



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 current / for monitoring		AC
Number of poles / for main current circuit		3
Measurable voltage		
• for 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 adjustment accuracy	%	0.2
Relative metering precision	%	5
Precision of digital display		+/-1 digit
Relative repeat accuracy	%	1
General technical details:		
Design of the display		LCD
Type of display / LED		No
Product function		
• undervoltage recognition		Yes
• overvoltage recognition		Yes

• phase sequence recognition		Yes
• phase disturbance recognition		Yes
• asymmetry recognition		Yes
• overvoltage recognition of 3 phases		Yes
• undervoltage recognition of 3 phases		Yes
• tension window recognition of 3 phases		Yes
• reset external		Yes
• self-reset		Yes
• open-circuit or closed-circuit current principle		Yes
Starting time / after the control supply voltage has been applied	ms	1,000
Response time / maximum	ms	450
Voltage type / of control feed voltage		DC
Control supply voltage		
• at 50 Hz / at AC		
• rated value	V	0 ... 0
• at 60 Hz / at AC		
• rated value	V	0 ... 0
• for DC		
• rated value	V	24 ... 24
Operating range factor control supply voltage rated value		
• for DC		1 ... 1
Impulse voltage resistance / rated value	kV	6
Recorded real power	W	2
Protection class IP		IP20
Electromagnetic compatibility		IEC 60947-1 / IEC 61000-6-2 / IEC 61000-6-4
Resistance against vibration / according to IEC 60068-2-6		1 ... 6 Hz: 15 mm, 6 ... 500 Hz: 2g
Resistance against shock / according to IEC 60068-2-27		sinusoidal half-wave 15g / 11 ms
Installation altitude / at a height over sea level / maximum	m	2,000
Conductor-bound parasitic coupling BURST / according to IEC 61000-4-4		2 kV
Conductor-bound parasitic coupling conductor-earth SURGE / according to IEC 61000-4-5		2 kV
Conductor-bound parasitic coupling conductor-conductor SURGE / according to IEC 61000-4-5		1 kV
Electrostatic discharge / according to IEC 61000-4-2		6 kV contact discharge / 8 kV air discharge
Field-bound parasitic coupling / according to IEC 61000-4-3		10 V/m
Degree of pollution		2
Ambient temperature		
• during operating	°C	-25 ... +60
• during storage	°C	-40 ... +85

• during transport	°C	-40 ... +85
Galvanic isolation		
• between entrance and outlet		Yes
• between the voltage supply and other circuits		Yes
Communication:		
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
Data volume		
• of the address range of the outputs / with cyclical transfer	byte	2
• of the address range of the inputs / with cyclical transfer	byte	4
Point-to-point cycle time / between master and IO-Link device / minimum	ms	10
Mechanical design:		
Width	mm	22.5
Height	mm	102
Depth	mm	91
mounting position		any
Distance, to be maintained, to earthed part		
• forwards	mm	0
• backwards	mm	0
• sideways	mm	0
• upwards	mm	0
• downwards	mm	0
Distance, to be maintained, to the ranks assembly		
• forwards	mm	0
• backwards	mm	0
• sideways	mm	0
• upwards	mm	0
• downwards	mm	0
Distance, to be maintained, conductive elements		
• forwards	mm	0
• backwards	mm	0
• sideways	mm	0
• upwards	mm	0
• downwards	mm	0
Mounting type		snap-on mounting
Product function / removable terminal for auxiliary and control circuit		Yes

Design of the electrical connection		screw-type terminals
Type of the connectable conductor cross-sections • solid • finely stranded • with wire end processing • for AWG conductors • solid • 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)
Tightening torque • with screw-type terminals	N·m	0.8 ... 1.2

Outputs:		
Number of NO contacts / delayed switching		0
Number of NC contacts / delayed switching		0
Number of change-over switches / delayed switching		1
Current carrying capacity / of output relay • at AC-15 • at 250 V / at 50/60 Hz • at 400 V / at 50/60 Hz • at DC-13 • at 24 V • at 125 V • at 250 V	A A A A A	3 3 1 0.2 0.1
Thermal current / of the contact-affected switching element / 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 operating cycles as operating time / typical		10,000,000
Electrical operating cycles as operating time / at AC-15 / at 230 V / typical		100,000
Operating cycles / with 3RT2 contactor / maximum	1/h	5,000

Certificates/approvals:		
General Product Approval		Test Certificates
 CCC		Manufacturer declaration
	 UL	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/industrial-controls/mall>

Cax online generator:

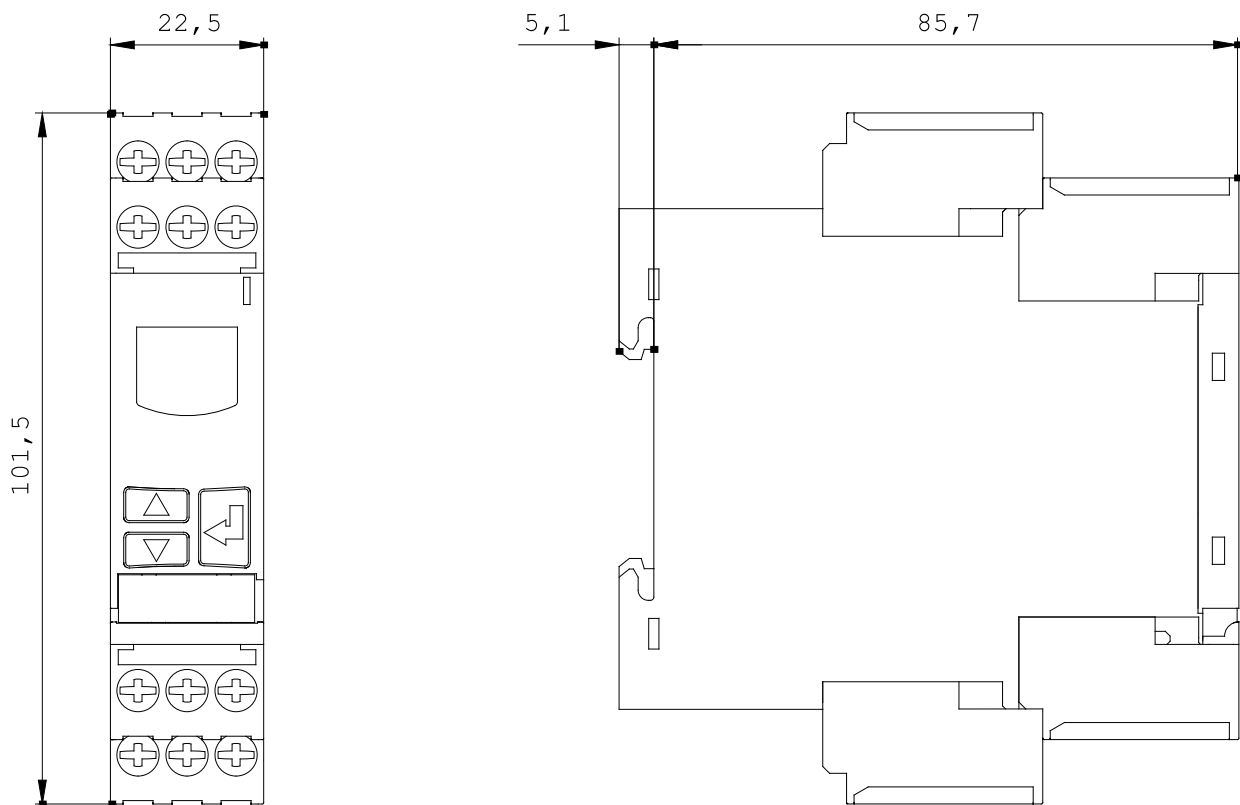
<http://www.siemens.com/cax>

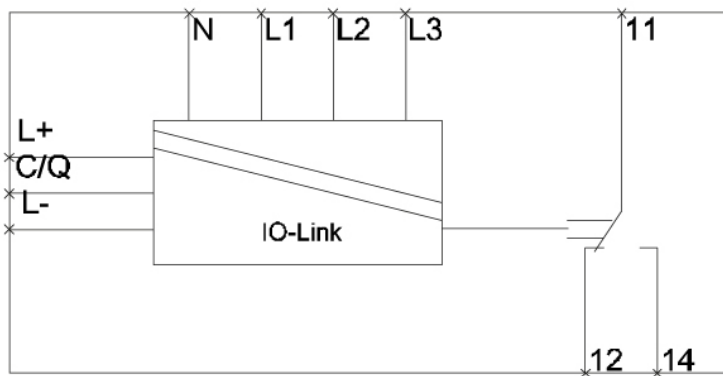
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3UG4816-1AA40/all>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3UG4816-1AA40





last change:

Jun 16, 2014