

ANALOG MONITORING RELAY PHASE FAILURE AND -
SEQUENCE 3X 160 TO 690V AC 50 TO 60 HZ 2
CHANGEOVER CONTACTS SCREW TERMINAL
REPLACEMENT PRODUCT FOR 3UG3513-1BL50 OR
3UG3513-1PB50

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	160 ... 690
Relative repeat accuracy	%	1
General technical details:		
Type of display / LED		Yes
Product function • undervoltage recognition • overvoltage recognition • phase sequence recognition • phase disturbance recognition • asymmetry recognition • overvoltage recognition of 3 phases • undervoltage recognition of 3 phases • tension window recognition of 3 phases • self-reset • open-circuit or closed-circuit current principle		No No Yes Yes No No No No Yes No
Starting time / after the control supply voltage has been applied	ms	1,000
Response time / maximum	ms	450
Voltage type / of control feed voltage		AC
Control supply voltage • at 50 Hz / at AC • rated value • at 60 Hz / at AC • rated value	V V	160 ... 690 160 ... 690
Operating range factor control supply voltage rated value • at 50 Hz		

• for AC		1 ... 1
• at 60 Hz		
• for AC		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
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		
• during operating	°C	-25 ... +60
• during storage	°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	92
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		1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²)
• finely stranded		1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²)
• with wire end processing		
• 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 change-over switches / delayed switching		2
Current carrying capacity / of 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 contact-affected switching element / 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 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		EMC	Test Certificates	
			Special Test Certificate	Type Test Certificates/Test Report
CCC	UL	C-TICK		
Shipping Approval			other	
			Declaration of Conformity	other
DNV	GL	LRS		

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:

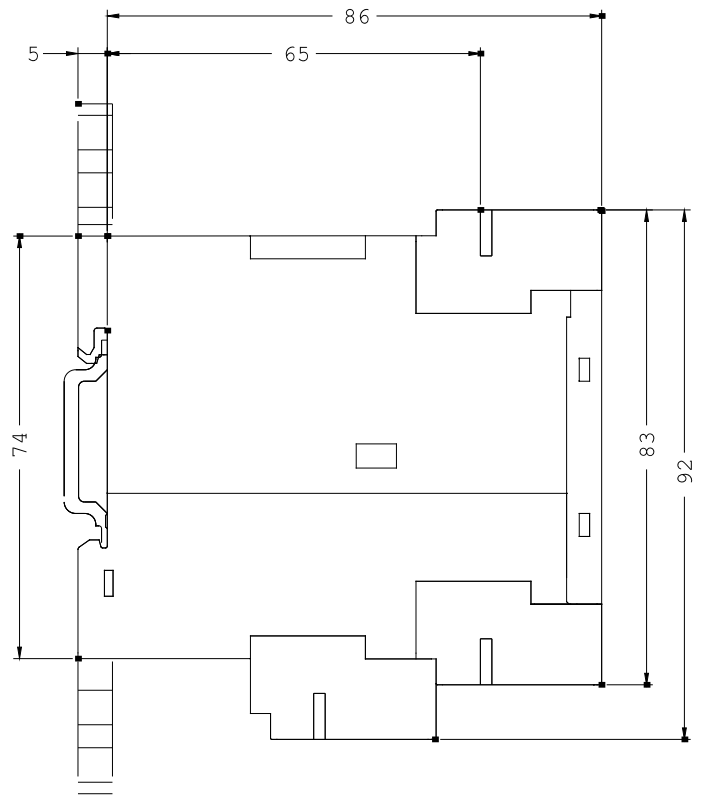
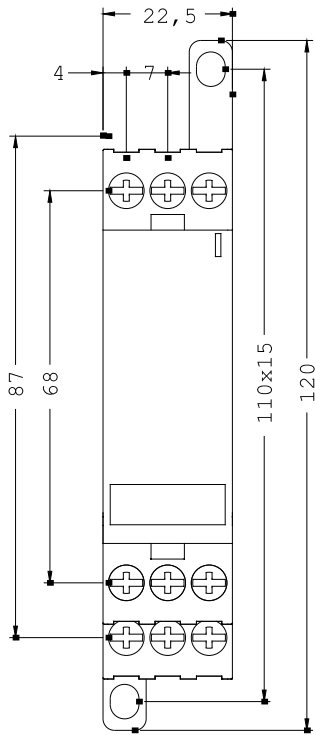
<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/WW/view/en/3UG4512-1BR20/all>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3UG4512-1BR20



last change:

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