



Figure similar

!!! product phase-out !!! The preferred successor type is 3UG5616-1CR20 phase sequence phase failure 3x160-690 V screw digital monitoring relay for 3-phase supply voltage connectable phase sequence phase failure 3 x 160 to 690 V 50 to 60 Hz AC undervoltage and overvoltage 160-690 V hysteresis 1-20 V 0-20 s each for Umin and Umax 1 CO for Umin 1 CO for Umax screw terminal

product brand name	SIRIUS
product designation	Network monitoring relay with digital setting
design of the product	5 functions
product type designation	3UG4
<b>General technical data</b>	
product function	Phase monitoring relay
display version LED	No
design of the display	LCD
insulation voltage for overvoltage category III according to IEC 60664	
• with degree of pollution 3 rated value	690 V
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 according to IEC 60068-2-27	sinusoidal half-wave 15g / 11 ms
vibration resistance according to IEC 60068-2-6	1 ... 6 Hz: 15 mm, 6 ... 500 Hz: 2g
mechanical service life (operating cycles) typical	10 000 000
electrical endurance (operating cycles) at AC-15 at 230 V typical	100 000
thermal current of the switching element with contacts maximum	5 A
reference code according to IEC 81346-2	K
relative repeat accuracy	1 %
Substance Prohibitance (Date)	05/01/2012
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8
Weight	0.147 kg
<b>Product Function</b>	
product function	
• undervoltage detection	Yes
• overvoltage detection	Yes
• phase sequence recognition	Yes
• phase failure detection	Yes
• asymmetry detection	Yes; not adjustable, indirectly by monitoring the voltage limit values
• overvoltage detection 3 phase	Yes
• undervoltage detection 3 phases	Yes
• voltage window recognition 3 phase	Yes

<ul style="list-style-type: none"> <li>adjustable open/closed-circuit current principle</li> <li>auto-RESET</li> </ul>	<p>Yes</p> <p>Yes</p>
<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>	<p>160 ... 690 V</p> <p>160 ... 690 V</p>
<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>	<p>1</p> <p>1</p>
<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>	<p>1</p> <p>1</p>
<b>Measuring circuit</b>	
<b>measurable voltage at AC</b>	160 ... 690 V
<b>adjustable response delay time</b>	
<ul style="list-style-type: none"> <li>with lower or upper limit violation</li> </ul>	0.1 ... 20 s
<b>response time maximum</b>	450 ms
<b>accuracy of digital display</b>	+/-1 digit
<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
<b>number of CO contacts</b>	
<ul style="list-style-type: none"> <li>for auxiliary contacts</li> <li>delayed switching</li> </ul>	<p>2</p> <p>2</p>
<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>	<p>3 A</p> <p>3 A</p>
<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>	<p>1 A</p> <p>0.2 A</p> <p>0.1 A</p>
<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>	<p>2 kV</p> <p>2 kV</p> <p>1 kV</p>
<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>	<p>Yes</p> <p>Yes</p> <p>Yes</p>
<b>Electrical Safety</b>	
<b>protection class IP on the front according to IEC 60529</b>	IP20
<b>Connections/ Terminals</b>	
<b>product component removable terminal for auxiliary and control circuit</b>	Yes
<b>type of electrical connection</b>	screw terminal
<b>type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"> <li>solid</li> </ul>	1x (0.5 ... 4.0 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> <li>for AWG cables solid</li> <li>for AWG cables stranded</li> </ul>	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

**Installation/ mounting/ dimensions**

<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 0 mm</li> <li>backwards 0 mm</li> <li>upwards 0 mm</li> <li>downwards 0 mm</li> <li>at the side 0 mm</li> </ul> </li> <li>for grounded parts               <ul style="list-style-type: none"> <li>forwards 0 mm</li> <li>backwards 0 mm</li> <li>upwards 0 mm</li> <li>at the side 0 mm</li> <li>downwards 0 mm</li> </ul> </li> <li>for live parts               <ul style="list-style-type: none"> <li>forwards 0 mm</li> <li>backwards 0 mm</li> <li>upwards 0 mm</li> <li>downwards 0 mm</li> <li>at the side 0 mm</li> </ul> </li> </ul>	

**Ambient conditions**

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

**Approvals Certificates**

**General Product Approval**



[Confirmation](#)



**EMV Test Certificates Marine / Shipping**



[KC](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



**other Railway Environment**



## Further information

## Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

## 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?mlfb=3UG4615-1CR20>

## Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4615-1CR20>

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

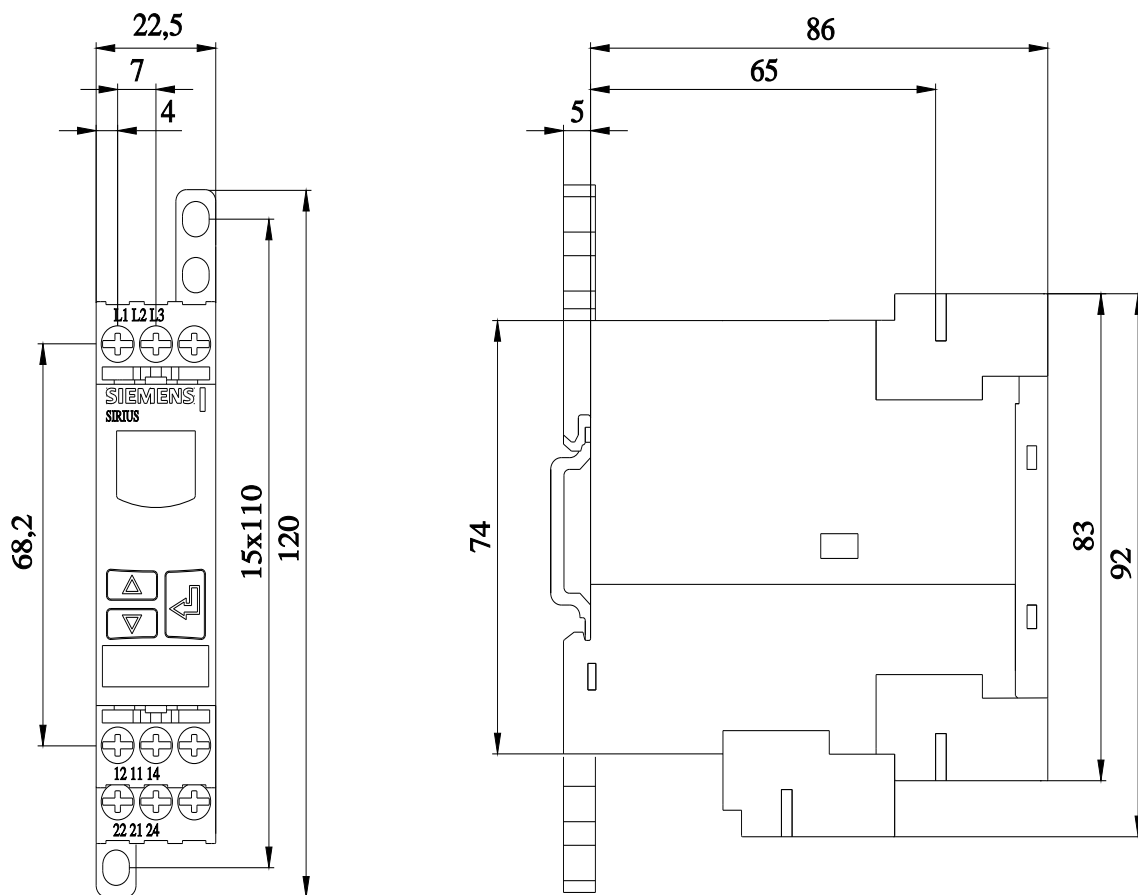
<https://support.industry.siemens.com/cs/ww/en/ps/3UG4615-1CR20>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3UG4615-1CR20&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4615-1CR20&lang=en)

## Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4615-1CR20/manual>



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