



ANALOG MONITORING RELAY PHASE FAILURE AND -  
SEQUENCE ADJUSTABLE UNDERVOLTAGE  
UNBALANCE 20% FIXED 3X 160 TO 690V AC 50 TO 60 HZ  
HYSTERESIS 5% FIXED DELAY TIME 0-20S 2  
CHANGEOVER CONTACTS SCREW TERMINAL  
REPLACEMENT PRODUCT FOR 3UG3013-1B...

<b>Product function</b>	Phase monitoring relay
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**Measuring circuit:**

<b>Type of current / for monitoring</b>	AC
<b>Number of poles / for main current circuit</b>	3
<b>Measurable voltage</b>	
• for AC	V 160 ... 690
<b>Adjustable voltage range</b>	V 200 ... 690
<b>Relative metering precision</b>	% 5
<b>Relative repeat accuracy</b>	% 1

**General technical details:**









<b>Type of display / LED</b>	Yes
<b>Product function</b>	
• undervoltage recognition	Yes
• overvoltage recognition	No
• phase sequence recognition	Yes
• phase disturbance recognition	Yes
• asymmetry recognition	Yes
• overvoltage recognition of 3 phases	No
• undervoltage recognition of 3 phases	Yes
• tension window recognition of 3 phases	No

<ul style="list-style-type: none"> <li>• self-reset</li> </ul>		Yes
<ul style="list-style-type: none"> <li>• open-circuit or closed-circuit current principle</li> </ul>		No
<b>Starting time / after the control supply voltage has been applied</b>	ms	1,000
<b>Response time / maximum</b>	ms	450
<b>Voltage type / of control feed voltage</b>		AC
<b>Control supply voltage</b>		
<ul style="list-style-type: none"> <li>• at 50 Hz / at AC <ul style="list-style-type: none"> <li>• rated value</li> </ul> </li> </ul>	V	160 ... 690
<ul style="list-style-type: none"> <li>• at 60 Hz / at AC <ul style="list-style-type: none"> <li>• rated value</li> </ul> </li> </ul>	V	160 ... 690
<b>Operating range factor control supply voltage rated value</b>		
<ul style="list-style-type: none"> <li>• at 50 Hz <ul style="list-style-type: none"> <li>• for AC</li> </ul> </li> </ul>		1 ... 1
<ul style="list-style-type: none"> <li>• at 60 Hz <ul style="list-style-type: none"> <li>• for AC</li> </ul> </li> </ul>		1 ... 1
<b>Impulse voltage resistance / rated value</b>	kV	6
<b>Recorded real power</b>	W	2
<b>Protection class IP</b>		IP20
<b>Electromagnetic compatibility</b>		IEC 60947-1 / IEC 61000-6-2 / IEC 61000-6-4
<b>Resistance against vibration / according to IEC 60068-2-6</b>		1 ... 6 Hz: 15 mm, 6 ... 500 Hz: 2g
<b>Shock resistance / according to IEC 60068-2-27</b>		sinusoidal half-wave 15g / 11 ms
<b>Installation altitude / at a height over sea level / maximum</b>	m	2,000
<b>Conductor-bound parasitic coupling BURST / according to IEC 61000-4-4</b>		2 kV
<b>Conductor-bound parasitic coupling conductor-earth SURGE / according to IEC 61000-4-5</b>		2 kV
<b>Conductor-bound parasitic coupling conductor-conductor SURGE / according to IEC 61000-4-5</b>		1 kV
<b>Electrostatic discharge / according to IEC 61000-4-2</b>		6 kV contact discharge / 8 kV air discharge
<b>Field-bound parasitic coupling / according to IEC 61000-4-3</b>		10 V/m
<b>Insulation voltage / for overvoltage category III according to IEC 60664 / with degree of pollution 3 / rated value</b>	V	690
<b>Degree of pollution</b>		3
<b>Ambient temperature</b>		
<ul style="list-style-type: none"> <li>• during operating</li> </ul>	°C	-25 ... +60
<ul style="list-style-type: none"> <li>• during storage</li> </ul>	°C	-40 ... +85
<ul style="list-style-type: none"> <li>• during transport</li> </ul>	°C	-40 ... +85
<b>Galvanic isolation</b>		
<ul style="list-style-type: none"> <li>• between entrance and outlet</li> </ul>		Yes
<ul style="list-style-type: none"> <li>• between the outputs</li> </ul>		Yes
<ul style="list-style-type: none"> <li>• between the voltage supply and other circuits</li> </ul>		Yes

Mechanical design:		
<b>Width</b>	mm	22.5
<b>Height</b>	mm	92
<b>Depth</b>	mm	91
<b>mounting position</b>		any
<b>Distance, to be maintained, to earthed part</b>		
• forwards	mm	0
• backwards	mm	0
• sideways	mm	0
• upwards	mm	0
• downwards	mm	0
<b>Distance, to be maintained, to the ranks assembly</b>		
• forwards	mm	0
• backwards	mm	0
• sideways	mm	0
• upwards	mm	0
• downwards	mm	0
<b>Distance, to be maintained, conductive elements</b>		
• forwards	mm	0
• backwards	mm	0
• sideways	mm	0
• upwards	mm	0
• downwards	mm	0
<b>Mounting type</b>		snap-on mounting
<b>Product function / removable terminal for auxiliary and control circuit</b>		Yes
<b>Design of the electrical connection</b>		screw-type terminals
<b>Type of the connectable conductor cross-sections</b>		
• solid		1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )
• finely stranded		
• with wire end processing		1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )
• for AWG conductors		
• solid		2x (20 ... 14)
• stranded		2x (20 ... 14)
<b>Tightening torque</b>		
• with screw-type terminals	N·m	0.8 ... 1.2
Outputs:		
<b>Number of NO contacts / delayed switching</b>		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
 CCC		 UL
	 C-TICK	<a href="#">Special Test Certificate</a>
 DNV	 GL	<a href="#">Type Test Certificates/Test Report</a>
 LRS	<a href="#">Declaration of Conformity</a>	<a href="#">other</a>

#### 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:

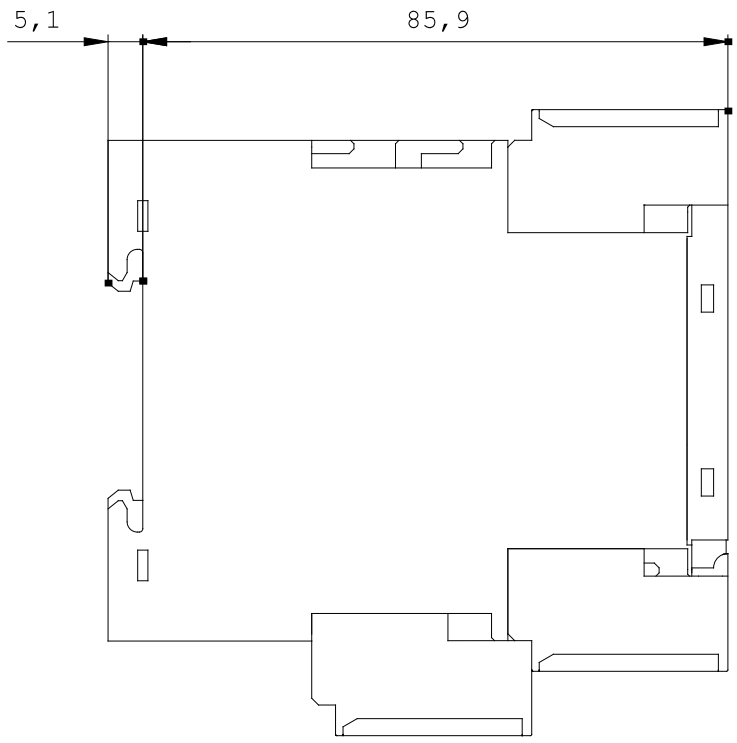
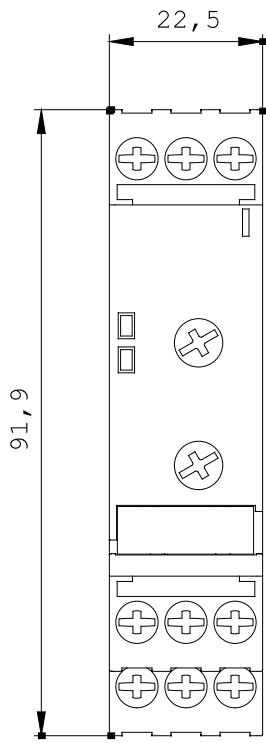
<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/WW/view/en/3UG4513-1BR20/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3UG4513-1BR20](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3UG4513-1BR20)



last change:

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