



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, SPRING-LOADED 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 response 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

<ul style="list-style-type: none"> Adjustable open/closed-circuit current principle 		Yes
Startup time after the control supply voltage has been applied	ms	1 000
Type of voltage of the control supply voltage		DC
Control supply voltage		
<ul style="list-style-type: none"> with AC <ul style="list-style-type: none"> at 50 Hz Rated value at 60 Hz Rated value for DC Rated value 	V V V	0 ... 0 0 ... 0 24 ... 24
Operating range factor control supply voltage rated value		0.75 ... 1.25
Surge voltage resistance Rated value	kV	6
Active power consumption	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		
<ul style="list-style-type: none"> during operation during storage during transport 	°C °C °C	-25 ... +60 -40 ... +85 -40 ... +85
Galvanic isolation		
<ul style="list-style-type: none"> between entrance and outlet between the outputs between the voltage supply and other circuits 		Yes Yes Yes
Mechanical service life (switching cycles) typical		10 000 002
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		
<ul style="list-style-type: none"> • of the address area of the outputs with cyclical transfer total 	byte	2
<ul style="list-style-type: none"> • 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	103
Depth	mm	91
mounting position		any
Required spacing for grounded parts		
<ul style="list-style-type: none"> • forwards 	mm	0
<ul style="list-style-type: none"> • Backwards 	mm	0
<ul style="list-style-type: none"> • at the side 	mm	0
<ul style="list-style-type: none"> • upwards 	mm	0
<ul style="list-style-type: none"> • downwards 	mm	0
Required spacing with side-by-side mounting		
<ul style="list-style-type: none"> • forwards 	mm	0
<ul style="list-style-type: none"> • Backwards 	mm	0
<ul style="list-style-type: none"> • at the side 	mm	0
<ul style="list-style-type: none"> • upwards 	mm	0
<ul style="list-style-type: none"> • downwards 	mm	0
Required spacing for live parts		
<ul style="list-style-type: none"> • forwards 	mm	0
<ul style="list-style-type: none"> • Backwards 	mm	0
<ul style="list-style-type: none"> • at the side 	mm	0
<ul style="list-style-type: none"> • upwards 	mm	0
<ul style="list-style-type: none"> • downwards 	mm	0
Mounting type		snap-on mounting
Product function removable terminal for auxiliary and control circuit		Yes
Type of electrical connection		spring-loaded terminals
Type of connectable conductor cross-section		
<ul style="list-style-type: none"> • solid 		2x (0.25 ... 1.5 mm ²)
<ul style="list-style-type: none"> • finely stranded 		
<ul style="list-style-type: none"> — with core end processing 		2 x (0.25 ... 1.5 mm ²)
<ul style="list-style-type: none"> — without core end processing 		2x (0.25 ... 1.5 mm ²)
<ul style="list-style-type: none"> • for AWG conductors 		

— solid	2x (24 ... 16)
— stranded	2x (24 ... 16)

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



[Manufacturer declaration](#)



Test Certificates

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

other

[Declaration of Conformity](#)

[other](#)

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

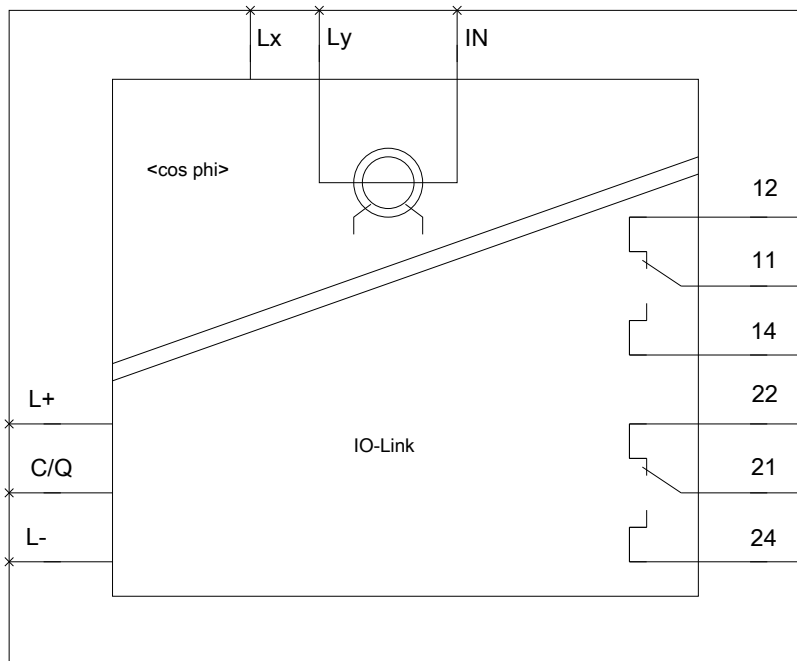
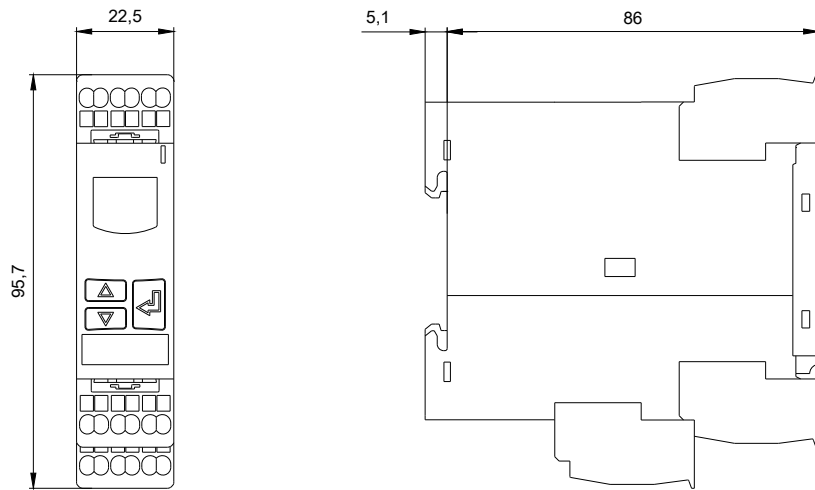
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG48412CA40>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3UG48412CA40>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG48412CA40&lang=en



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