# SIEMENS

#### Data sheet

### 3UG4581-1AW31



insulation monitoring relay for ungrounded (IT) networks up to 400 V AC, 50-60 Hz measuring range 1-100 kohm supply voltage 24-240 V AC/DC 22.5 mm, 1 changeover contact screw terminal

| product brand name   | SIRIUS  |
|--|---|
| product designation  | Insulation monitoring relay with analog setting |
| product type designation   | 3UG4  |
| General technical data   |   |
| product function   | Insulation monitor                              |
| type of voltage  |   |
| for monitoring   | AC  |
| <ul> <li>of the operating voltage for actuation</li> </ul>               | AC/DC   |
| <ul> <li>of the control supply voltage</li> </ul>                        | AC/DC   |
| surge voltage resistance rated value                                     | 6 000 V   |
| protection class IP  | IP20  |
| thermal current of the switching element with contacts maximum           | 4 A   |
| reference code according to IEC 81346-2                                  | К   |
| Substance Prohibitance (Date)  | 05/01/2012                                      |
| Product Function   |   |
| product function   |   |
| error memory   | Yes   |
| <ul> <li>adjustable open/closed-circuit current principle</li> </ul>     | No  |
| manual RESET   | Yes   |
| Control circuit/ Control   |   |
| control supply voltage at AC   |   |
| <ul> <li>at 50 Hz rated value</li> </ul>                                 | 24 240 V  |
| • at 60 Hz rated value   | 24 240 V  |
| control supply voltage at DC rated value                                 | 24 240 V  |
| operating range factor control supply voltage rated value at DC          |   |
| initial value  | 0.85  |
| full-scale value   | 1.1   |
| operating range factor control supply voltage rated value at AC at 50 Hz |   |
| <ul> <li>initial value</li> </ul>  | 0.85  |
| • full-scale value   | 1.1   |
| operating range factor control supply voltage rated value at AC at 60 Hz |   |
| <ul> <li>initial value</li> </ul>  | 0.85  |
| • full-scale value   | 1.1   |
| Measuring circuit  |   |
|  |   |
| measurable line frequency  | 50 60 Hz  |
| measurable line frequency<br>measurable voltage at AC                    | 50 60 Hz<br>0 400 V                             |

| number of NC contacts for auxiliary contacts   | 0                            |                       |  |
|--|------------------------------|-----------------------|--|
| number of NC contacts delayed switching  | 0                            |                       |  |
| number of NO contacts for auxiliary contacts   | 0                            |                       |  |
| number of NO contacts delayed switching  | 0                            |                       |  |
| number of CO contacts  |                              |                       |  |
| delayed switching  | 1                            |                       |  |
| Main circuit   |                              |                       |  |
| operating frequency rated value  | 50 60 Hz                     |                       |  |
| Connections/ Terminals   |                              |                       |  |
| product component removable terminal for auxiliary and<br>control circuit                    | No                           |                       |  |
| type of electrical connection  | screw-type terminals         |                       |  |
| type of connectable conductor cross-sections   |                              |                       |  |
| • solid  | 1x (0.5 4.0 mm²), 2x (0.5    | 2.5 mm <sup>2</sup> ) |  |
| <ul> <li>finely stranded with core end processing</li> </ul>                                 | 1x (0.5 2.5 mm²), 2x (0.5    |                       |  |
| <ul> <li>finely stranded without core end processing</li> </ul>                              | 1x (0.5 2.5 mm²), 2x (0.5    |                       |  |
| • for AWG cables solid   | 1x (20 12), 2x (20 14)       |                       |  |
| for AWG cables stranded  | 1x (18 14), 2x (18 16)       |                       |  |
| connectable conductor cross-section  | IX (10 14), 2X (10 10)       |                       |  |
| solid  | 0.5 4 mm²                    |                       |  |
| <ul> <li>finely stranded with core end processing</li> </ul>                                 | 0.5 4 mm <sup>2</sup>        |                       |  |
|  | 0.5 2.5 mm <sup>2</sup>      |                       |  |
| finely stranded without core end processing  AWG number as coded connectable conductor cross | 0.5 2.5 mm                   |                       |  |
| section  | 00 40                        |                       |  |
| • solid  | 20 12                        |                       |  |
| • stranded   | 18 14                        |                       |  |
| tightening torque with screw-type terminals  | 0.6 0.8 N·m                  |                       |  |
| Installation/ mounting/ dimensions   |                              |                       |  |
| mounting position  | any                          |                       |  |
| fastening method   | snap-on fastening on 35 mm [ | DIN rail              |  |
| height   | 78 mm                        |                       |  |
| width  | 22.5 mm                      |                       |  |
| depth  | 100 mm                       |                       |  |
| required spacing   |                              |                       |  |
| <ul> <li>with side-by-side mounting</li> </ul>   |                              |                       |  |
| — forwards   | 0 mm                         |                       |  |
| — backwards  | 0 mm                         |                       |  |
| — upwards  | 0 mm                         |                       |  |
| — downwards  | 0 mm                         |                       |  |
| — at the side  | 0 mm                         |                       |  |
| <ul> <li>for grounded parts</li> </ul>   |                              |                       |  |
| — 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                         |                       |  |
| — downwards  | 0 mm                         |                       |  |
| — at the side  | 0 mm                         |                       |  |
| Ambient conditions   |                              |                       |  |
|  |                              |                       |  |
|  | -25 +60 °C                   |                       |  |
| ambient temperature during operation<br>Certificates/ approvals                              | -25 +60 °C                   |                       |  |



 
 Declaration of Conformity
 Marine / Shipping
 other

 Confirmation
 Confirmation

#### **Further information**

EG-Konf

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

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=3UG4581-1AW31

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4581-1AW31

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

https://support.industry.siemens.com/cs/ww/en/ps/3UG4581-1AW31

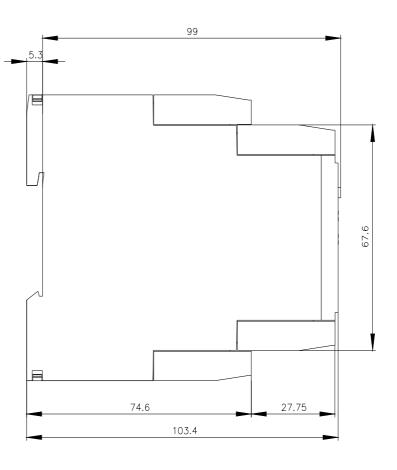
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

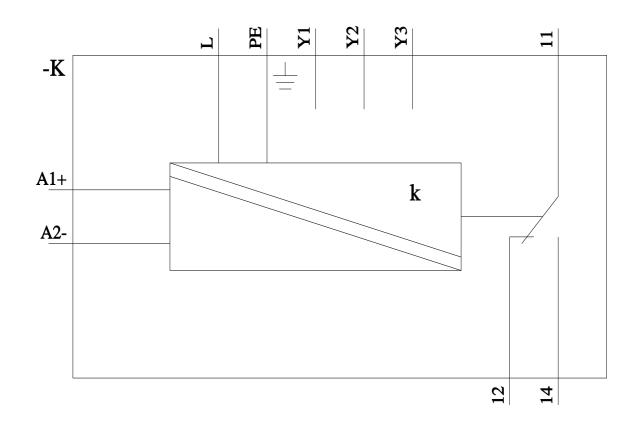
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3UG4581-1AW31&lang=en

**Characteristic: Derating** 

https://support.industry.siemens.com/cs/ww/en/ps/3UG4581-1AW31/manual

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3/31/2023 🖸

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