <li>— downwards</li> </ul> </li> <li>• for live parts           <ul style="list-style-type: none"> <li>— forwards</li> <li>— backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> </ul> | 0 mm<br>0 mm<br>0 mm<br>0 mm<br>0 mm<br><br>0 mm<br>0 mm<br>0 mm<br>0 mm<br>0 mm<br><br>0 mm<br>0 mm<br>0 mm<br>0 mm<br>0 mm |

### Ambient conditions

|  |  |
|--|--|
| installation altitude at height above sea level maximum  | 2 000 m  |
| <b>ambient temperature</b>   |  |
| <ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> <li>• during transport</li> </ul> | -25 ... +60 °C<br>-40 ... +85 °C<br>-40 ... +85 °C |

### Certificates/ approvals

|                                 |     |
|---------------------------------|-----|
| <b>General Product Approval</b> | EMC |
|---------------------------------|-----|

[Confirmation](#)



[Manufacturer Declaration](#)



Declaration of Conformity

Test Certificates

Marine / Shipping

other



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



[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=3UG4841-2CA40>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4841-2CA40>

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

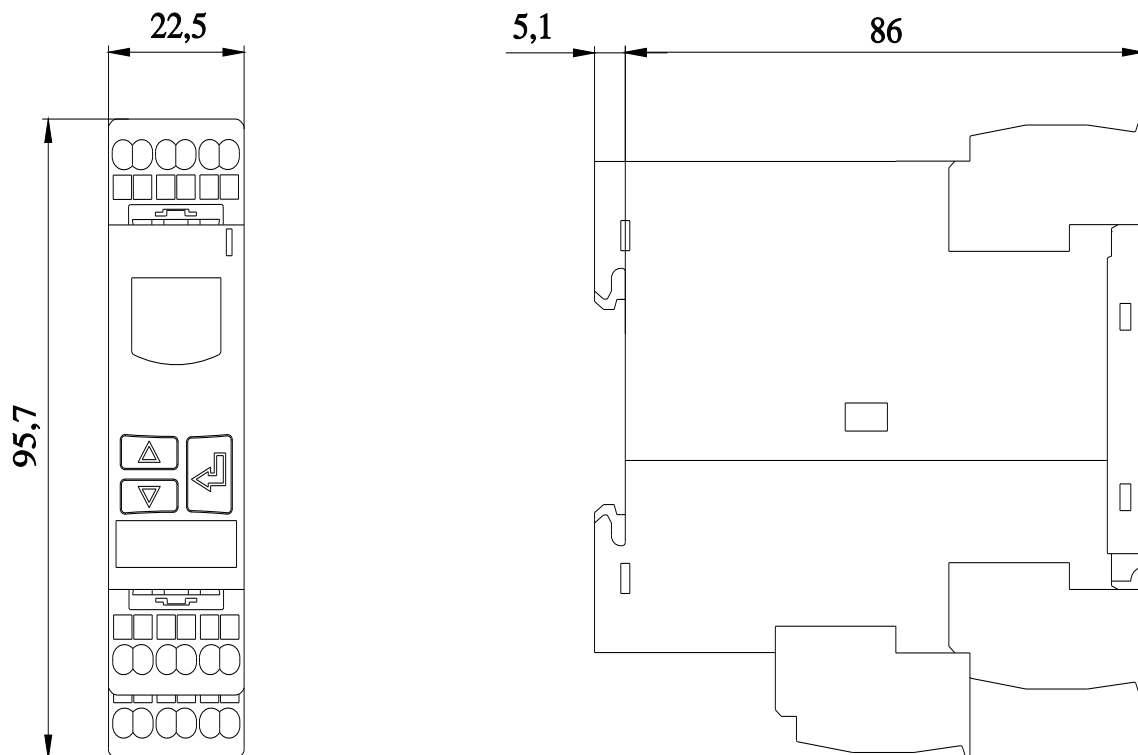
<https://support.industry.siemens.com/cs/ww/en/ps/3UG4841-2CA40>

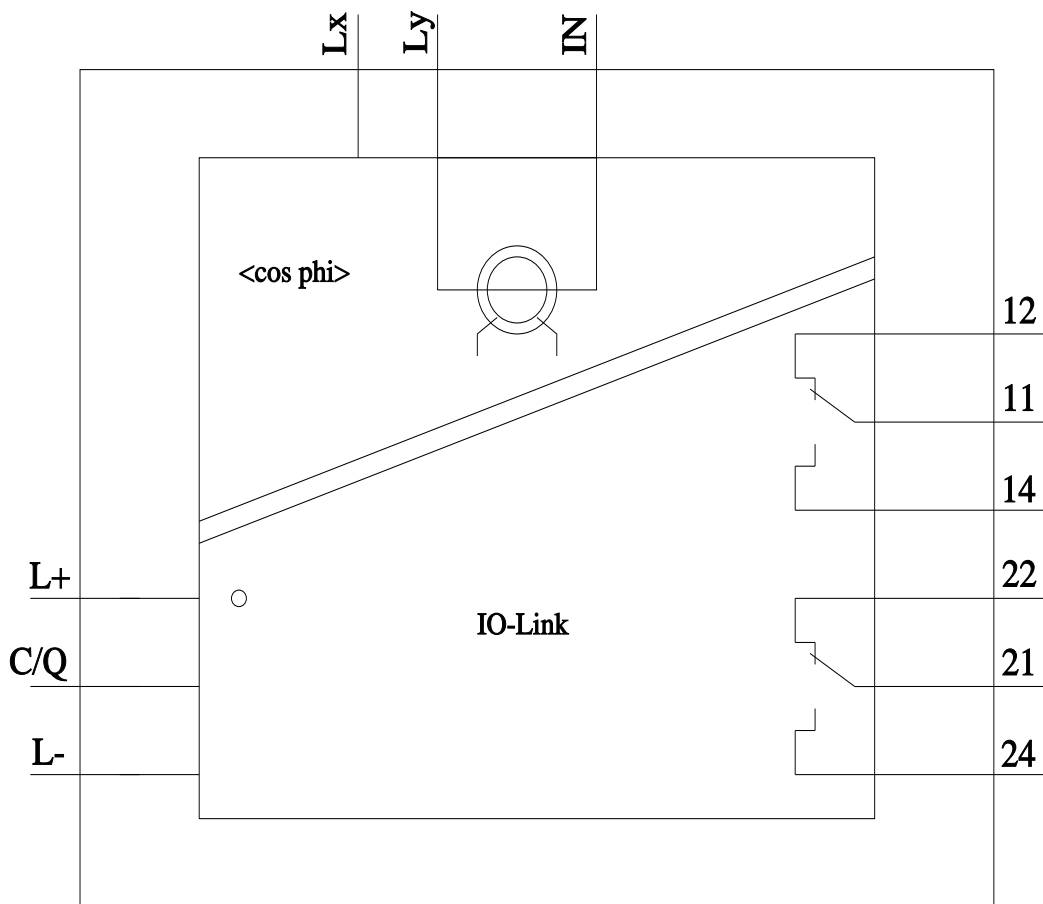
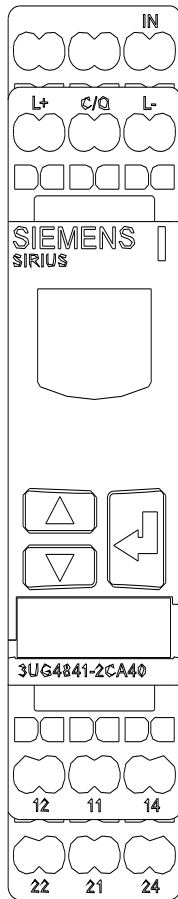
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3UG4841-2CA40&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4841-2CA40&lang=en)

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4841-2CA40/manual>





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