



Analog monitoring relay Phase failure and sequence Adjustable undervoltage Asymmetry 20% fixed 3 x 160 to 690 V 50 to 60 Hz AC Hysteresis 5% fixed Delay time 0-20 s 2 change-over contacts screw terminal Successor product for 3UG3013-1B...

<b>product brand name</b>	SIRIUS
<b>product designation</b>	Network monitoring relay with analog setting
<b>design of the product</b>	4 functions
<b>product type designation</b>	3UG4
<b>General technical data</b>	
<b>product function</b>	Phase monitoring relay
<b>display version LED</b>	Yes
<b>insulation voltage for overvoltage category III according to IEC 60664</b>	
• with degree of pollution 3 rated value	690 V
<b>degree of pollution</b>	3
<b>type of voltage</b>	
• for monitoring	AC
• of the control supply voltage	AC
<b>surge voltage resistance rated value</b>	6 kV
<b>protection class IP</b>	IP20
<b>shock resistance according to IEC 60068-2-27</b>	sinusoidal half-wave 15g / 11 ms
<b>vibration resistance according to IEC 60068-2-6</b>	1 ... 6 Hz: 15 mm, 6 ... 500 Hz: 2g
<b>mechanical service life (switching cycles) typical</b>	10 000 000
<b>electrical endurance (switching cycles) at AC-15 at 230 V typical</b>	100 000
<b>thermal current of the switching element with contacts maximum</b>	5 A
<b>reference code according to IEC 81346-2</b>	K
<b>relative repeat accuracy</b>	1 %
<b>Substance Prohibitance (Date)</b>	05/01/2012
<b>Product Function</b>	
<b>product function</b>	
• undervoltage detection	Yes
• overvoltage detection	No
• phase sequence recognition	Yes
• phase failure detection	Yes
• asymmetry detection	Yes
• overvoltage detection 3 phase	No
• undervoltage detection 3 phases	Yes
• voltage window recognition 3 phase	No
• adjustable open/closed-circuit current principle	No
• auto-RESET	Yes
<b>Control circuit/ Control</b>	
<b>control supply voltage at AC</b>	

<ul style="list-style-type: none"> <li>• at 50 Hz rated value</li> <li>• at 60 Hz rated value</li> </ul>	160 ... 690 V 160 ... 690 V
<b>operating range factor control supply voltage rated value at AC at 50 Hz</b>	
<ul style="list-style-type: none"> <li>• initial value</li> <li>• full-scale value</li> </ul>	1 1
<b>operating range factor control supply voltage rated value at AC at 60 Hz</b>	
<ul style="list-style-type: none"> <li>• initial value</li> <li>• full-scale value</li> </ul>	1 1
<b>Measuring circuit</b>	
<b>measurable voltage at AC</b>	690 ... 160 V
<b>Precision</b>	
<b>relative metering precision</b>	5 %
<b>Auxiliary circuit</b>	
number of NC contacts delayed switching	0
number of NO contacts delayed switching	0
number of CO contacts delayed switching	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>ampacity of the output relay at AC-15</b>	
<ul style="list-style-type: none"> <li>• at 250 V at 50/60 Hz</li> <li>• at 400 V at 50/60 Hz</li> </ul>	3 A 3 A
<b>ampacity of the output relay at DC-13</b>	
<ul style="list-style-type: none"> <li>• at 24 V</li> <li>• at 125 V</li> <li>• at 250 V</li> </ul>	1 A 0.2 A 0.1 A
<b>operational 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 according to IEC 61000-4-4</li> <li>• due to conductor-earth surge according to IEC 61000-4-5</li> <li>• due to conductor-conductor surge according to IEC 61000-4-5</li> </ul>	2 kV 2 kV 1 kV
<b>field-based interference according to IEC 61000-4-3</b>	10 V/m
<b>electrostatic discharge according 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 input and output</li> <li>• between the outputs</li> <li>• between the voltage supply and other circuits</li> </ul>	Yes Yes Yes
<b>Connections/ Terminals</b>	
<b>product component removable terminal for auxiliary and control circuit</b>	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> <li>• finely stranded with core end processing</li> <li>• at AWG cables solid</li> <li>• at AWG cables stranded</li> </ul>	1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> ) 1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> ) 2x (20 ... 14) 2x (20 ... 14)
<b>connectable conductor cross-section</b>	
<ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded with core end processing</li> </ul>	0.5 ... 4 mm <sup>2</sup> 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> <li>• stranded</li> </ul>	20 ... 14 20 ... 14

tightening torque with screw-type terminals	0.8 ... 1.2 N·m
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	any
<b>fastening method</b>	snap-on mounting
<b>height</b>	92 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> <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> <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  0 mm 0 mm 0 mm 0 mm 0 mm  0 mm 0 mm 0 mm 0 mm 0 mm

<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m
<b>ambient temperature</b>	
<ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> <li>• during transport</li> </ul>	-25 ... +60 °C -40 ... +85 °C -40 ... +85 °C

<b>Certificates/ approvals</b>		
<b>General Product Approval</b>	<b>EMC</b>	<b>Declaration of Conformity</b>



[Confirmation](#)



<b>Test Certificates</b>	<b>Marine / Shipping</b>	<b>other</b>	<b>Railway</b>
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[Special Test Certificate](#)

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**Further information**

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

<https://www.siemens.com/ic10>

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mfb=3UG4513-1BR20>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3UG4513-1BR20>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4513-1BR20>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mfb=3UG4513-1BR20&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3UG4513-1BR20&lang=en)

**Characteristic: Derating**

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12/21/2020 