



!!! product phase-out !!! the preferred successor is 3UG5842-2AA40 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 changeover contacts, spring-loaded 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	
• with degree of pollution 2 rated value	690 V
degree of pollution	2
surge voltage resistance rated value	6 kV
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	10 000 002
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)	05/01/2012
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol - 119-47-1
Weight	0.172 kg
<b>Product Function</b>	
product function	
• 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 rated value	18 ... 30 V
control supply voltage at DC rated value	24 ... 24 V
supply voltage frequency for auxiliary and control circuit rated value	0 ... 0 Hz
operating range factor control supply voltage rated value at DC	
• initial value	0.75
• full-scale value	1.25
<b>Supply voltage</b>	

supply voltage frequency rated value	60 Hz
<b>Measuring circuit</b>	
type of current for monitoring	AC
measurable current	0.2 ... 10 A
adjustable current response value current	
• 1	0.2 ... 10 A
• 2	0.2 ... 10 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 ... 3 000 mA
accuracy of digital display	+/-1 digit
<b>Precision</b>	
relative metering precision	10 %
<b>Communication/ Protocol</b>	
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
<b>Auxiliary circuit</b>	
number of NC contacts delayed switching	0
number of NO contacts delayed switching	0
number of CO contacts delayed switching	2
operating frequency with 3RT2 contactor maximum	5 000 1/h
<b>Main circuit</b>	
number of poles for main current circuit	1
operating voltage rated value	90 ... 690 V
ampacity of the output relay at AC-15	
• at 250 V at 50/60 Hz	3 A
• at 400 V at 50/60 Hz	3 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	10 mA
continuous current of the DIAZED fuse link of the output relay	4 A
<b>Electromagnetic compatibility</b>	
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	6 kV contact discharge / 8 kV air discharge
<b>Galvanic isolation</b>	
galvanic isolation	
• between input and output	Yes
• between the outputs	Yes
• between the voltage supply and other circuits	Yes
<b>Connections/ Terminals</b>	
product component removable terminal for auxiliary and control circuit	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>• for AWG cables solid</li> <li>• for AWG cables stranded</li> </ul>	2x (0.25 ... 1.5 mm <sup>2</sup> ) 2 x (0.25 ... 1.5 mm <sup>2</sup> ) 2x (0.25 ... 1.5 mm <sup>2</sup> ) 2x (24 ... 16) 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> 0.25 ... 1.5 mm <sup>2</sup> 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 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 0 mm 0 mm 0 mm 0 mm  0 mm 0 mm 0 mm 0 mm 0 mm  0 mm 0 mm 0 mm 0 mm 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 -40 ... +85 °C -40 ... +85 °C

#### Approvals Certificates

##### General Product Approval



[Manufacturer Declaration](#)



EMV	Test Certificates	Maritime application	other
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[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



other	Railway	Environment
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[Confirmation](#)

[Special Test Certificate](#)

[Environmental Confirmations](#)

### Further information

#### Information on the packaging

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

#### Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

#### 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

<https://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, ...)

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





