

Siemens  
EcoTech



analog adjustment monitoring relay phase failure, phase sequence, asymmetry and under-voltage monitoring 3x 160-690 V AC, 15-70 Hz 2 changeover contacts screw terminal

|                                                                        |                                                                                                                                                                                                                                                     |
|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| product brand name                                                     | SIRIUS                                                                                                                                                                                                                                              |
| product designation                                                    | Network monitoring relay with analog setting                                                                                                                                                                                                        |
| design of the product                                                  | monitoring of phase sequence, phase failure, phase asymmetry, and undervoltage                                                                                                                                                                      |
| product type designation                                               | 3UG5                                                                                                                                                                                                                                                |
| <b>General technical data</b>                                          |                                                                                                                                                                                                                                                     |
| product function                                                       | line monitoring                                                                                                                                                                                                                                     |
| display version LED                                                    | Yes                                                                                                                                                                                                                                                 |
| design of the display                                                  | LED                                                                                                                                                                                                                                                 |
| power loss [W] maximum                                                 | 1.8 W                                                                                                                                                                                                                                               |
| power loss [V·A] maximum                                               | 5.1 VA                                                                                                                                                                                                                                              |
| insulation voltage for overvoltage category III according to IEC 60664 |                                                                                                                                                                                                                                                     |
| • with degree of pollution 2 rated value                               | 690 V                                                                                                                                                                                                                                               |
| • with degree of pollution 3 rated value                               | 690 V                                                                                                                                                                                                                                               |
| degree of pollution                                                    | 3                                                                                                                                                                                                                                                   |
| type of voltage                                                        |                                                                                                                                                                                                                                                     |
| • for monitoring                                                       | AC                                                                                                                                                                                                                                                  |
| • of the operating voltage for actuation                               | AC/DC                                                                                                                                                                                                                                               |
| surge voltage resistance rated value                                   | 6 kV                                                                                                                                                                                                                                                |
| shock resistance according to IEC 60068-2-27                           | sinusoidal half-wave 15 g / 11 ms                                                                                                                                                                                                                   |
| vibration resistance according to IEC 60068-2-6                        | 10 ... 55 Hz: 0.35 mm                                                                                                                                                                                                                               |
| switching behavior                                                     | monostable                                                                                                                                                                                                                                          |
| 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                                               | 0 %                                                                                                                                                                                                                                                 |
| Substance Prohibitance (day/month/year)                                | 06/01/2023                                                                                                                                                                                                                                          |
| SVHC substance name                                                    | Lead CAS-No. 7439-92-1<br>Lead monoxide (lead oxide) CAS-No. 1317-36-8<br>2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5<br>Melamine CAS-No. 108-78-1<br>6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol CAS-No. 119-47-1 |
| Net Weight                                                             | 169 g                                                                                                                                                                                                                                               |

|                                                    |     |
|----------------------------------------------------|-----|
| <b>Product Function</b>                            |     |
| product function                                   |     |
| • undervoltage detection                           | Yes |
| • overvoltage detection                            | No  |
| • phase sequence recognition                       | Yes |
| • phase failure detection                          | Yes |
| • asymmetry detection                              | Yes |
| • overcurrent detection 1 phase                    | No  |
| • overvoltage detection 3 phase                    | No  |
| • undercurrent detection 1 phase                   | No  |
| • undervoltage detection 3 phases                  | Yes |
| • voltage window recognition 3 phase               | No  |
| • adjustable open/closed-circuit current principle | No  |

|                                                                                 |                                                                                    |
|---------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| • auto-RESET                                                                    | Yes                                                                                |
| • neutral conductor monitoring adjustable                                       | No                                                                                 |
| suitability for use safety-related circuits                                     | No                                                                                 |
| <b>Control circuit/ Control</b>                                                 |                                                                                    |
| <b>type of voltage of the control supply voltage</b>                            | AC                                                                                 |
| <b>control supply voltage 1 at AC</b>                                           |                                                                                    |
| • at 50 Hz                                                                      | 200 ... 690 V                                                                      |
| • at 60 Hz                                                                      | 200 ... 690 V                                                                      |
| <b>operating range factor control supply voltage rated value at AC at 50 Hz</b> |                                                                                    |
| • initial value                                                                 | 0.85                                                                               |
| • full-scale value                                                              | 1.1                                                                                |
| <b>operating range factor control supply voltage rated value at AC at 60 Hz</b> |                                                                                    |
| • initial value                                                                 | 0.85                                                                               |
| • full-scale value                                                              | 1.1                                                                                |
| <b>Supply voltage</b>                                                           |                                                                                    |
| supply voltage frequency rated value                                            | 70 ... 15 Hz                                                                       |
| <b>Interfaces</b>                                                               |                                                                                    |
| design of the interface bluetooth                                               | No                                                                                 |
| <b>Measuring circuit</b>                                                        |                                                                                    |
| <b>measurable voltage 1 at AC</b>                                               | 160 ... 760 V                                                                      |
| <b>measurable voltage 2 at AC</b>                                               | 160 ... 760 V                                                                      |
| <b>adjustable operating delay time initial value</b>                            | 0.1 s                                                                              |
| <b>adjustable response delay time</b>                                           |                                                                                    |
| • with lower or upper limit violation                                           | 0.1 ... 20 s                                                                       |
| <b>buffering time in the event of power failure minimum</b>                     | 20 ms                                                                              |
| <b>response time maximum</b>                                                    | 500 ms                                                                             |
| <b>relative temperature-related measurement deviation</b>                       | 1 %                                                                                |
| <b>Precision</b>                                                                |                                                                                    |
| <b>relative metering precision</b>                                              | 5 %                                                                                |
| <b>temperature drift per °C</b>                                                 | 0 %/°C                                                                             |
| <b>Short-circuit protection</b>                                                 |                                                                                    |
| <b>design of the fuse link</b>                                                  |                                                                                    |
| • for short-circuit protection of the NO contacts of the relay outputs required | gL/gG: 6 A or MCB type C: 1 A                                                      |
| • for short circuit protection of the NC contacts of the relay outputs required | gL/gG: 6 A or MCB type C: 1 A                                                      |
| <b>Communication/ Protocol</b>                                                  |                                                                                    |
| protocol is supported IO-Link protocol                                          | No                                                                                 |
| <b>type of voltage supply via input/output link master</b>                      | No                                                                                 |
| <b>Auxiliary circuit</b>                                                        |                                                                                    |
| <b>material of switching contacts</b>                                           | AgSnO2                                                                             |
| number of NC contacts delayed switching                                         | 0                                                                                  |
| number of NO contacts delayed switching                                         | 0                                                                                  |
| <b>number of CO contacts</b>                                                    |                                                                                    |
| • for auxiliary contacts                                                        | 2                                                                                  |
| • delayed switching                                                             | 2                                                                                  |
| <b>operating frequency with 3RT2 contactor maximum</b>                          | 5 000 1/h                                                                          |
| <b>contact reliability of auxiliary contacts</b>                                | one incorrect switching operation of 100 million switching operations (17 V, 5 mA) |
| <b>contact rating of auxiliary contacts according to UL</b>                     | R300 / B300                                                                        |
| <b>Main circuit</b>                                                             |                                                                                    |
| <b>number of poles for main current circuit</b>                                 | 3                                                                                  |
| <b>ampacity of the output relay at AC-15</b>                                    |                                                                                    |
| • at 250 V at 50/60 Hz                                                          | 3 A                                                                                |
| • at 400 V at 50/60 Hz                                                          | 3 A                                                                                |
| <b>ampacity of the output relay at DC-13</b>                                    |                                                                                    |
| • at 24 V                                                                       | 1 A                                                                                |
| • at 110 V                                                                      | 0.2 A                                                                              |

|                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• at 125 V</li> <li>• at 230 V</li> <li>• at 250 V</li> </ul>                                                                                                                                                                                                                                              | 0.2 A<br>0.1 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>                                                                                                                                                                                                                                                                             | 6 A                                                                                                                                                                        |
| <b>Electromagnetic compatibility</b>                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                            |
| EMC emitted interference according to IEC 60947-1                                                                                                                                                                                                                                                                                                 | class A                                                                                                                                                                    |
| <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 (power ports), 2 kV (signal ports)<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>                                                                                                                                                                                                                                                                                                         | galvanic isolation                                                                                                                                                         |
| <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>Safety related data</b>                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                            |
| product function suitable for safety function                                                                                                                                                                                                                                                                                                     | No                                                                                                                                                                         |
| <b>Electrical Safety</b>                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                            |
| <b>protection class IP on the front according to IEC 60529</b>                                                                                                                                                                                                                                                                                    | IP20                                                                                                                                                                       |
| <b>Connections/ Terminals</b>                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                            |
| <b>product component removable terminal for main circuit</b>                                                                                                                                                                                                                                                                                      | Yes                                                                                                                                                                        |
| <b>product component removable terminal for auxiliary and control circuit</b>                                                                                                                                                                                                                                                                     | Yes                                                                                                                                                                        |
| <b>type of electrical connection</b>                                                                                                                                                                                                                                                                                                              | screw terminal                                                                                                                                                             |
| <b>design of terminals with cross-head screw</b>                                                                                                                                                                                                                                                                                                  | PZ 1                                                                                                                                                                       |
| <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>• for AWG cables solid</li> </ul>                                                                                                                                                                                                     | 1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )<br>1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )<br>1x (20 ... 12), 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 ... 4 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 ... 12<br>20 ... 12                                                                                                                                                     |
| tightening torque with screw-type terminals                                                                                                                                                                                                                                                                                                       | 0.6 ... 0.8 N·m                                                                                                                                                            |
| <b>stripped length</b>                                                                                                                                                                                                                                                                                                                            | 10 mm                                                                                                                                                                      |
| <b>Installation/ mounting/ dimensions</b>                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                            |
| <b>mounting position</b>                                                                                                                                                                                                                                                                                                                          | any                                                                                                                                                                        |
| <b>fastening method</b>                                                                                                                                                                                                                                                                                                                           | screw and snap-on mounting onto 35 mm DIN rail                                                                                                                             |
| <b>height</b>                                                                                                                                                                                                                                                                                                                                     | 100 mm                                                                                                                                                                     |
| <b>width</b>                                                                                                                                                                                                                                                                                                                                      | 22.5 mm                                                                                                                                                                    |
| <b>depth</b>                                                                                                                                                                                                                                                                                                                                      | 90 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> </ul> </li> </ul> | 0 mm<br>0 mm<br>0 mm<br>0 mm<br>0 mm<br>0 mm<br>0 mm<br>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

|                                                         |                |
|---------------------------------------------------------|----------------|
| 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 |
| relative humidity during operation maximum              | 70 %           |

#### Approvals Certificates

|                                                            |            |
|------------------------------------------------------------|------------|
| Environmental Product Declaration                          |            |
| • global warming potential [CO2 eq] / during manufacturing | 5.65 kg    |
| • global warming potential [CO2 eq] / during sales         | 0.0387 kg  |
| • global warming potential [CO2 eq] / during operation     | 12.3 kg    |
| • global warming potential [CO2 eq] / after end of life    | -0.0297 kg |
| • global warming potential [CO2 eq] / total                | 18 kg      |

#### Environment

#### General Product Approval

[Environmental Confirmations](#)



Siemens  
EcoTech



#### General Product Approval

#### EMV

#### Test Certificates

#### Maritime application

#### other



EG-Konf.

[Confirmation](#)



RCM

[Type Test Certificates/Test Report](#)



DNV

[Confirmation](#)

#### other



#### Further information

##### Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

##### Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

##### 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=3UG5514-1BR20>

##### Cax online generator

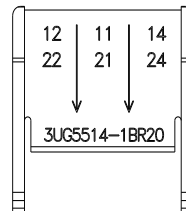
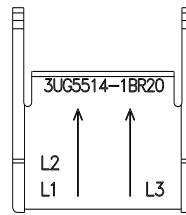
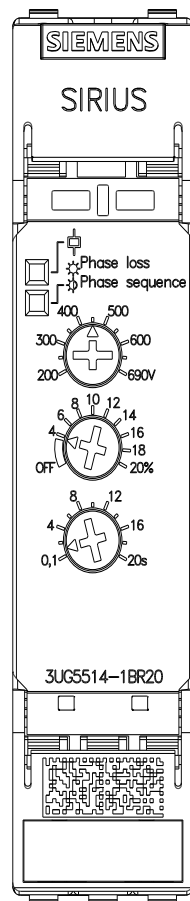
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG5514-1BR20>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3UG5514-1BR20>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3UG5514-1BR20&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG5514-1BR20&lang=en)



last modified:

6/30/2026