



!!! product phase-out !!! The preferred successor type is 3UG5514-1BR20 phase failure and sequence adjustment undervoltage 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 changeover contacts screw terminal

|  |  |
|--|--|
| product brand name   | SIRIUS   |
| product designation  | Network monitoring relay with analog setting               |
| design of the product  | 4 functions  |
| product type designation   | 3UG4   |
| <b>General technical data</b>  |  |
| product function   | Phase monitoring relay                                     |
| display version LED  | Yes  |
| insulation voltage for overvoltage category III according to IEC 60664 |  |
| • with degree of pollution 3 rated value                               | 690 V  |
| 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 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 |
| <b>Product Function</b>  |  |
| product function   |  |
| • undervoltage detection   | Yes  |
| • overvoltage detection  | No   |
| • phase sequence recognition   | Yes  |
| • phase failure detection  | Yes  |
| • asymmetry 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  |
| <b>Control circuit/ Control</b>  |  |
| control supply voltage at AC   |  |

|   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• at 50 Hz rated value</li> </ul>  | 160 ... 690 V  |
| <ul style="list-style-type: none"> <li>• at 60 Hz rated value</li> </ul>  | 160 ... 690 V  |
| <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> </ul>   | 1  |
| <ul style="list-style-type: none"> <li>• full-scale value</li> </ul>  | 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> </ul>   | 1  |
| <ul style="list-style-type: none"> <li>• full-scale value</li> </ul>  | 1  |
| <b>Measuring circuit</b>  |  |
| <b>measurable voltage at AC</b>   | 160 ... 690 V  |
| <b>response time maximum</b>  | 450 ms   |
| <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  |
| <b>number of CO contacts</b>  |  |
| <ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>                                      | 2  |
| <ul style="list-style-type: none"> <li>• delayed switching</li> </ul>   | 2  |
| <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>   | 3  |
| <b>ampacity of the output relay at AC-15</b>  |  |
| <ul style="list-style-type: none"> <li>• at 250 V at 50/60 Hz</li> </ul>  | 3 A  |
| <ul style="list-style-type: none"> <li>• at 400 V at 50/60 Hz</li> </ul>  | 3 A  |
| <b>ampacity of the output relay at DC-13</b>  |  |
| <ul style="list-style-type: none"> <li>• at 24 V</li> </ul>   | 1 A  |
| <ul style="list-style-type: none"> <li>• at 125 V</li> </ul>  | 0.2 A  |
| <ul style="list-style-type: none"> <li>• at 250 V</li> </ul>  | 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> </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                          |
| <b>Galvanic isolation</b>   |  |
| <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>               | Yes  |
| <b>Connections/ Terminals</b>   |  |
| <b>product component removable terminal for auxiliary and control circuit</b>                                   | 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> </ul>   | 1x (0.5 ... 4.0 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  |

|   |                  |
|---|------------------|
| • stranded  | 20 ... 14        |
| tightening torque with screw-type terminals             | 0.8 ... 1.2 N·m  |
| <b>Installation/ mounting/ dimensions</b>               |                  |
| <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>                                 |                  |
| • 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             |
| <b>Ambient conditions</b>                               |                  |
| 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   |
| <b>Approvals Certificates</b>                           |                  |
| <b>General Product Approval</b>                         |                  |



[Confirmation](#)



| EMV   | Test Certificates  |  | Marine / Shipping                                  |  |
|-------|--------------------|--|--|--|
|       | <a href="#">KC</a> | <a href="#">Special Test Certificate</a> | <a href="#">Type Test Certificates/Test Report</a> |  |
| other | Railway            | Environment                              |  |  |

[Confirmation](#)

[Special Test Certificate](#)

[Environmental Confirmations](#)

|   |
|---|
| <b>Further information</b>  |
| Information on the packaging<br><a href="https://support.industry.siemens.com/cs/ww/en/view/109813875">https://support.industry.siemens.com/cs/ww/en/view/109813875</a><br>Information- and Downloadcenter (Catalogs, Brochures,...)<br><a href="https://www.siemens.com/ic10">https://www.siemens.com/ic10</a><br>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,...)

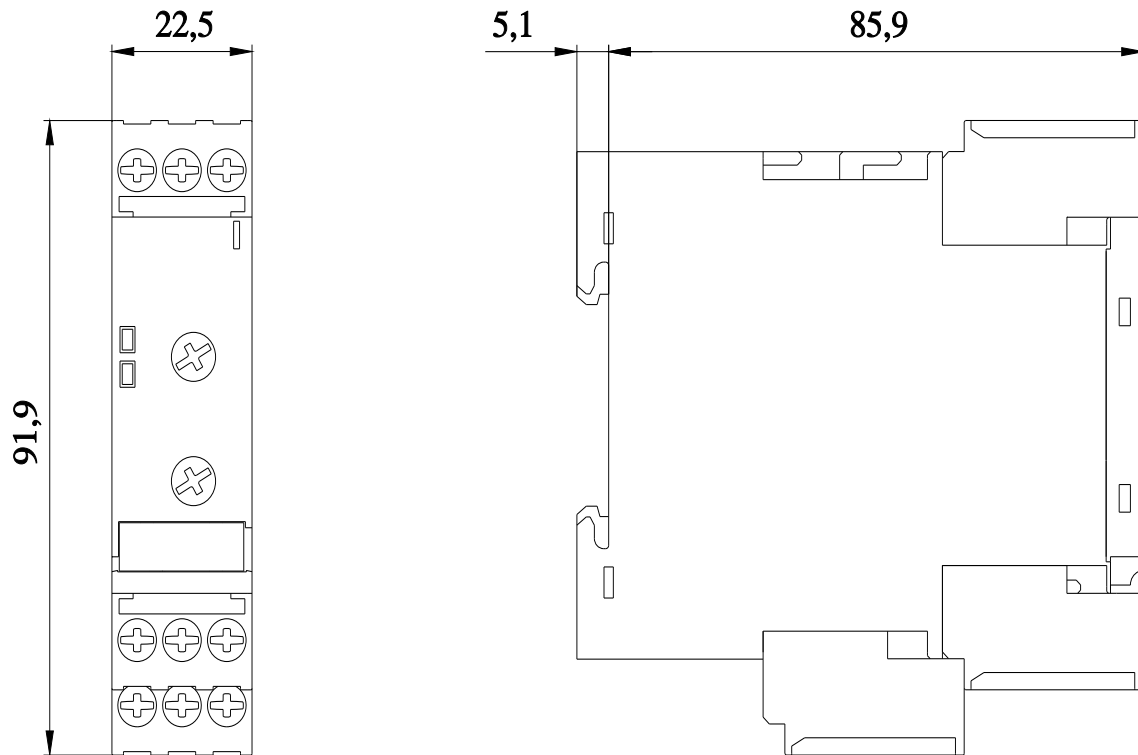
<https://support.industry.siemens.com/cs/ww/en/ps/3UG4513-1BR20>

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)

Characteristic: Derating

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



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