



DIGITAL MONITORING RELAY FOR THREE-PH. VOLT. W. N COND. REVERSIBLE PHASE SEQUENCE PHASE FAILURE 3X 160 TO 690V AC 50 TO 60 HZ UNDERVOLT. AND OVERVOLT. 160-690V HYSTERESIS 1-20V 0-20S EACH FOR UMIN AND UMAX 1 W FOR UMIN 1 W FOR UMAX SCREW TERMINAL REPLACEMENT PRODUCT F. 3UG3042-1BP50

Product function	Phase monitoring relay
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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		
• with lower or upper limit violation	s	0.1 ... 20
Relative setting accuracy	%	0.2
Relative metering precision	%	5
Accuracy of digital display		+/-1 digit
Relative repeat accuracy	%	1

General technical details:		
Design of the display		LCD
Display version / LED		No
Product function		
• undervoltage detection		Yes
• Overvoltage detection		Yes
• phase sequence recognition		Yes

<ul style="list-style-type: none"> • Phase failure detection • Asymmetry recognition • Overvoltage detection 3 phase • undervoltage detection 3 phases • Voltage window recognition 3 phase • 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		AC
Control supply voltage		
<ul style="list-style-type: none"> • with AC / at 50 Hz <ul style="list-style-type: none"> • Rated value • with AC / at 60 Hz <ul style="list-style-type: none"> • Rated value 	V	160 ... 690
	V	160 ... 690
Operating range factor control supply voltage rated value		
<ul style="list-style-type: none"> • with AC <ul style="list-style-type: none"> • at 50 Hz • with AC <ul style="list-style-type: none"> • at 60 Hz 		1 ... 1
		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 BURST / acc. to IEC 61000-4-4		2 kV
Conducted interference conductor-earth SURGE / acc. to IEC 61000-4-5		2 kV
Conducted interference 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
Insulation voltage / for overvoltage category III according to IEC 60664 / with degree of pollution 3 / Rated value	V	690
Degree of pollution		3
Ambient temperature		
<ul style="list-style-type: none"> • during operation • during storage 	°C	-25 ... +60
	°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 design:		
Width	mm	22.5
Height	mm	102
Depth	mm	91
mounting position		any
Spacing required for grounded parts		
• forwards	mm	0
• Backwards	mm	0
• at the side	mm	0
• upwards	mm	0
• downwards	mm	0
Spacing required with side-by-side mounting		
• forwards	mm	0
• Backwards	mm	0
• at the side	mm	0
• upwards	mm	0
• downwards	mm	0
Spacing required 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
Design of the electrical connection		screw-type terminals
Type of connectable conductor cross-section		
• solid		1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²)
• finely stranded		
• with core end processing		1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²)
• for AWG conductors		
• solid		2x (20 ... 14)
• stranded		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 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
Thermal current / of the switching element with contacts / maximum	A	5
Operating current / at 17 V / minimum	mA	5
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			EMC	Test Certificates	
 CCC	 EAC	 UL	 C-TICK	Special Test Certificate	Type Test Certificates/Test Report
Shipping Approval			other		
 DNV	 GL	 LRS	Declaration of Conformity	other	

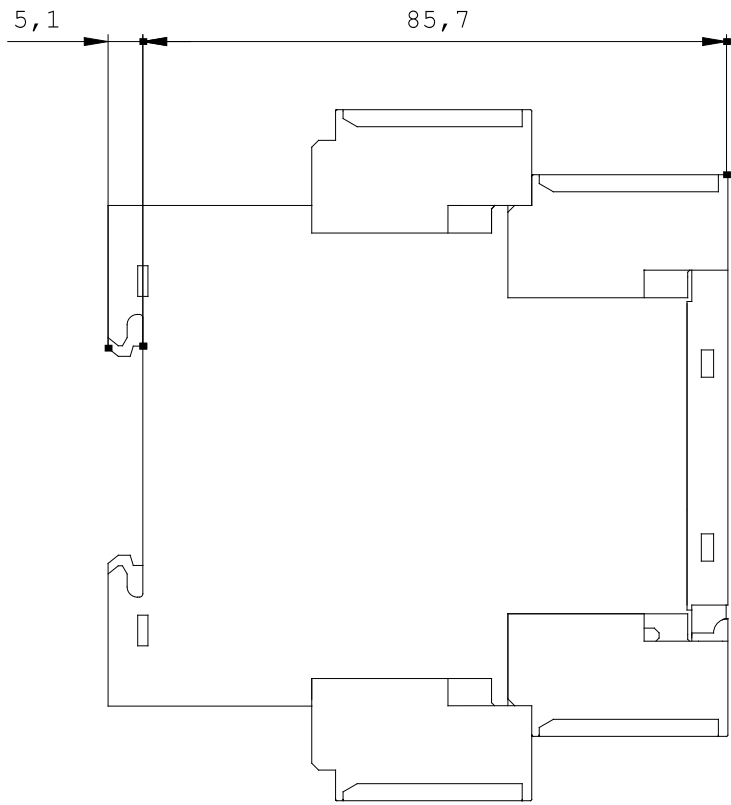
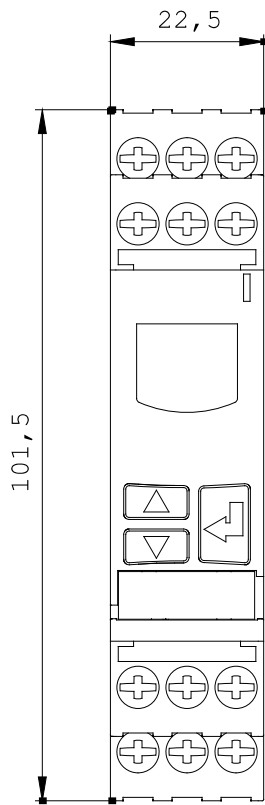
Further information:

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/3UG4616-1CR20/all>



last change:

Jun 16, 2014