



Figure similar

!!! product phase-out !!! the preferred successor is 3UG5643-1CS20 digital monitoring relay voltage monitoring, 22.5 mm from 17 to 275 V AC/DC overshoot and undershoot with internal power supply noise pulses delay 0.1 to 20 s hysteresis 0.1 to 150 V 1 changeover contact spring-loaded connection system screw terminal

<b>product brand name</b>	SIRIUS
<b>product designation</b>	Voltage monitoring relay with digital setting
<b>product type designation</b>	3UG4
<b>General technical data</b>	
<b>product function</b>	Voltage monitoring relay
<b>design of the display</b>	LCD
<b>consumed active power</b>	2 W
<b>insulation voltage for overvoltage category III according to IEC 60664</b>	
• with degree of pollution 3 rated value	690 V
<b>type of voltage</b>	
• for monitoring	AC/DC
• of the control supply voltage	AC/DC
<b>surge voltage resistance rated value</b>	4 kV
<b>maximum permissible voltage for protective separation</b>	
• between auxiliary and auxiliary circuit	300 V
• between control and auxiliary circuit	300 V
<b>shock resistance according to IEC 60068-2-27</b>	sinusoidal half-wave 15 g / 11 ms
<b>vibration resistance according to IEC 60068-2-6</b>	1 ... 6 Hz: 15 mm, 6 ... 500 Hz: 2 g
<b>mechanical service life (operating cycles) typical</b>	10 000 000
electrical endurance (operating cycles) 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 according to IEC 81346-2</b>	K
<b>relative repeat accuracy</b>	1 %
<b>Substance Prohibitance (Date)</b>	05/01/2012
<b>SVHC substance name</b>	Lead CAS-No. 7439-92-1 Lead monoxide (lead oxide) CAS-No. 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5 Melamine CAS-No. 108-78-1 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol CAS-No. 119-47-1
<b>Net Weight</b>	137 g
<b>Product Function</b>	
<b>product function</b>	
• undervoltage detection	Yes
• overvoltage detection	Yes
• overvoltage detection 1 phase	Yes
• overvoltage detection 3 phase	No
• overvoltage detection DC	Yes

• undervoltage detection 1 phase	Yes
• undervoltage detection 3 phases	No
• undervoltage detection DC	Yes
• voltage window recognition 1 phase	Yes
• voltage window recognition 3 phase	No
• voltage window recognition DC	Yes
• adjustable open/closed-circuit current principle	Yes
• external reset	Yes
• auto-RESET	Yes
<b>measurable line frequency initial value</b>	40 Hz
<b>measurable line frequency full-scale value</b>	500 Hz
<b>Control circuit/ Control</b>	
<b>control supply voltage at AC</b>	
• at 50 Hz rated value	17 ... 275 V
• at 60 Hz rated value	17 ... 275 V
<b>control supply voltage at DC rated value</b>	17 ... 275 V
<b>operating range factor control supply voltage rated value at DC</b>	
• initial value	1
• full-scale value	1
<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>starting time after the control supply voltage has been applied</b>	1 000 ms
<b>Measuring circuit</b>	
<b>measurable line frequency</b>	40 ... 500 Hz
<b>measurable voltage at AC</b>	17 ... 275 V
<b>measurable voltage at DC</b>	17 ... 275 V
<b>adjustable response delay time</b>	
• when starting	0.1 ... 20 s
• 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>relative temperature-related measurement deviation</b>	0.1 %
<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	1
<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>	1
<b>operating voltage</b>	
• at AC at 60 Hz rated value	240 V
• at DC rated value	24 V
ampacity of the output relay at AC-15 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

Electromagnetic compatibility	
<b>conducted interference</b>	
<ul style="list-style-type: none"> <li>• due to burst according to IEC 61000-4-4</li> </ul>	2 kV
<ul style="list-style-type: none"> <li>• due to conductor-earth surge according to IEC 61000-4-5</li> </ul>	2 kV
<ul style="list-style-type: none"> <li>• due to conductor-conductor surge according to IEC 61000-4-5</li> </ul>	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
Galvanic isolation	
<b>design of the electrical isolation</b>	Protective separation
<b>galvanic isolation</b>	
<ul style="list-style-type: none"> <li>• between input and output</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>	No
Electrical Safety	
<b>protection class IP on the front according to IEC 60529</b>	IP20
Connections/ Terminals	
<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 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>• for AWG cables solid</li> </ul>	2x (20 ... 14)
<ul style="list-style-type: none"> <li>• for AWG cables 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
tightening torque with screw-type terminals	1.2 ... 0.8 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</li> <li>— backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> </ul>	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
<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>— at the side</li> </ul> </li> </ul>	0 mm
<ul style="list-style-type: none"> <li>• for live parts <ul style="list-style-type: none"> <li>— backwards</li> </ul> </li> </ul>	0 mm
<ul style="list-style-type: none"> <li>• for live parts <ul style="list-style-type: none"> <li>— upwards</li> </ul> </li> </ul>	0 mm
<ul style="list-style-type: none"> <li>• for live parts <ul style="list-style-type: none"> <li>— at the side</li> </ul> </li> </ul>	0 mm
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m

<b>ambient temperature</b>	
• during operation	-25 ... +60 °C
• during storage	-40 ... +85 °C
• during transport	-40 ... +85 °C

### Approvals Certificates

<b>Environmental Product Declaration</b>	
• global warming potential [CO2 eq] / during manufacturing	4.44 kg
• global warming potential [CO2 eq] / during sales	0.0341 kg
• global warming potential [CO2 eq] / during operation	13.7 kg
• global warming potential [CO2 eq] / after end of life	-1.06 kg
• global warming potential [CO2 eq] / total	17.1 kg

<b>Environment</b>	<b>General Product Approval</b>	<b>EMV</b>
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[Environmental Confirmations](#)



<b>Maritime application</b>	<b>other</b>
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[Confirmation](#)



### Further information

Information on the packaging

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

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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=3UG4633-1AL30>

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4633-1AL30>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4633-1AL30>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3UG4633-1AL30&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4633-1AL30&lang=en)

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