



DIGITAL MONITORING RELAY FOR THREE-PHASE LINE VOLTAGE FOR IO-LINK AC 50 TO 60 HZ 3X 160 TO 690V LINE PHASE SEQUENCE, PHASE FAILURE, PHASE ASYMMETRY UNDER- AND OVERVOLTAGE HYSTERESIS 1-20V NETWORK STABILITY TIME TRIGGER DELAY TIME 1 CO CONTACT, SCREW TERMINAL

Product function		Phase monitoring relay
Measuring circuit:		
Type of voltage for monitoring		AC
Number of poles for main current circuit		3
Measurable voltage with AC	V	90 ... 400
Adjustable voltage range	V	90 ... 400
Adjustable response delay time		
• when starting	s	0 ... 999.9
• with lower or upper limit violation	s	0 ... 999.9
Relative setting accuracy	%	0.2
Relative metering precision	%	5
Accuracy of digital display		+/-1 digit
Relative repeat accuracy	%	1
General technical data:		
Design of the display		LCD
Display version LED		No
Product function		
• undervoltage detection		Yes
• Overvoltage detection		Yes
• phase sequence recognition		Yes
• Phase failure detection		Yes
• Asymmetry recognition		Yes
• Overvoltage detection 3 phase		Yes
• undervoltage detection 3 phases		Yes

<ul style="list-style-type: none"> • Voltage window recognition 3 phase • External reset • Auto-reset • Adjustable open/closed-circuit current principle 		Yes
Startup time after the control supply voltage has been applied	ms	1 000
Response time maximum	ms	450
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		1 ... 1
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 voltage supply and other circuits 		Yes Yes
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	102
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		screw-type terminals
Type of connectable conductor cross-section		
<ul style="list-style-type: none"> • solid 		1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²)
<ul style="list-style-type: none"> • finely stranded <ul style="list-style-type: none"> — with core end processing 		1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²)
<ul style="list-style-type: none"> • for AWG conductors <ul style="list-style-type: none"> — solid 		2x (20 ... 14)
<ul style="list-style-type: none"> — stranded 		2x (20 ... 14)

Tightening torque with screw-type terminals	N·m	0.8 ... 1.2
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Outputs:

Number of NO contacts delayed switching		0
Number of NC contacts delayed switching		0
Number of CO contacts delayed switching		1
Ampacity of the output relay		
<ul style="list-style-type: none"> • at AC-15 <ul style="list-style-type: none"> — at 250 V at 50/60 Hz — at 400 V at 50/60 Hz • at DC-13 <ul style="list-style-type: none"> — at 24 V — at 125 V — at 250 V 	A A A A A A	3 3 1 0.2 0.1
Thermal current of the switching element with contacts maximum	A	5
Operating current at 17 V minimum	mA	20
Continuous current of the DIAZED fuse link of the output relay	A	4
Mechanical service life (switching cycles) typical		10 000 000
Electrical endurance (switching cycles) at AC-15 at 230 V typical		100 000
Operating frequency with 3RT2 contactor maximum	1/h	5 000

Certificates/ approvals:

General Product Approval



[Manufacturer declaration](#)



Test Certificates

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

other

[other](#)

[Declaration of Conformity](#)

Further information

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

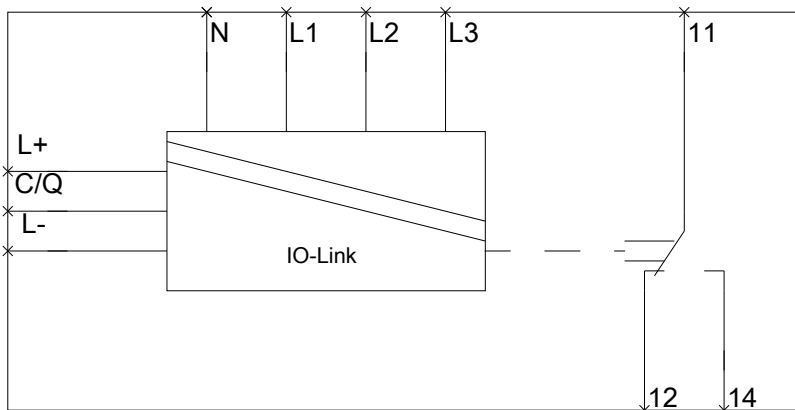
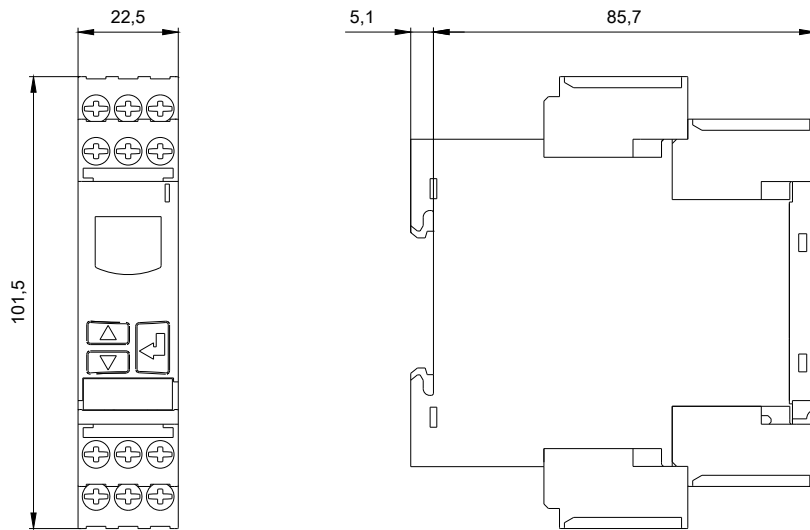
<http://www.siemens.com/industrial-controls/catalogs>

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=3UG48161AA40>



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