SIEMENS

Data sheet 3UG4815-2AA40

DIGITAL MONITORING RELAY FOR 3-PHASE MAINS 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 CHANGEOVER, SPRING BALANCER TECHNOLOGY

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	160 ... 690
Adjustable voltage range	V	160 ... 690
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

• Voltage window recognition 3 phase		Yes
• External reset		Yes
• Auto-reset		Yes
• 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		
• with AC		
— at 50 Hz Rated value	V	0 ... 0
— at 60 Hz Rated value	V	0 ... 0
• for DC Rated value	V	24 ... 24
Operating range factor control supply voltage rated value		
• for DC		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		
• during operation	°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/ 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	103
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		spring-loaded terminals
Type of connectable conductor cross-section		
• solid		2x (0.25 ... 1.5 mm²)
• finely stranded		
— with core end processing		2 x (0.25 ... 1.5 mm²)
— without core end processing		2x (0.25 ... 1.5 mm²)
• 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		1
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
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				Test Certificates	
CCC	Manufacturer declartion	EAC	UL	Special Test Certificate	Type Test Certificates/Test Report

other	
Declaration of Conformity	other

Further information

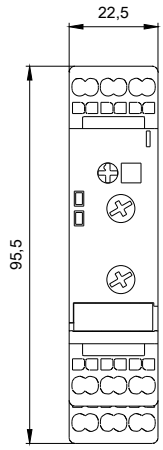
Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/industrial-controls/catalogs

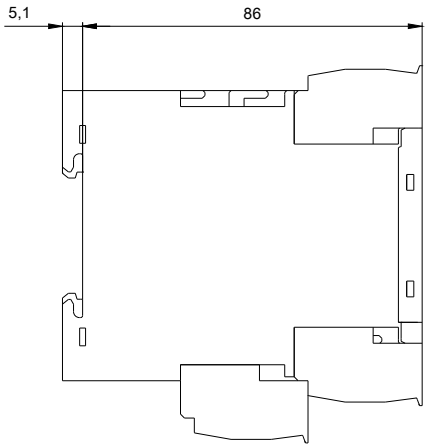
Industry Mall (Online ordering system)
http://www.siemens.com/industrymall

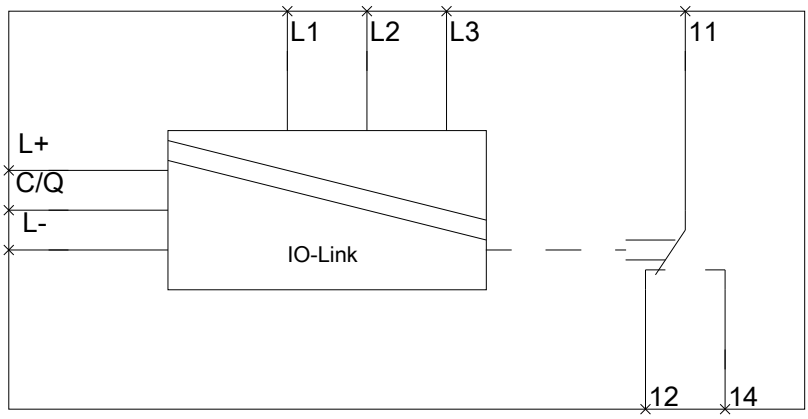
Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG48152AA40

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3UG48152AA40

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG48152AA40&lang=en







last modified: 15.01.2015