

Digital monitoring relay for 3-phase voltage with N-conductor Phase sequence can be activated Phase failure 3 x 90 to 400 V 50 to 60 Hz AC Undervoltage and overvoltage 90-400 V Hysteresis 1-20 V 0-20 s each for Umin and Umax 1 CO for Umin 1 CO for Umax screw terminal Successor product for 3UG3042-1BP50



Figure similar

Product brand name	SIRIUS
Product designation	Network monitoring relay with digital setting
Design of the product	5 functions
Product type designation	3UG4

General technical data	
Product function	Phase monitoring relay
Display version LED	No
Design of the display	LCD
Degree of pollution	3
Type of voltage	
• for monitoring	AC
• of the control supply voltage	AC
Surge voltage resistance rated value	6 kV
Protection class IP	IP20
Shock resistance	
• acc. to IEC 60068-2-27	sinusoidal half-wave 15g / 11 ms
Mechanical service life (switching cycles)	

• typical	10 000 000
<b>Electrical endurance (switching cycles)</b>	
• at AC-15 at 230 V typical	100 000
<b>Thermal current of the switching element with contacts maximum</b>	5 A
<b>Reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750</b>	K
<b>Reference code acc. to DIN EN 81346-2</b>	K
<b>Reference code acc. to DIN EN 61346-2</b>	K
<b>Relative repeat accuracy</b>	1 %

### Product Function

<b>Product function</b>	
• undervoltage detection	Yes
• Overvoltage detection	Yes
• phase sequence recognition	Yes
• Phase failure detection	Yes
• Overvoltage detection 3 phase	Yes
• undervoltage detection 3 phases	Yes
• Voltage window recognition 3 phase	Yes
• Adjustable open/closed-circuit current principle	Yes
• Auto-reset	Yes

### Control circuit/ Control

<b>Control supply voltage at AC</b>	
• at 50 Hz rated value	90 ... 400 V
• at 60 Hz rated value	90 ... 400 V
<b>Operating range factor control supply voltage rated value at AC at 50 Hz</b>	
• initial value	1
• Full-scale value	1
<b>Operating range factor control supply voltage rated value at AC at 60 Hz</b>	
• initial value	1
• Full-scale value	1

### Measuring circuit

<b>Adjustable response delay time</b>	
• with lower or upper limit violation	0.1 ... 20 s
<b>Accuracy of digital display</b>	+/-1 digit

### Precision

<b>Relative metering precision</b>	5 %
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### Auxiliary circuit

<b>Number of CO contacts</b>	
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<ul style="list-style-type: none"> <li>• delayed switching</li> </ul>	2
<b>Operating frequency with 3RT2 contactor maximum</b>	5 000 1/h
<b>Main circuit</b>	
<b>Number of poles for main current circuit</b>	3
<b>Outputs</b>	
<b>Ampacity of the output relay at AC-15</b>	
<ul style="list-style-type: none"> <li>• at 250 V at 50/60 Hz</li> </ul>	3 A
<ul style="list-style-type: none"> <li>• at 400 V at 50/60 Hz</li> </ul>	3 A
<b>Ampacity of the output relay at DC-13</b>	
<ul style="list-style-type: none"> <li>• at 24 V</li> </ul>	1 A
<ul style="list-style-type: none"> <li>• at 125 V</li> </ul>	0.2 A
<ul style="list-style-type: none"> <li>• at 250 V</li> </ul>	0.1 A
<b>Operating current at 17 V minimum</b>	5 mA
<b>Continuous current of the DIAZED fuse link of the output relay</b>	4 A
<b>Electromagnetic compatibility</b>	
<b>Conducted interference</b>	
<ul style="list-style-type: none"> <li>• due to burst acc. to IEC 61000-4-4</li> </ul>	2 kV
<ul style="list-style-type: none"> <li>• due to conductor-earth surge acc. to IEC 61000-4-5</li> </ul>	2 kV
<ul style="list-style-type: none"> <li>• due to conductor-conductor surge acc. to IEC 61000-4-5</li> </ul>	1 kV
<b>Field-bound parasitic coupling acc. to IEC 61000-4-3</b>	10 V/m
<b>Electrostatic discharge acc. to IEC 61000-4-2</b>	6 kV contact discharge / 8 kV air discharge
<b>Galvanic isolation</b>	
<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
<b>Connections/ Terminals</b>	
<b>Product function</b>	
<ul style="list-style-type: none"> <li>• removable terminal for auxiliary and control circuit</li> </ul>	Yes
<b>Type of electrical connection</b>	screw-type terminals
<b>Type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"> <li>• solid</li> </ul>	1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>• finely stranded with core end processing</li> </ul>	1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>• at AWG conductors solid</li> </ul>	2x (20 ... 14)
<ul style="list-style-type: none"> <li>• at AWG conductors stranded</li> </ul>	2x (20 ... 14)
<b>Connectable conductor cross-section</b>	
<ul style="list-style-type: none"> <li>• solid</li> </ul>	0.5 ... 4 mm <sup>2</sup>

<ul style="list-style-type: none"> <li>finely stranded with core end processing</li> </ul>	0.5 ... 2.5 mm <sup>2</sup>
<b>AWG number as coded connectable conductor cross section</b>	
<ul style="list-style-type: none"> <li>solid</li> </ul>	20 ... 14
<ul style="list-style-type: none"> <li>stranded</li> </ul>	20 ... 14
<b>Tightening torque</b>	
<ul style="list-style-type: none"> <li>with screw-type terminals</li> </ul>	0.8 ... 1.2 N·m






### Installation/ mounting/ dimensions

<b>Mounting position</b>	any
<b>Mounting type</b>	snap-on mounting
<b>Height</b>	102 mm
<b>Width</b>	22.5 mm
<b>Depth</b>	91 mm
<b>Required spacing</b>	
<ul style="list-style-type: none"> <li>with side-by-side mounting <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> </ul>	0 mm
	0 mm
	0 mm
	0 mm
	0 mm
<ul style="list-style-type: none"> <li>for grounded parts <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> <li>— upwards</li> <li>— at the side</li> <li>— downwards</li> </ul> </li> </ul>	0 mm
	0 mm
	0 mm
	0 mm
	0 mm
<ul style="list-style-type: none"> <li>for live parts <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> </ul>	0 mm
	0 mm
	0 mm
	0 mm
	0 mm

### Ambient conditions

<b>Installation altitude at height above sea level</b>	
<ul style="list-style-type: none"> <li>maximum</li> </ul>	2 000 m

### Certificates/ approvals

General Product Approval		EMC	Declaration of Conformity	
 CCC	 UL		 RCM	 EG-Konf.

[Miscellaneous](#)

Test Certificates	Marine / Shipping	other	Railway
<a href="#">Type Test Certificates/Test Report</a>	<a href="#">Special Test Certificate</a>	<a href="#">Confirmation</a>	<a href="#">Vibration and Shock</a>
	 LRS		
		 DNVGL.COM/AF	

### Further information

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

[www.siemens.com/sirius/catalogs](http://www.siemens.com/sirius/catalogs)

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3UG4616-1CR20>

**Cax online generator**

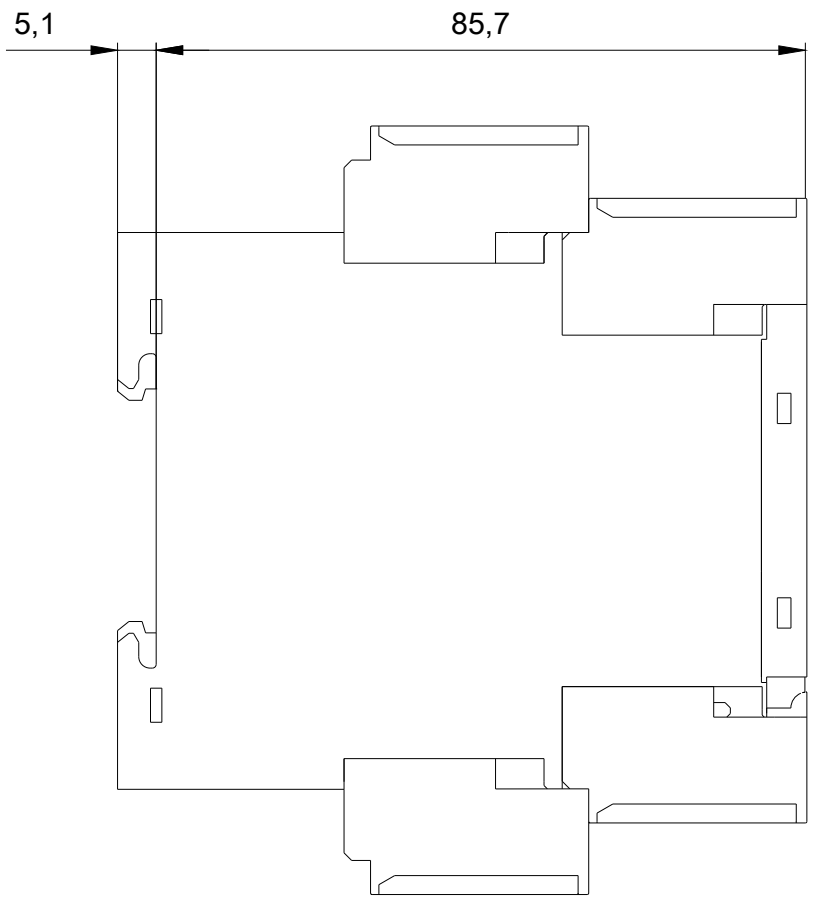
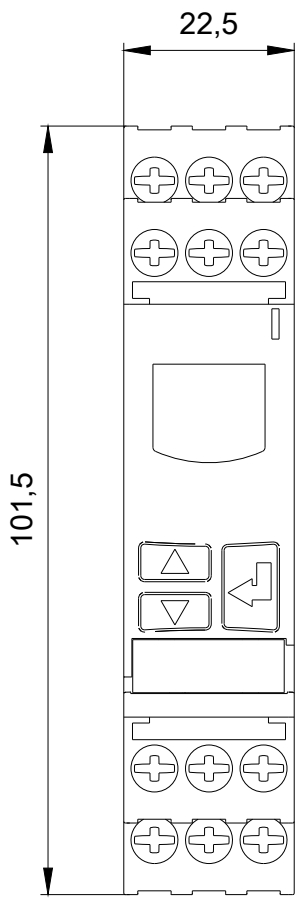
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4616-1CR20>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4616-1CR20>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3UG4616-1CR20&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4616-1CR20&lang=en)



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