



DIGITAL MONITORING RELAY CURRENT MONITORING,  
22.5MM FROM 2 TO 500MA AC/DC OVERSHOOT A.  
UNDERSHOOT AC/DC 24 TO 240V DC AND AC 50 TO 60  
HZ ON AND SPIKE DELAY 0.1 TO 20S HYSTERESIS 0.1  
TO 250MA 1 CO CONTACT W. OR W/O ERROR MEMORY  
SCREW CONNECTION REPLACEMENT PRODUCT FOR  
3UG3521-1AL20,  
3UG3521-1AG20 AND 3UG3521-1AC48-0AA1

### Product function

Current monitoring relay

### Measuring circuit:

|  |    |                |
|--|----|----------------|
| Number of poles / for main current circuit                 |    | 1              |
| Type of current / for monitoring                           |    | AC/DC          |
| Measurable current   | A  | 0.0030 ... 0.6 |
| • for AC   | mA | 3 ... 600      |
| Measurable line frequency                                  | Hz | 40 ... 500     |
| Adjustable response current                                |    |                |
| • 1  | A  | 0.0030 ... 0.5 |
| • 2  | A  | 0.0030 ... 0.5 |
| Adjustable response delay time                             |    |                |
| • when starting  | s  | 0.1 ... 20     |
| • with lower or upper limit violation                      | s  | 0.1 ... 20     |
| Adjustable switching hysteresis for measured current value | mA | 0.1 ... 250    |
| Stored energy time / at mains power cut / minimum          | ms | 10             |
| Operating voltage  |    |                |
| • rated value  | V  | 24 ... 240     |
| Response time / maximum                                    | ms | 450            |
| Relative metering precision                                | %  | 5              |
| Precision of digital display                               |    | +/-1 digit     |

|  |      |     |
|--|------|-----|
| Relative temperature-related measurement deviation | %    | 5   |
| Temperature drift per °C                           | %/°C | 0.1 |
| Relative repeat accuracy                           | %    | 1   |

#### General technical details:

|  |    |   |
|--|----|---|
| <b>Design of the display</b>   |    | LCD   |
| <b>Product function</b>  |    |   |
| • overcurrent recognition of 1 phase   |    | Yes   |
| • overcurrent recognition of 3 phases  |    | No  |
| • undercurrent recognition of 1 phase  |    | Yes   |
| • undercurrent recognition of 3 phases   |    | No  |
| • overcurrent recognition DC   |    | Yes   |
| • undercurrent recognition DC  |    | Yes   |
| • current window recognition DC  |    | Yes   |
| • reset external   |    | Yes   |
| • self-reset   |    | Yes   |
| • open-circuit or closed-circuit current principle   |    | Yes   |
| <b>Starting time / after the control supply voltage has been applied</b>                         | ms | 1,000                                       |
| <b>Type of voltage / of supply voltage</b>   |    | AC/DC                                       |
| <b>Supply voltage / 1</b>  |    |   |
| • at 50 Hz   |    |   |
| • for AC   | V  | 24 ... 240                                  |
| • at 60 Hz   |    |   |
| • for AC   | V  | 240 ... 24                                  |
| • for DC   | V  | 24 ... 240                                  |
| <b>Impulse voltage resistance / rated value</b>  | kV | 4   |
| <b>Recorded real power</b>   | W  | 2   |
| <b>Protection class IP</b>   |    | IP20  |
| <b>Electromagnetic compatibility</b>   |    | IEC 60947-1 / IEC 61000-6-2 / IEC 61000-6-4 |
| <b>Resistance against vibration / according to IEC 60068-2-6</b>                                 |    | 1 ... 6 Hz: 15 mm, 6 ... 500 Hz: 2g         |
| <b>Resistance against shock / according to IEC 60068-2-27</b>                                    |    | sinusoidal half-wave 15g / 11 ms            |
| <b>Installation altitude / at a height over sea level / maximum</b>                              | m  | 2,000                                       |
| <b>Conductor-bound parasitic coupling BURST / according to IEC 61000-4-4</b>                     |    | 2 kV  |
| <b>Conductor-bound parasitic coupling conductor-earth SURGE / according to IEC 61000-4-5</b>     |    | 2 kV  |
| <b>Conductor-bound parasitic coupling conductor-conductor SURGE / according to IEC 61000-4-5</b> |    | 1 kV  |
| <b>Electrostatic discharge / according to IEC 61000-4-2</b>                                      |    | 6 kV contact discharge / 8 kV air discharge |
| <b>Field-bound parasitic coupling / according to IEC 61000-4-3</b>                               |    | 10 V/m                                      |

|  |    |             |
|--|----|-------------|
| <b>Insulation voltage / for overvoltage category III according to IEC 60664 / with degree of pollution 3 / rated value</b> | V  | 690         |
| <b>Maximum permissible voltage for safe disconnection</b>  |    |             |
| • between control and auxiliary circuit  | V  | 300         |
| • between auxiliary circuit and auxiliary circuit  | V  | 300         |
| <b>Degree of pollution</b>   |    | 3           |
| <b>Ambient temperature</b>   |    |             |
| • during operating   | °C | -25 ... +60 |
| • during storage   | °C | -40 ... +85 |
| • during transport   | °C | -40 ... +85 |
| <b>Galvanic isolation</b>  |    |             |
| • between entrance and outlet  |    | Yes         |
| • between the outputs  |    | Yes         |
| • between the voltage supply and other circuits  |    | Yes         |








| <b>Mechanical design:</b>                                |    |                  |
|--|----|------------------|
| <b>Width</b>   | mm | 22.5             |
| <b>Height</b>  | mm | 92               |
| <b>Depth</b>   | mm | 91               |
| <b>mounting position</b>                                 |    | any              |
| <b>Distance, to be maintained, to earthed part</b>       |    |                  |
| • forwards   | mm | 0                |
| • backwards  | mm | 0                |
| • sideways   | mm | 0                |
| • upwards  | mm | 0                |
| • downwards  | mm | 0                |
| <b>Distance, to be maintained, to the ranks assembly</b> |    |                  |
| • forwards   | mm | 0                |
| • backwards  | mm | 0                |
| • sideways   | mm | 0                |
| • upwards  | mm | 0                |
| • downwards  | mm | 0                |
| <b>Distance, to be maintained, conductive elements</b>   |    |                  |
| • forwards   | mm | 0                |
| • backwards  | mm | 0                |
| • sideways   | mm | 0                |
| • upwards  | mm | 0                |
| • downwards  | mm | 0                |
| <b>Type of mounting</b>                                  |    | snap-on mounting |
| <b>Design of the electrical connection</b>               |    |                  |

|   |     |  |
|---|-----|--|
| <ul style="list-style-type: none"> <li>• for auxiliary and control current circuit</li> <li>• for main current circuit</li> </ul>                       |     | screw-type terminals   |
| <b>Product function</b>   |     | screw-type terminals   |
| <ul style="list-style-type: none"> <li>• removable terminal for auxiliary and control circuit</li> <li>• removable terminal for main circuit</li> </ul> |     | Yes  |
|   |     | Yes  |
| <b>Type of the connectable conductor cross-section</b>  |     |  |
| <ul style="list-style-type: none"> <li>• solid</li> </ul>   |     | 1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )   |
| <ul style="list-style-type: none"> <li>• finely stranded <ul style="list-style-type: none"> <li>• with wire end processing</li> </ul> </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 conductors <ul style="list-style-type: none"> <li>• solid</li> <li>• stranded</li> </ul> </li> </ul>   |     | 2x (20 ... 14)   |
|   |     | 2x (20 ... 14)   |
| <b>Tightening torque</b>  |     |  |
| <ul style="list-style-type: none"> <li>• with screw-type terminals</li> </ul>   | N·m | 0.8 ... 1.2  |

#### Outputs:

|  |     |            |
|--|-----|------------|
| <b>Number of NO contacts / delayed switching</b>   |     | 0          |
| <b>Number of NC contacts / delayed switching</b>   |     | 0          |
| <b>Number of change-over switches / delayed switching</b>  |     | 1          |
| <b>Current carrying capacity</b>   |     |            |
| <ul style="list-style-type: none"> <li>• of output relay <ul style="list-style-type: none"> <li>• 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> </li> <li>• at DC-13 <ul style="list-style-type: none"> <li>• at 24 V</li> <li>• at 125 V</li> <li>• at 250 V</li> </ul> </li> </ul> </li> <li>• for permanent overcurrent / maximum permissible</li> <li>• for overcurrent duration &lt; 1 s / maximum permissible</li> </ul> | A   | 3          |
|  | A   | 3          |
|  | A   | 1          |
|  | A   | 0.2        |
|  | A   | 0.1        |
|  | A   | 0.6        |
|  | A   | 5          |
| <b>Operating current / at 17 V / minimum</b>   | A   | 0.0050     |
| <b>Continuous current / of the DIAZED fuse link of the output relay</b>  | A   | 4          |
| <b>Thermal current / of the contact-affected switching element / maximum</b>   | A   | 5          |
| <b>Mechanical operating cycles as operating time / typical</b>   |     | 10,000,000 |
| <b>Electrical operating cycles as operating time / at AC-15 / at 230 V / typical</b>   |     | 100,000    |
| <b>Operating cycles / with 3RT2 contactor / maximum</b>  | 1/h | 5,000      |

#### Certificates/approvals:

| General Product Approval   |   |  | EMC   | Test Certificates                        |
|--|---|--|---|--|
| <br>CCC | <br>GOST | <br>UL  | <br>C-TICK | <a href="#">Special Test Certificate</a> |
| Shipping Approval  |   |  | other   |  |
| <br>DNV | <br>GL   | <br>LRS | <a href="#">Declaration of Conformity</a>   | <a href="#">other</a>                    |

#### Further information:

##### Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/industrial-controls/catalogs>

##### Industry Mall (Online ordering system)

<http://www.siemens.com/industrial-controls/mall>

##### Cax online generator:

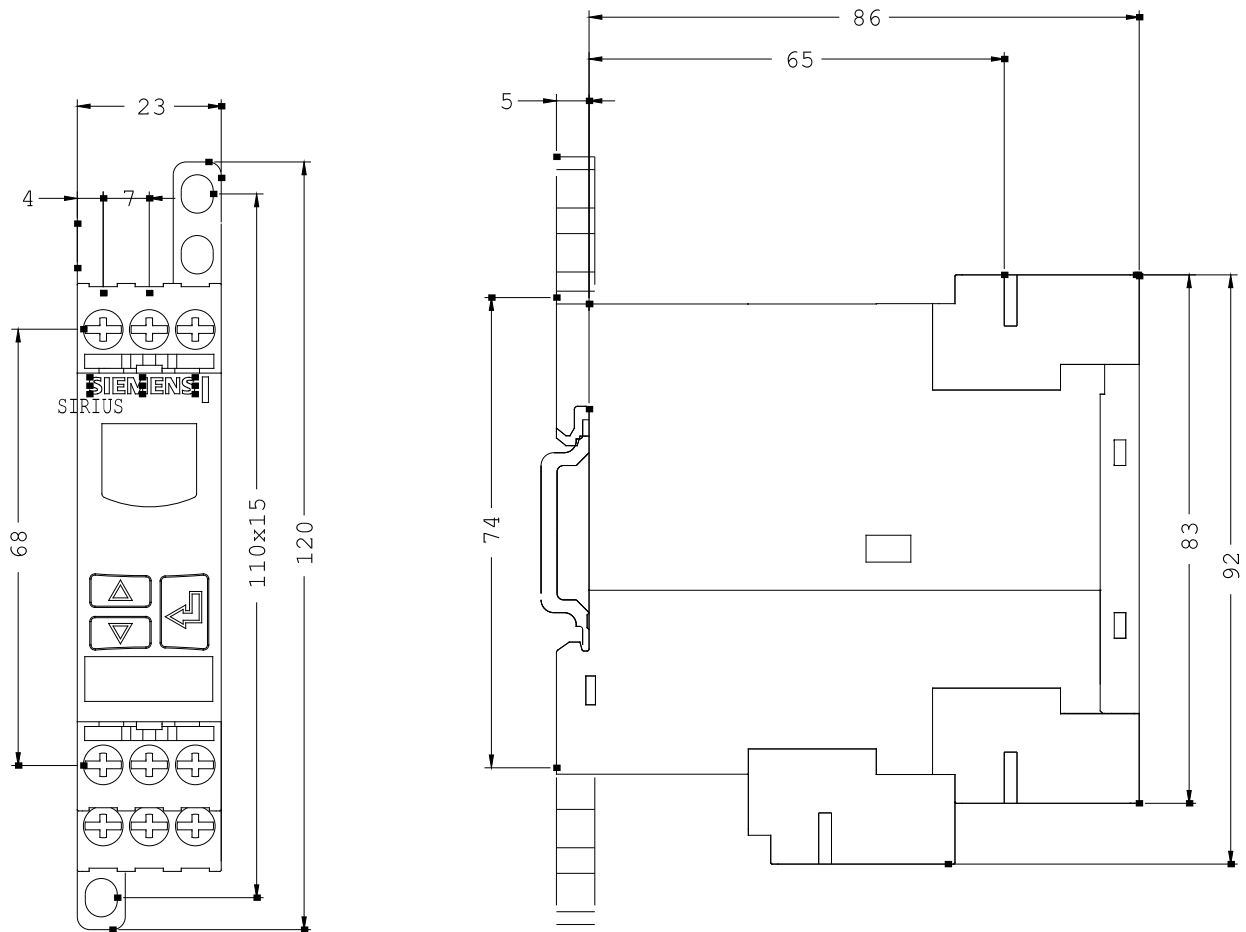
<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/WW/view/en/3UG4621-1AW30/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3UG4621-1AW30](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3UG4621-1AW30)



last change:

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