



Digital monitoring relay Voltage monitoring, 22.5 mm from 0.1-60 V  
 AC/DC Overshoot and undershoot Supply voltage: 24 V AC/DC 50 to  
 60 Hz DC and AC without galvanic isolation to measuring circuit  
 Noise pulses delay 0.1 to 20 s Hysteresis 0.1 to 30 V 1 change-over  
 contact with or without fault buffer screw terminal Successor product  
 for 3UG3531-1AC..

Product brand name	SIRIUS
Product designation	Voltage monitoring relay with digital setting
Product type designation	3UG4

**General technical data**

Product function	Voltage monitoring relay
Design of the display	LCD
Type of voltage	
• for monitoring	AC/DC
• of the control supply voltage	AC/DC
Surge voltage resistance rated value	4 kV
maximum permissible voltage for safe isolation	
• between auxiliary and auxiliary circuit	300 V
• between control and auxiliary circuit	300 V
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
Electrical endurance (switching 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 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
• 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

## Control circuit/ Control

<b>Control supply voltage at AC</b>	
• at 50 Hz rated value	24 ... 24 V
• at 60 Hz rated value	24 ... 24 V
<b>Control supply voltage at DC</b>	
• rated value	24 ... 24 V
<b>Operating range factor control supply voltage rated value at DC</b>	
• initial value	0.85
• Full-scale value	1.15
<b>Operating range factor control supply voltage rated value at AC at 50 Hz</b>	
• initial value	0.85
• Full-scale value	1.15
<b>Operating range factor control supply voltage rated value at AC at 60 Hz</b>	
• initial value	0.85
• Full-scale value	1.15

Measuring circuit	
Measurable line frequency	40 ... 500 Hz
Measurable voltage at DC	0.1 ... 60
Adjustable response delay time <ul style="list-style-type: none"> <li>• with lower or upper limit violation</li> </ul>	0.1 ... 20 s
Accuracy of digital display	+/-1 digit
Relative temperature-related measurement deviation	0.1 %

Precision	
Relative metering precision	5 %

Auxiliary circuit	
Number of CO contacts <ul style="list-style-type: none"> <li>• delayed switching</li> </ul>	1
Operating frequency with 3RT2 contactor maximum	5 000 1/h

Main circuit	
Number of poles for main current circuit	1

Outputs	
Operating current at 17 V minimum	5 mA
Continuous current of the DIAZED fuse link of the output relay	4 A

Electromagnetic compatibility	
Conducted interference <ul style="list-style-type: none"> <li>• due to burst acc. to IEC 61000-4-4</li> <li>• due to conductor-earth surge acc. to IEC 61000-4-5</li> <li>• due to conductor-conductor surge acc. to IEC 61000-4-5</li> </ul>	2 kV 2 kV 1 kV
Field-bound parasitic coupling acc. to IEC 61000-4-3	10 V/m
Electrostatic discharge acc. to IEC 61000-4-2	6 kV contact discharge / 8 kV air discharge

Galvanic isolation	
Design of the electrical isolation	Safe isolation
Galvanic isolation <ul style="list-style-type: none"> <li>• between entrance and outlet</li> <li>• between the outputs</li> <li>• between the voltage supply and other circuits</li> </ul>	Yes Yes No

Connections/Terminals	
Product function <ul style="list-style-type: none"> <li>• removable terminal for auxiliary and control circuit</li> </ul>	Yes
Type of electrical connection	screw-type terminals
Type of connectable conductor cross-sections	

<ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded with core end processing</li> <li>• at AWG conductors solid</li> <li>• at AWG conductors stranded</li> </ul>	<p>1x (0.5 ... 4 mm<sup>2</sup>), 2x (0.5 ... 2.5 mm<sup>2</sup>)</p> <p>1x (0.5 ... 2.5 mm<sup>2</sup>), 2x (0.5 ... 1.5 mm<sup>2</sup>)</p> <p>2x (20 ... 14)</p> <p>2x (20 ... 14)</p>
<b>Connectable conductor cross-section</b> <ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded with core end processing</li> </ul>	<p>0.5 ... 4 mm<sup>2</sup></p> <p>0.5 ... 2.5 mm<sup>2</sup></p>
<b>AWG number as coded connectable conductor cross section</b> <ul style="list-style-type: none"> <li>• solid</li> <li>• stranded</li> </ul>	<p>20 ... 14</p> <p>20 ... 14</p>
<b>Tightening torque</b> <ul style="list-style-type: none"> <li>• with screw-type terminals</li> </ul>	<p>1.2 ... 0.8 N·m</p>






### Installation/ mounting/ dimensions

<b>Mounting position</b>	any
<b>Mounting type</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>— at the side</li> </ul> </li> </ul>	<p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p>

### Ambient conditions

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

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

[Miscellaneous](#)

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

### Further information

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

<http://www.siemens.com/industrial-controls/catalogs>

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3UG4631-1AA30>

**Cax online generator**

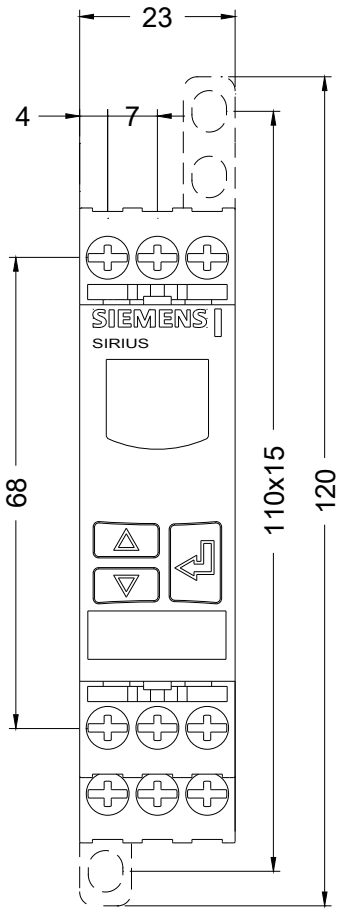
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4631-1AA30>

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

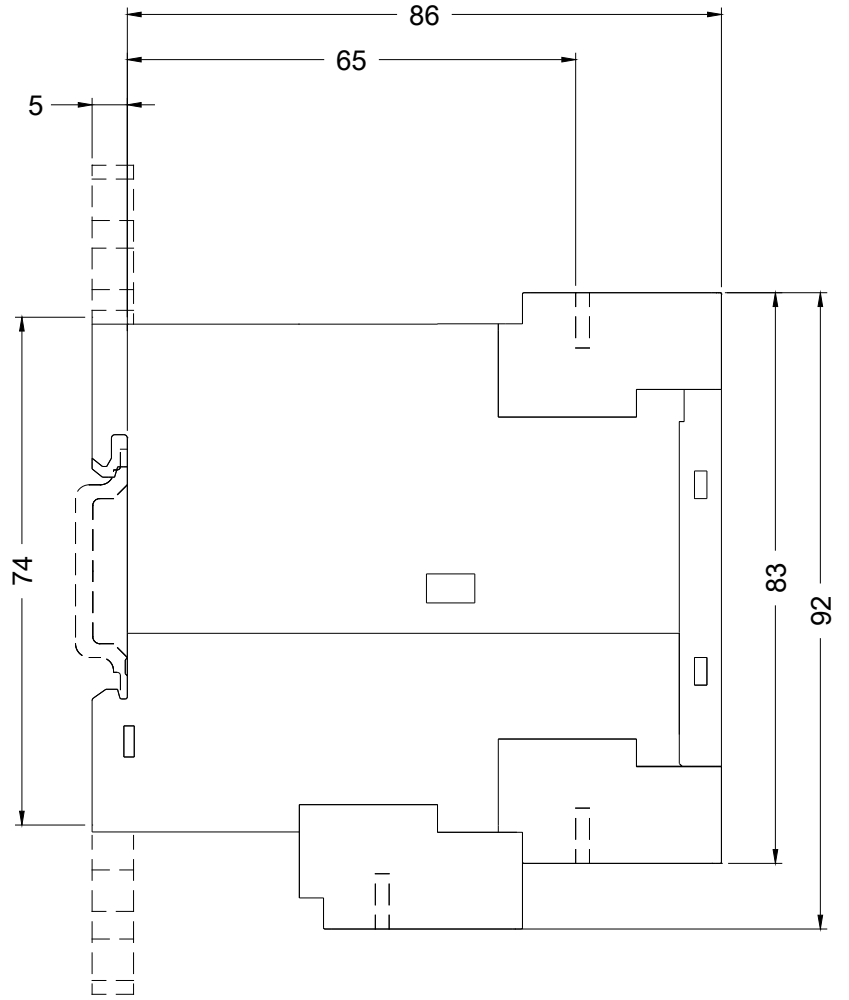
<https://support.industry.siemens.com/cs/ww/en/ps/3UG4631-1AA30>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3UG4631-1AA30&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4631-1AA30&lang=en)



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