



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, screw terminal

product brand name	SIRIUS
product designation	Cos phi monitoring relay with digital setting
product type designation	3UG4
General technical data	
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	10 000 001
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)	
Product Function	
product function	Yes
• overcurrent detection 1 phase	Yes
• undercurrent detection 1 phase	Yes
• adjustable open/closed-circuit current principle	Yes
• external reset	Yes
Control circuit/ Control	
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	
Supply voltage	

supply voltage frequency rated value	60 Hz
Measuring circuit	
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
Precision	
relative metering precision	10 %
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 data volume	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
Auxiliary circuit	
control supply voltage rated value	30 ... 18
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
Main circuit	
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
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	6 kV contact discharge / 8 kV air discharge
Galvanic isolation	
galvanic isolation	
• between input and output	Yes
• between the outputs	Yes
• between the voltage supply and other circuits	Yes
Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	Yes

type of electrical connection	screw-type terminals
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • solid • finely stranded with core end processing • at AWG cables solid • at AWG cables stranded 	1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²) 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²) 2x (20 ... 14) 2x (20 ... 14)
connectable conductor cross-section	
<ul style="list-style-type: none"> • solid • finely stranded with core end processing 	0.5 ... 4 mm ² 0.5 ... 2.5 mm ²
AWG number as coded connectable conductor cross section	
<ul style="list-style-type: none"> • solid • stranded 	20 ... 14 20 ... 14
tightening torque with screw-type terminals	1.2 ... 0.8 N·m

Installation/ mounting/ dimensions

mounting position	any
fastening method	snap-on mounting
height	102 mm
width	22.5 mm
depth	91 mm
required spacing	
<ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards — backwards — upwards — downwards — at the side • for grounded parts <ul style="list-style-type: none"> — forwards — backwards — upwards — at the side — downwards • for live parts <ul style="list-style-type: none"> — forwards — backwards — upwards — downwards — at the side 	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
ambient temperature	
<ul style="list-style-type: none"> • during operation • during storage • during transport 	-25 ... +60 °C -40 ... +85 °C -40 ... +85 °C

Certificates/ approvals

General Product Approval	EMC
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[Confirmation](#)

[Manufacturer Declaration](#)



Declaration of Conformity	Test Certificates	Marine / Shipping	other
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[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=3UG4841-1CA40>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4841-1CA40>

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

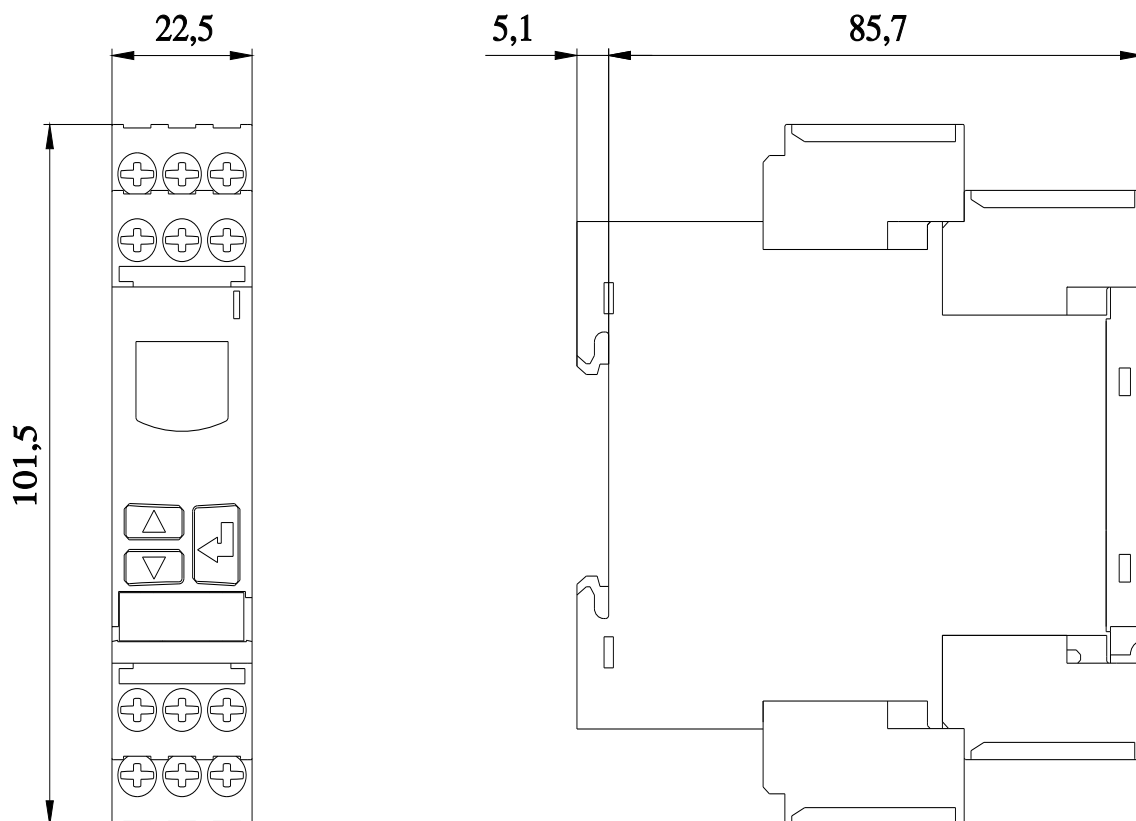
<https://support.industry.siemens.com/cs/ww/en/ps/3UG4841-1CA40>

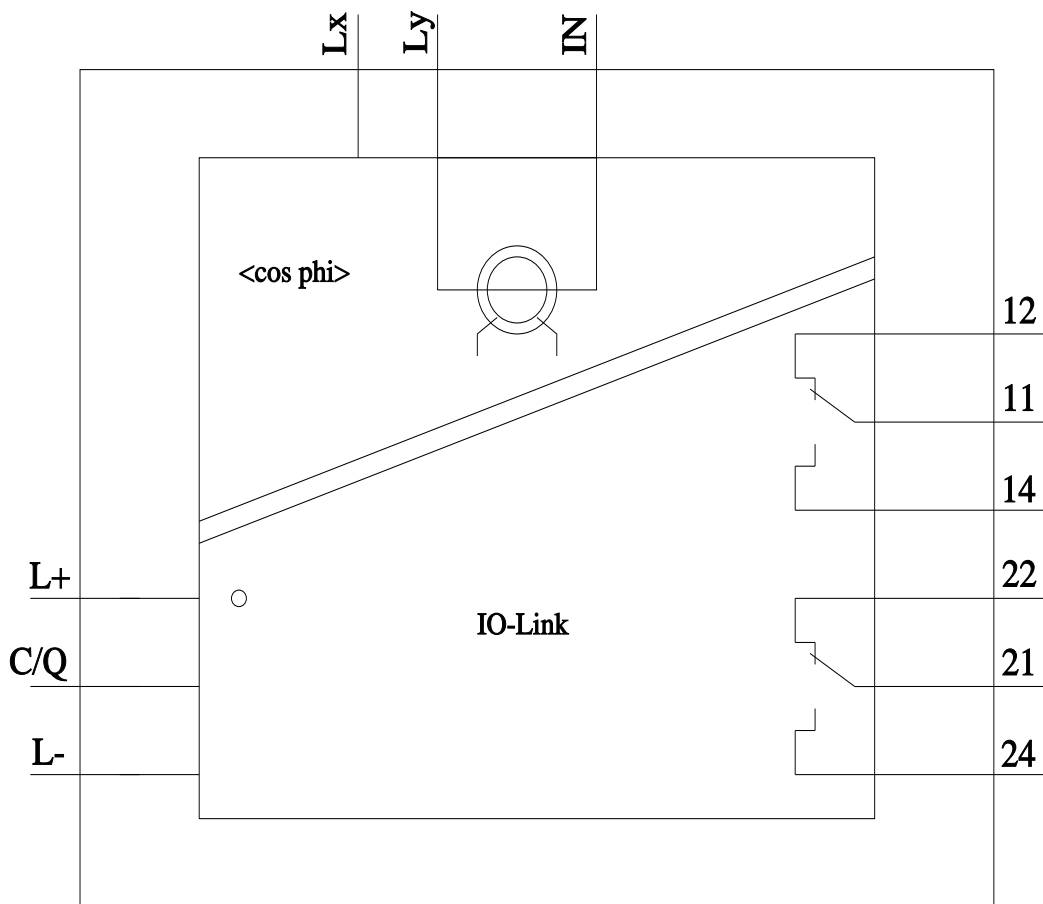
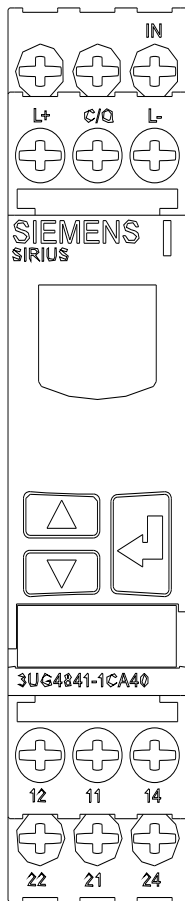
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4841-1CA40&lang=en

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4841-1CA40/manual>





last modified:

1/8/2021