



DIGITAL MONITORING RELAY UNBALANCE 0-20%
 REVERSIBLE PHASE SEQUENCE PHASE FAILURE
 3X 160 TO 690V AC 50 TO 60 HZ UNDERVOLTAGE
 160-690V HYSTERESIS 1-20V ON AND OFF DELAY 0-
 20S 2 CHANGEOVER CONTACTS SCREW
 TERMINAL REPLACEMENT PRODUCT FOR
 3UG3012-1A...

Product function		Phase monitoring relay
Measuring circuit:		
Type of voltage for monitoring		AC
Number of poles for main current circuit		3
Measurable voltage at AC	V	160 ... 690
Adjustable voltage range	V	160 ... 690
Adjustable response delay time		
• when starting	s	0.1 ... 20
• 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 data:		
Design of the display		LCD
Display version LED		No
Product function		
• undervoltage detection		Yes

<ul style="list-style-type: none"> • Overvoltage detection • phase sequence recognition • Phase failure detection • Phase unbalance • Overvoltage detection 3 phase • undervoltage detection 3 phases • Voltage window recognition 3 phase • Auto-reset • Adjustable open/closed-circuit current principle 		<p>No</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>No</p> <p>Yes</p> <p>No</p> <p>Yes</p> <p>Yes</p>
Starting 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"> • at AC <ul style="list-style-type: none"> — at 50 Hz rated value — at 60 Hz rated value 	V	160 ... 690
	V	160 ... 690
Operating range factor control supply voltage rated value		
<ul style="list-style-type: none"> • at AC <ul style="list-style-type: none"> — at 50 Hz — at 60 Hz 		1 ... 1
		1 ... 1
Surge voltage resistance rated value	kV	6
Consumed active power	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
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 	°C	-25 ... +60

<ul style="list-style-type: none"> during storage 	°C	-40 ... +85
<ul style="list-style-type: none"> during transport 	°C	-40 ... +85
Galvanic isolation		
<ul style="list-style-type: none"> between entrance and outlet 		Yes
<ul style="list-style-type: none"> between the outputs 		Yes
<ul style="list-style-type: none"> between the voltage supply and other circuits 		Yes

Mechanical data:		
Width	mm	22.5
Height	mm	92
Depth	mm	91
Mounting position		any
Required spacing for grounded parts		
<ul style="list-style-type: none"> forwards 	mm	0
<ul style="list-style-type: none"> Backwards 	mm	0
<ul style="list-style-type: none"> at the side 	mm	0
<ul style="list-style-type: none"> upwards 	mm	0
<ul style="list-style-type: none"> downwards 	mm	0
Required spacing with side-by-side mounting		
<ul style="list-style-type: none"> forwards 	mm	0
<ul style="list-style-type: none"> Backwards 	mm	0
<ul style="list-style-type: none"> at the side 	mm	0
<ul style="list-style-type: none"> upwards 	mm	0
<ul style="list-style-type: none"> downwards 	mm	0
Required spacing for live parts		
<ul style="list-style-type: none"> forwards 	mm	0
<ul style="list-style-type: none"> Backwards 	mm	0
<ul style="list-style-type: none"> at the side 	mm	0
<ul style="list-style-type: none"> upwards 	mm	0
<ul style="list-style-type: none"> downwards 	mm	0
Mounting type		snap-on mounting
Product function removable terminal for auxiliary and control circuit		Yes
Type of electrical connection		screw-type terminals
Type of connectable conductor cross-sections		
<ul style="list-style-type: none"> solid 		1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²)
<ul style="list-style-type: none"> finely stranded <ul style="list-style-type: none"> — with core end processing 		1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²)
<ul style="list-style-type: none"> at AWG conductors <ul style="list-style-type: none"> — solid 		2x (20 ... 14)
<ul style="list-style-type: none"> — 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		
<ul style="list-style-type: none"> • at AC-15 <ul style="list-style-type: none"> — at 250 V at 50/60 Hz — at 400 V at 50/60 Hz • at DC-13 <ul style="list-style-type: none"> — 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 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	Declaration of Conformity	Test Certificates
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[Special Test Certificate](#)

Test Certificates	Shipping Approval	other	Railway
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[Type Test Certificates/Test Report](#)



LRS

[Confirmation](#)

[Vibration and Shock](#)

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

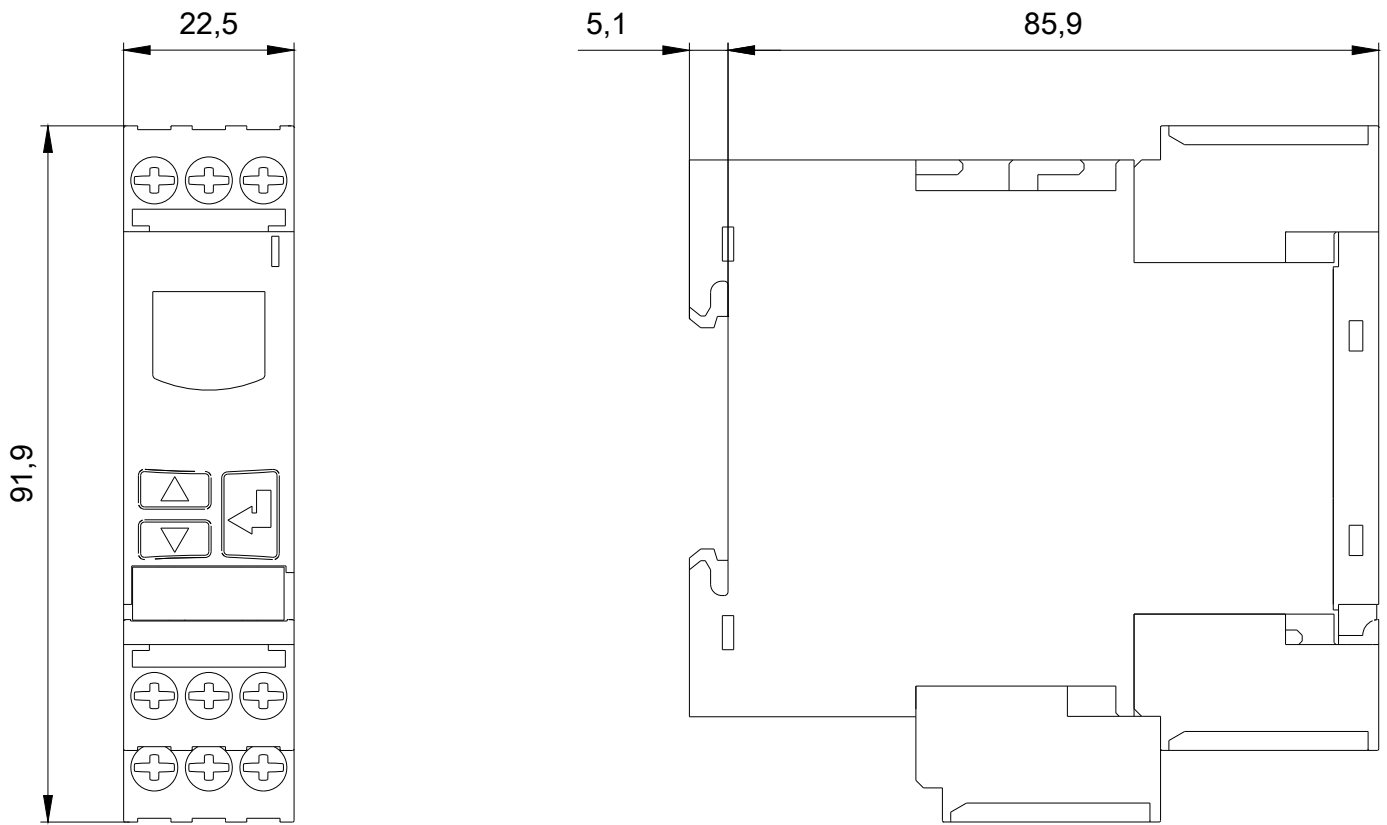
<http://www.siemens.com/industrial-controls/catalogs>

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=3UG4614-1BR20>



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