

Analog monitoring relay Phase failure and sequence Adjustable undervoltage Asymmetry 20% fixed 3 x 160 to 690 V 50 to 60 Hz AC Hysteresis 5% fixed Delay time 0-20 s 2 change-over contacts screw terminal Successor product for 3UG3013-1B...



|                          |  |
|--------------------------|--|
| Product brand name       | SIRIUS                                       |
| Product designation      | Network monitoring relay with analog setting |
| Design of the product    | 4 functions                                  |
| Product type designation | 3UG4   |

| General technical data                     |                                  |
|--|----------------------------------|
| Product function                           | Phase monitoring relay           |
| Display version LED                        | Yes                              |
| Degree of pollution                        | 3                                |
| Type of voltage                            |                                  |
| • for monitoring                           | AC                               |
| • of the control supply voltage            | AC                               |
| Surge voltage resistance rated value       | 6 kV                             |
| 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                          |

|  |     |
|--|-----|
| Thermal current of the switching element with contacts maximum                   | 5 A |
| Reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750 | K   |
| Reference code acc. to DIN EN 81346-2  | K   |
| Reference code acc. to DIN EN 61346-2  | K   |
| Relative repeat accuracy   | 1 % |

## Product Function

|  |     |
|--|-----|
| <b>Product function</b>                            |     |
| • undervoltage detection                           | Yes |
| • Overvoltage detection                            | No  |
| • phase sequence recognition                       | Yes |
| • Phase failure detection                          | Yes |
| • Overvoltage detection 3 phase                    | No  |
| • undervoltage detection 3 phases                  | Yes |
| • Voltage window recognition 3 phase               | No  |
| • Adjustable open/closed-circuit current principle | No  |
| • Auto-reset                                       | Yes |

## Control circuit/ Control

|   |               |
|---|---------------|
| <b>Control supply voltage at AC</b>   |               |
| • at 50 Hz rated value  | 160 ... 690 V |
| • at 60 Hz rated value  | 160 ... 690 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             |

## Precision

|                             |     |
|-----------------------------|-----|
| Relative metering precision | 5 % |
|-----------------------------|-----|

## Auxiliary circuit

|   |           |
|---|-----------|
| <b>Number of CO contacts</b>                    |           |
| • delayed switching                             | 2         |
| Operating frequency with 3RT2 contactor maximum | 5 000 1/h |

## Main circuit

|  |   |
|--|---|
| Number of poles for main current circuit | 3 |
|--|---|

## Outputs

|                                       |  |
|---------------------------------------|--|
| Ampacity of the output relay at AC-15 |  |
|---------------------------------------|--|

|  |                       |
|--|-----------------------|
| <ul style="list-style-type: none"> <li>• at 250 V at 50/60 Hz</li> <li>• at 400 V at 50/60 Hz</li> </ul> | 3 A<br>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>Operating 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 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<br>2 kV<br>1 kV                        |
| <b>Field-bound parasitic coupling acc. to IEC 61000-4-3</b>  | 10 V/m                                      |
| <b>Electrostatic discharge acc. to IEC 61000-4-2</b>   | 6 kV contact discharge / 8 kV air discharge |

### Galvanic isolation

|   |                   |
|---|-------------------|
| <b>Galvanic isolation</b>   |                   |
| <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<br>Yes<br>Yes |

### Connections/Terminals

|  |  |
|--|--|
| <b>Product function</b>  |  |
| <ul style="list-style-type: none"> <li>• removable terminal for auxiliary and control circuit</li> </ul>   | Yes  |
| <b>Type of electrical connection</b>   | screw-type terminals   |
| <b>Type of connectable conductor cross-sections</b>  |  |
| <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> | 1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )<br>1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )<br>2x (20 ... 14)<br>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><br>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<br>20 ... 14   |
| <b>Tightening torque</b>   |  |
| <ul style="list-style-type: none"> <li>• with screw-type terminals</li> </ul>  | 0.8 ... 1.2 N·m  |






## 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>      |                  |
| • 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             |
| — downwards                  | 0 mm             |
| — at the side                | 0 mm             |

## Ambient conditions

|  |         |
|--|---------|
| <b>Installation altitude at height above sea level</b> |         |
| • maximum  | 2 000 m |

## Certificates/approvals

| General Product Approval   |   | EMC   | Declaration of Conformity  |   |                               |
|--|---|---|--|---|-------------------------------|
| <br>CCC | <br>UL |  | <br>RCM | <br>EG-Konf. | <a href="#">Miscellaneous</a> |

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

### 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=3UG4513-1BR20>

**Cax online generator**

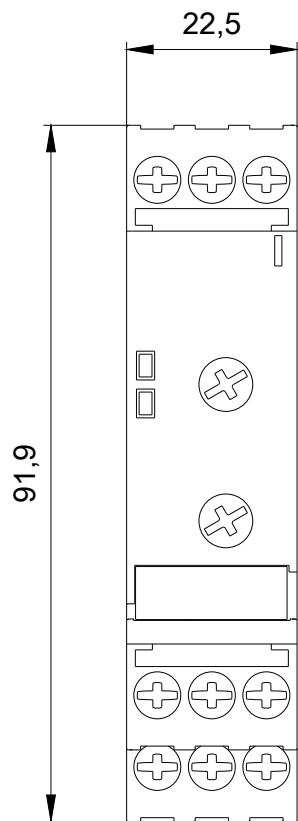
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4513-1BR20>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4513-1BR20>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3UG4513-1BR20&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4513-1BR20&lang=en)



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