



Figure similar

!!! product phase-out !!! the preferred successor is 3UG5616-1CR20 phase failure and sequence monitoring 3x 160-690 V, screw terminal digital monitoring relay for 3-phase voltage with N conductor connectable phase sequence 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 contact for Umin 1 CO contact 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
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 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol - 119-47-1
Weight	0.161 kg
<b>Product Function</b>	
product function	
• undervoltage detection	Yes
• overvoltage detection	Yes
• phase sequence recognition	Yes
• phase failure detection	Yes
• asymmetry 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
<b>Control circuit/ Control</b>	
<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
<b>Measuring circuit</b>	
<b>measurable voltage at AC</b>	90 ... 400 V
<b>adjustable response delay time</b>	
• with lower or upper limit violation	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>	
• for auxiliary contacts	2
• 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>	
• at 250 V at 50/60 Hz	3 A
• at 400 V at 50/60 Hz	3 A
<b>ampacity of the output relay at DC-13</b>	
• at 24 V	1 A
• at 125 V	0.2 A
• at 250 V	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>	
• due to burst according to IEC 61000-4-4	2 kV
• due to conductor-earth surge according to IEC 61000-4-5	2 kV
• due to conductor-conductor surge according to IEC 61000-4-5	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>	
• between input and output	Yes
• between the outputs	Yes
• between the voltage supply and other circuits	Yes
<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>	
• solid	1x (0.5 ... 4.0 mm²), 2x (0.5 ... 2.5 mm²)
• finely stranded with core end processing	1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²)

<ul style="list-style-type: none"> <li>• for AWG cables solid</li> <li>• for AWG cables stranded</li> </ul>	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>	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> <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

#### 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</li> <li>• during storage</li> <li>• during transport</li> </ul>	-25 ... +60 °C -40 ... +85 °C -40 ... +85 °C

#### Environmental footprint

Environmental Product Declaration (EPD)	Yes
global warming potential [CO2 eq] total	17.1 kg
global warming potential [CO2 eq] during manufacturing	4.44 kg
global warming potential [CO2 eq] during operation	13.7 kg
global warming potential [CO2 eq] after end of life	-1.06 kg

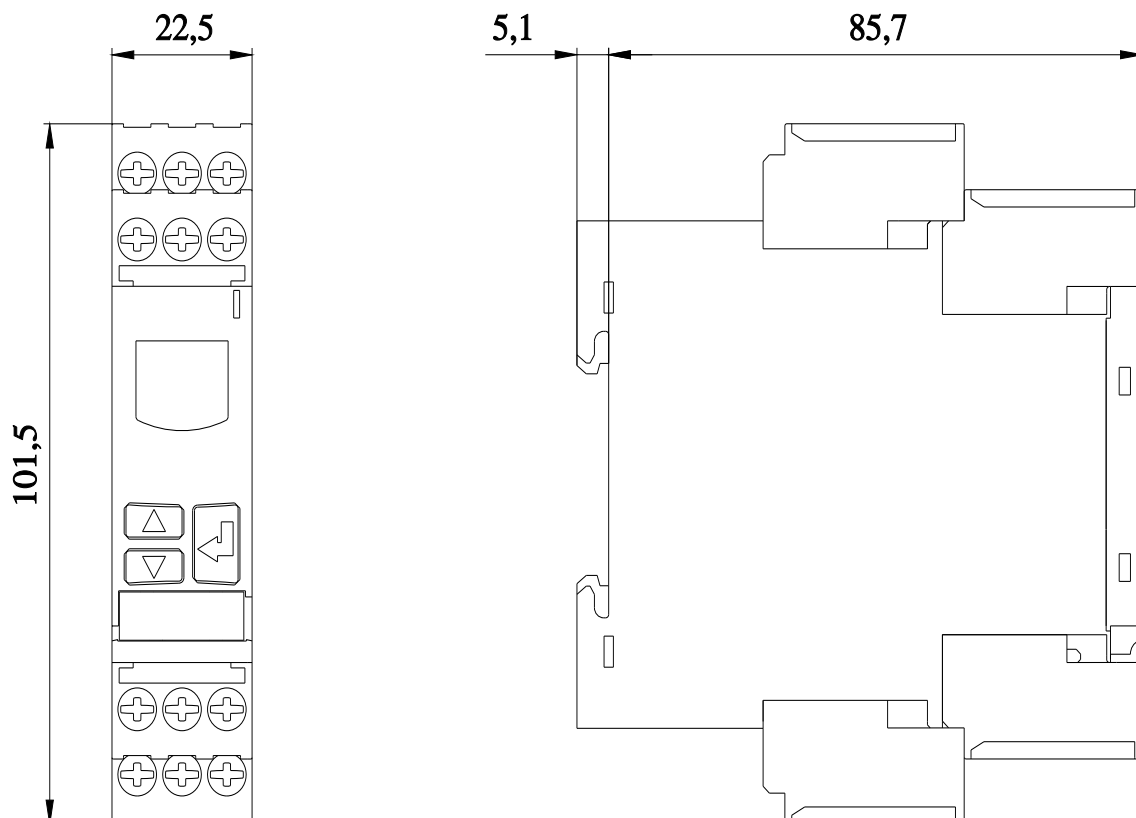
#### Approvals Certificates

<b>General Product Approval</b>	EMV
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EMV	Test Certificates	Marine / Shipping	other
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**Railway**
**Environment**
[Special Test Certificate](#)

[Environmental Confirmations](#)
**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=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)
**Characteristic: Derating**
<https://support.industry.siemens.com/cs/ww/en/ps/3UG4616-1CR20/manual>


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