



Digital monitoring relay Voltage monitoring, 22.5 mm from 0.1-60 V AC/DC  
Overshoot and undershoot 24 to 240 V AC/DC 50 to 60 Hz DC and AC Noise  
pulses delay 0.1 to 20 s Hysteresis 0.1 to 30 V 1 change-over contact with or  
without fault buffer spring-type connection system

|                                                                        |                                                                                                       |
|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| product brand name                                                     | SIRIUS                                                                                                |
| product designation                                                    | Voltage monitoring relay with digital setting                                                         |
| product type designation                                               | 3UG4                                                                                                  |
| <b>General technical data</b>                                          |                                                                                                       |
| product function                                                       | Voltage monitoring relay                                                                              |
| design of the display                                                  | LCD                                                                                                   |
| insulation voltage for overvoltage category III according to IEC 60664 |                                                                                                       |
| • with degree of pollution 3 rated value                               | 690 V                                                                                                 |
| 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 protective separation                  |                                                                                                       |
| • between auxiliary and auxiliary circuit                              | 300 V                                                                                                 |
| • between control and auxiliary circuit                                | 300 V                                                                                                 |
| protection class IP                                                    | IP20                                                                                                  |
| shock resistance according to IEC 60068-2-27                           | sinusoidal half-wave 15g / 11 ms                                                                      |
| 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<br>Lead monoxide (lead oxide) - 1317-36-8<br>Dicyclohexyl phthalate (DCHP) - 84-61-7 |

|                                      |     |
|--------------------------------------|-----|
| <b>Product Function</b>              |     |
| product function                     |     |
| • 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 |

|                                                                                                                                                                                                                                       |                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| <ul style="list-style-type: none"> <li>• adjustable open/closed-circuit current principle</li> <li>• external reset</li> <li>• auto-RESET</li> </ul>                                                                                  | Yes<br>Yes<br>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>                                                                                                                              | 24 ... 240 V<br>24 ... 240 V                |
| <b>control supply voltage at DC rated value</b>                                                                                                                                                                                       |                                             |
| <ul style="list-style-type: none"> <li>•</li> </ul>                                                                                                                                                                                   | 24 ... 240 V                                |
| <b>operating range factor control supply voltage rated value at DC</b>                                                                                                                                                                |                                             |
| <ul style="list-style-type: none"> <li>• initial value</li> <li>• full-scale value</li> </ul>                                                                                                                                         | 0.85<br>1.1                                 |
| <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>                                                                                                                                         | 0.85<br>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>                                                                                                                                         | 0.85<br>1.1                                 |
| <b>Measuring circuit</b>                                                                                                                                                                                                              |                                             |
| <b>measurable line frequency</b>                                                                                                                                                                                                      | 40 ... 500 Hz                               |
| <b>measurable voltage at AC</b>                                                                                                                                                                                                       | 0.1 ... 60 V                                |
| <b>measurable voltage at DC</b>                                                                                                                                                                                                       | 0.1 ... 60 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>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                                           |
| 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>                                                                                                                                                                                          |                                             |
| <ul style="list-style-type: none"> <li>• at 24 V</li> <li>• at 125 V</li> <li>• at 250 V</li> </ul>                                                                                                                                   | 1 A<br>0.2 A<br>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<br>2 kV<br>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>design of the electrical isolation</b>                                                                                                                                                                                             | Protective separation                       |
| <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<br>Yes<br>Yes                           |
| <b>Connections/ Terminals</b>                                                                                                                                                                                                         |                                             |
| <b>product component removable terminal for auxiliary and</b>                                                                                                                                                                         | Yes                                         |

|                                                                |                                     |
|----------------------------------------------------------------|-------------------------------------|
| <b>control circuit</b>                                         |                                     |
| <b>type of electrical connection</b>                           | spring-loaded terminals             |
| <b>type of connectable conductor cross-sections</b>            |                                     |
| • solid                                                        | 2x (0.25 ... 1.5 mm <sup>2</sup> )  |
| • finely stranded with core end processing                     | 2 x (0.25 ... 1.5 mm <sup>2</sup> ) |
| • finely stranded without core end processing                  | 2x (0.25 ... 1.5 mm <sup>2</sup> )  |
| • for AWG cables solid                                         | 2x (24 ... 16)                      |
| • for AWG cables stranded                                      | 2x (24 ... 16)                      |
| <b>connectable conductor cross-section</b>                     |                                     |
| • solid                                                        | 0.25 ... 1.5 mm <sup>2</sup>        |
| • finely stranded with core end processing                     | 0.25 ... 1.5 mm <sup>2</sup>        |
| • finely stranded without core end processing                  | 0.25 ... 1.5 mm <sup>2</sup>        |
| <b>AWG number as coded connectable conductor cross section</b> |                                     |
| • solid                                                        | 24 ... 16                           |
| • stranded                                                     | 24 ... 16                           |

#### Installation/ mounting/ dimensions

|                              |                  |
|------------------------------|------------------|
| <b>mounting position</b>     | any              |
| <b>fastening method</b>      | snap-on mounting |
| <b>height</b>                | 94 mm            |
| <b>width</b>                 | 22.5 mm          |
| <b>depth</b>                 | 91 mm            |
| <b>required spacing</b>      |                  |
| • with side-by-side mounting |                  |
| — forwards                   | 0 mm             |
| — backwards                  | 0 mm             |
| — upwards                    | 0 mm             |
| — downwards                  | 0 mm             |
| — at the side                | 0 mm             |
| • for grounded parts         |                  |
| — forwards                   | 0 mm             |
| — backwards                  | 0 mm             |
| — upwards                    | 0 mm             |
| — at the side                | 0 mm             |
| — downwards                  | 0 mm             |
| • for live parts             |                  |
| — forwards                   | 0 mm             |
| — backwards                  | 0 mm             |
| — upwards                    | 0 mm             |
| — at the side                | 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

##### General Product Approval



[Confirmation](#)



##### EMV

##### Test Certificates

##### Marine / Shipping



[KC](#)

[Special Test Certificate](#)

[Type Test Certificate/Test Report](#)



| other                        | Railway                                  | Environment                                 |
|------------------------------|------------------------------------------|---------------------------------------------|
| <a href="#">Confirmation</a> | <a href="#">Special Test Certificate</a> | <a href="#">Environmental Confirmations</a> |

#### 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=3UG4631-2AW30>

##### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4631-2AW30>

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

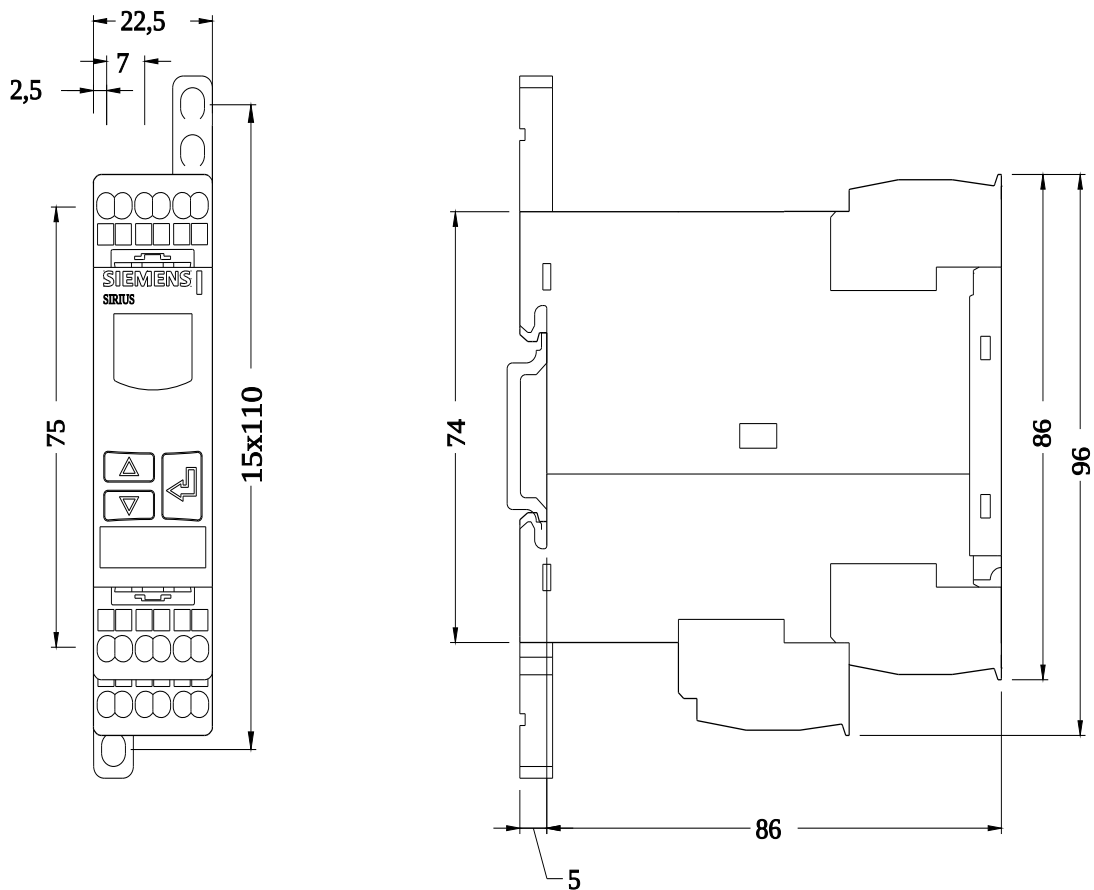
<https://support.industry.siemens.com/cs/ww/en/ps/3UG4631-2AW30>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3UG4631-2AW30&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4631-2AW30&lang=en)

##### Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4631-2AW30/manual>



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