



DIGITAL MONITORING RELAY COS-PHI AND
CURRENT MONITORING FOR IO-LINK 90 TO 690V
AC, 0.2 TO 10A OVERSHOOT AND UNDERSHOOT
ON DELAY TIME TRIPPING DELAY TIME
HYSTERESIS 0.1 TO 3.0A 2 CHANGE-OVER
CONTACTS, SCREW TERMINAL

Product function		Active power monitoring relay
Measuring circuit:		
Number of poles for main current circuit		1
Phase number		1
Adaptable response value phase displacement angle	°	0.1 ... 0.99
Type of current for monitoring		AC
Measurable current	A	0.2 ... 10
Adjustable pick-up value current		
• 1	A	0.2 ... 10
• 2	A	0.2 ... 10
Adjustable response delay time		
• when starting	s	0 ... 999.9
• with lower or upper limit violation	s	0 ... 999.9
Adjustable switching hysteresis for measured current value	mA	0 ... 3 000
Operating voltage rated value	V	90 ... 690
Relative metering precision	%	10
Accuracy of digital display		+/-1 digit
Relative repeat accuracy	%	1

General technical data:

Design of the display		LCD
Product function		
• Overcurrent detection 1 phase		Yes
• undercurrent detection 1 phase		Yes
• External reset		Yes
• Adjustable open/closed-circuit current principle		Yes
Starting time after the control supply voltage has been applied	ms	1 000
Type of voltage of the control supply voltage		DC
Control supply voltage		
• at AC		
— at 50 Hz rated value	V	0 ... 0
— at 60 Hz rated value	V	0 ... 0
• at DC rated value	V	24 ... 24
Operating range factor control supply voltage rated value		
• at DC		0.75 ... 1.25
Surge voltage resistance rated value	kV	6
Consumed active power	W	2
Protection class IP		IP20
Electromagnetic compatibility		IEC 60947-1 / IEC 61000-6-2 / IEC 61000-6-4
Vibration resistance acc. to IEC 60068-2-6		1 ... 6 Hz: 15 mm, 6 ... 500 Hz: 2g
Shock resistance acc. to IEC 60068-2-27		sinusoidal half-wave 15g / 11 ms
Installation altitude at height above sea level maximum	m	2 000
Conducted interference due to burst acc. to IEC 61000-4-4		2 kV
Conducted interference due to conductor-earth surge acc. to IEC 61000-4-5		2 kV
Conducted interference due to conductor-conductor surge acc. to IEC 61000-4-5		1 kV
Electrostatic discharge acc. to IEC 61000-4-2		6 kV contact discharge / 8 kV air discharge
Field-bound parasitic coupling acc. to IEC 61000-4-3		10 V/m
Degree of pollution		2
Ambient temperature		
• during operation	°C	-25 ... +60
• during storage	°C	-40 ... +85
• during transport	°C	-40 ... +85
Galvanic isolation		
• between entrance and outlet		Yes
• between the outputs		Yes
• between the voltage supply and other circuits		Yes

Mechanical service life (switching cycles) typical		10 000 001
Electrical endurance (switching cycles) at AC-15 at 230 V typical		100 000
Operating frequency with 3RT2 contactor maximum	1/h	5 000

Communication/ Protocol:

Type of voltage supply via input/output link master		Yes
IO-Link transfer rate		COM2 (38,4 kBaud)
Protocol is supported IO-Link protocol		Yes
Amount of data		
• of the address area of the outputs with cyclical transfer total	byte	2
• of the address area of the inputs with cyclical transfer total	byte	4
Point-to-point cycle time between master and IO-Link device minimum	ms	10

Mechanical data:

Width	mm	22.5
Height	mm	102
Depth	mm	91
Mounting position		any
Required spacing for grounded parts		
• forwards	mm	0
• Backwards	mm	0
• at the side	mm	0
• upwards	mm	0
• downwards	mm	0
Required spacing with side-by-side mounting		
• forwards	mm	0
• Backwards	mm	0
• at the side	mm	0
• upwards	mm	0
• downwards	mm	0
Required spacing for live parts		
• forwards	mm	0
• Backwards	mm	0
• at the side	mm	0
• upwards	mm	0
• downwards	mm	0
Mounting type		snap-on mounting
Product function removable terminal for auxiliary and control circuit		Yes
Type of electrical connection		screw-type terminals

Type of connectable conductor cross-sections		1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²)
	• solid	
	• finely stranded	
	— with core end processing	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²)
• at AWG conductors		
	— solid	2x (20 ... 14)
	— stranded	2x (20 ... 14)
Tightening torque with screw-type terminals	N·m	1.2 ... 0.8

Outputs:

Number of NO contacts delayed switching		0
Number of NC contacts delayed switching		0
Number of CO contacts delayed switching		2
Ampacity of the output relay		
• at AC-15		
— at 250 V at 50/60 Hz	A	3
— at 400 V at 50/60 Hz	A	3
• at DC-13		
— at 24 V	A	1
— at 125 V	A	0.2
— at 250 V	A	0.1
Operating current at 17 V minimum	mA	10
Continuous current of the DIAZED fuse link of the output relay	A	4
Thermal current of the switching element with contacts maximum	A	5

Certificates/ approvals:

General Product Approval		Declaration of Conformity	Test Certificates
	Manufacturer Declaration		Special Test Certificate
CCC		UL	
			
			
		EG-Konf.	

Test Certificates	other	Railway
Type Test Certificates/Test Report	Confirmation	Vibration and Shock

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<http://www.siemens.com/industrymall>

Cax online generator

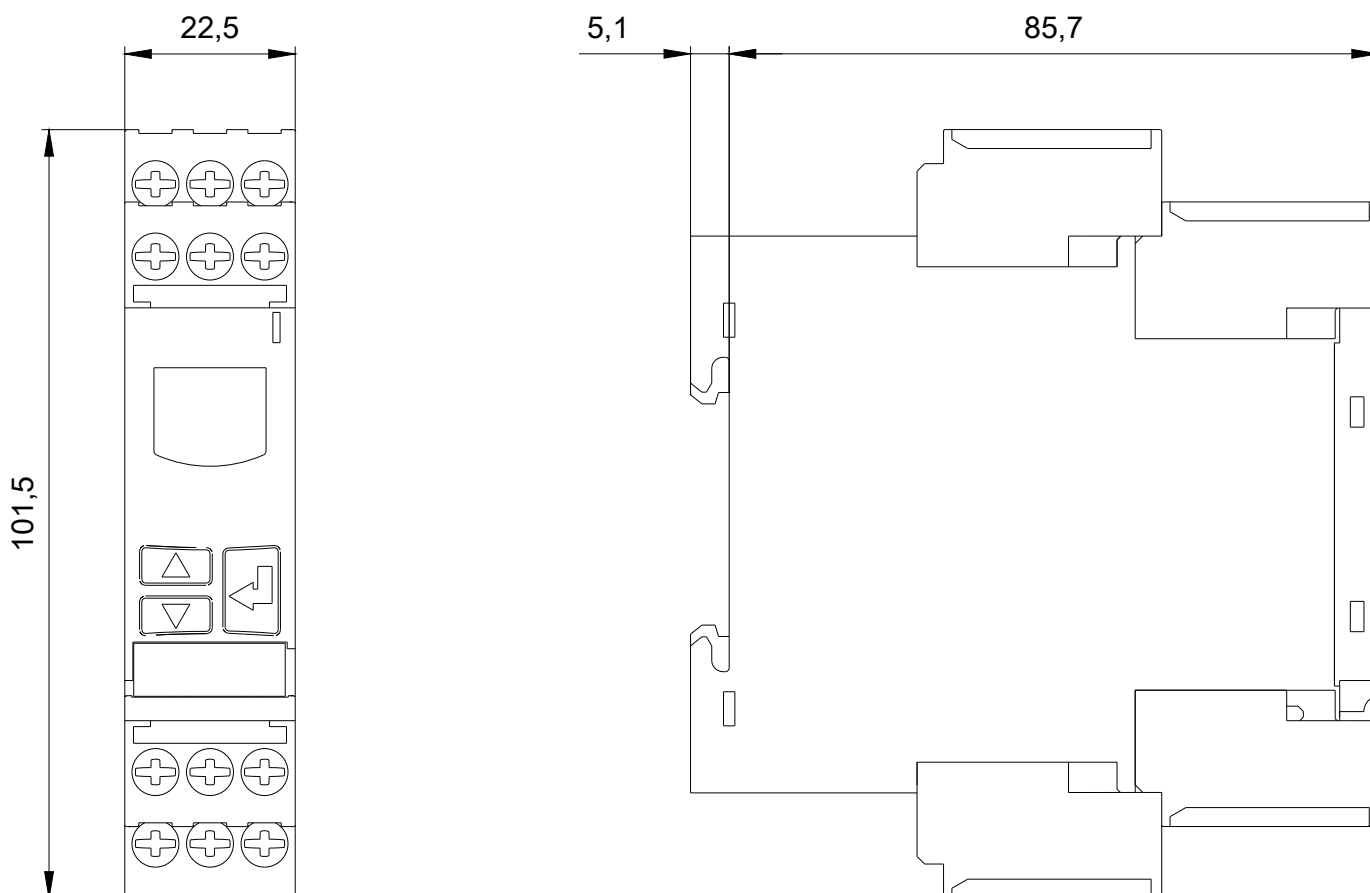
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4841-1CA40>

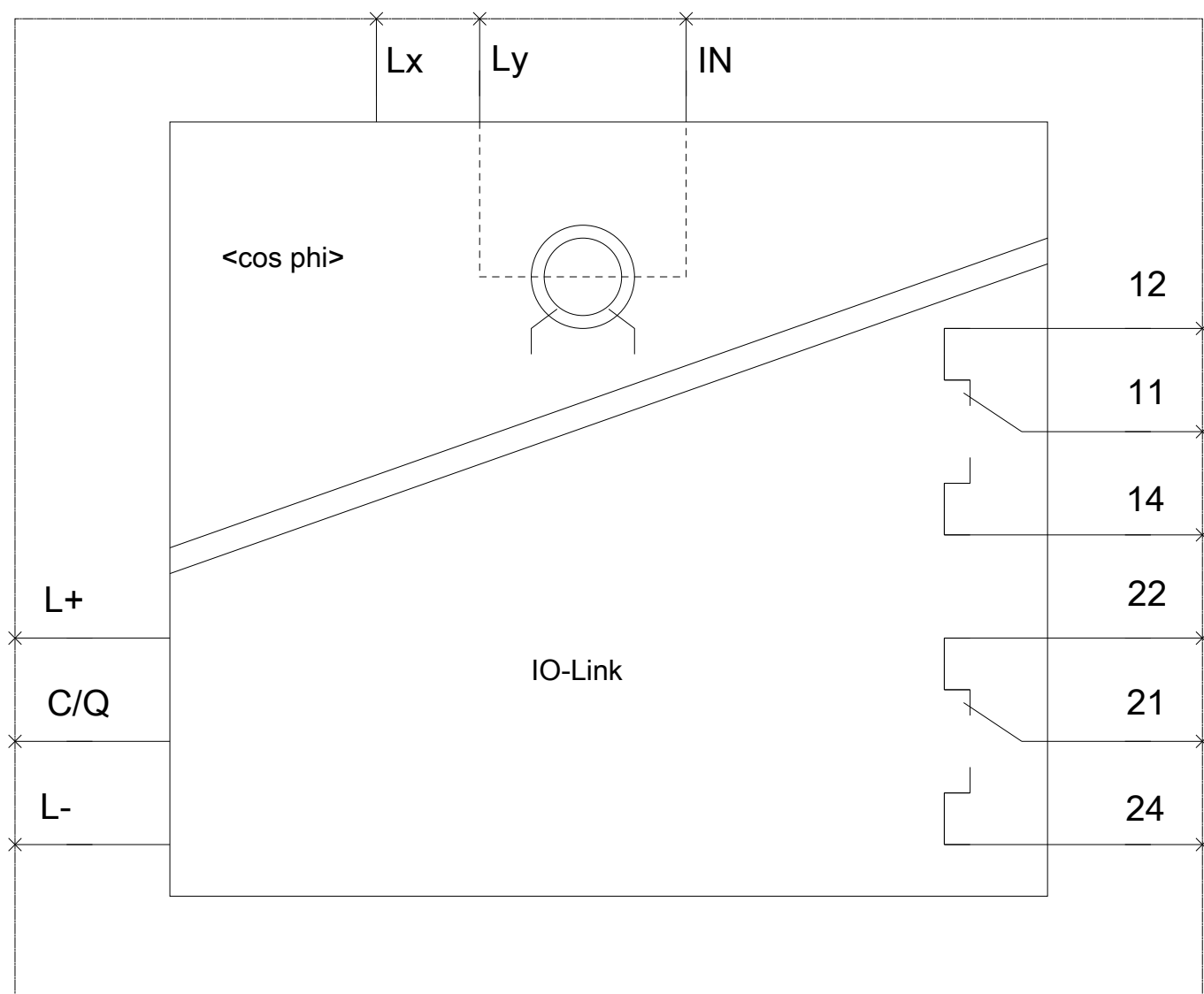
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<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





last modified:

08/12/2017