



ANALOG MONITORING RELAY PHASE FAILURE AND
-SEQUENCE 3X 160 TO 690V AC 50 TO 60 HZ 2
CHANGEOVER CONTACTS SCREW TERMINAL
REPLACEMENT PRODUCT FOR 3UG3513-1BL50 OR
3UG3513-1PB50

| | | |
|---|----|------------------------|
| Product function | | Phase monitoring relay |
| Measuring circuit: | | |
| Type of voltage for monitoring | | AC |
| Number of poles for main current circuit | | 3 |
| Measurable voltage at AC | V | 160 ... 690 |
| Relative repeat accuracy | % | 1 |
| General technical data: | | |
| Display version LED | | Yes |
| Product function | | |
| • undervoltage detection | | No |
| • Overvoltage detection | | No |
| • phase sequence recognition | | Yes |
| • Phase failure detection | | Yes |
| • Asymmetry recognition | | No |
| • Overvoltage detection 3 phase | | No |
| • undervoltage detection 3 phases | | No |
| • Voltage window recognition 3 phase | | No |
| • Auto-reset | | Yes |
| • Adjustable open/closed-circuit current principle | | No |
| Startup time after the control supply voltage has been applied | ms | 1 000 |
| Response time maximum | ms | 450 |
| Type of voltage of the control supply voltage | | AC |
| Control supply voltage | | |
| • at AC | | |
| — at 50 Hz Rated value | V | 160 ... 690 |
| — at 60 Hz Rated value | V | 160 ... 690 |
| Operating range factor control supply voltage rated value | | |
| • at AC | | |
| — at 50 Hz | | 1 ... 1 |

| | | |
|--|----|---|
| — at 60 Hz | | 1 ... 1 |
| Surge voltage resistance Rated value | kV | 6 |
| Active power consumption | W | 2 |
| Protection class IP | | IP20 |
| Electromagnetic compatibility | | IEC 60947-1 / IEC 61000-6-2 / IEC 61000-6-4 |
| Vibration resistance acc. to IEC 60068-2-6 | | 1 ... 6 Hz: 15 mm, 6 ... 500 Hz: 2g |
| Shock resistance acc. to IEC 60068-2-27 | | sinusoidal half-wave 15g / 11 ms |
| Installation altitude at height above sea level maximum | m | 2 000 |
| Conducted interference due to burst acc. to IEC 61000-4-4 | | 2 kV |
| Conducted interference due to conductor-earth surge acc. to IEC 61000-4-5 | | 2 kV |
| Conducted interference due to conductor-conductor surge acc. to IEC 61000-4-5 | | 1 kV |
| Electrostatic discharge acc. to IEC 61000-4-2 | | 6 kV contact discharge / 8 kV air discharge |
| Field-bound parasitic coupling acc. to IEC 61000-4-3 | | 10 V/m |
| Insulation voltage for overvoltage category III according to IEC 60664 with degree of pollution 3 Rated value | V | 690 |
| Degree of pollution | | 3 |
| Ambient temperature | | |
| • during operation | °C | -25 ... +60 |
| • during storage | °C | -40 ... +85 |
| • during transport | °C | -40 ... +85 |
| Galvanic isolation | | |
| • between entrance and outlet | | Yes |
| • between the outputs | | Yes |
| • between the voltage supply and other circuits | | Yes |

| Mechanical data: | | |
|--|----|------|
| Width | mm | 22.5 |
| Height | mm | 92 |
| Depth | mm | 91 |
| mounting position | | any |
| Required spacing for grounded parts | | |
| • forwards | mm | 0 |
| • Backwards | mm | 0 |
| • at the side | mm | 0 |
| • upwards | mm | 0 |
| • downwards | mm | 0 |
| Required spacing with side-by-side mounting | | |
| • forwards | mm | 0 |
| • Backwards | mm | 0 |

| | | |
|--|-----|--|
| • at the side | mm | 0 |
| • upwards | mm | 0 |
| • downwards | mm | 0 |
| Required spacing for live parts | | |
| • forwards | mm | 0 |
| • Backwards | mm | 0 |
| • at the side | mm | 0 |
| • upwards | mm | 0 |
| • downwards | mm | 0 |
| Mounting type | | snap-on mounting |
| Product function removable terminal for auxiliary and control circuit | | Yes |
| Type of electrical connection | | screw-type terminals |
| Type of connectable conductor cross-section | | |
| • solid | | 1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²) |
| • finely stranded | | |
| — with core end processing | | 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²) |
| • for AWG conductors | | |
| — solid | | 2x (20 ... 14) |
| — stranded | | 2x (20 ... 14) |
| Tightening torque with screw-type terminals | N·m | 0.8 ... 1.2 |

| Outputs: | | |
|--|-----|------------|
| Number of NO contacts delayed switching | | 0 |
| Number of NC contacts delayed switching | | 0 |
| Number of CO contacts delayed switching | | 2 |
| Ampacity of the output relay | | |
| • at AC-15 | | |
| — at 250 V at 50/60 Hz | A | 3 |
| — at 400 V at 50/60 Hz | A | 3 |
| • at DC-13 | | |
| — at 24 V | A | 1 |
| — at 125 V | A | 0.2 |
| — at 250 V | A | 0.1 |
| Thermal current of the switching element with contacts maximum | A | 5 |
| Operating current at 17 V minimum | mA | 5 |
| Continuous current of the DIAZED fuse link of the output relay | A | 4 |
| Mechanical service life (switching cycles) typical | | 10 000 000 |
| Electrical endurance (switching cycles) at AC-15 at 230 V typical | | 100 000 |
| Operating frequency with 3RT2 contactor maximum | 1/h | 5 000 |

Certificates/ approvals:

| | | | |
|--------------------------|-----|---------------------------|-------------------|
| General Product Approval | EMC | Declaration of Conformity | Test Certificates |
|--------------------------|-----|---------------------------|-------------------|



[spezielle Prüfbescheinigungen](#)

| | | |
|-------------------|-------------------|-------|
| Test Certificates | Shipping Approval | other |
|-------------------|-------------------|-------|

[Typprüfbescheinigung/Werkszeugnis](#)



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Further information

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

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

Industry Mall (Online ordering system)

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

Cax online generator

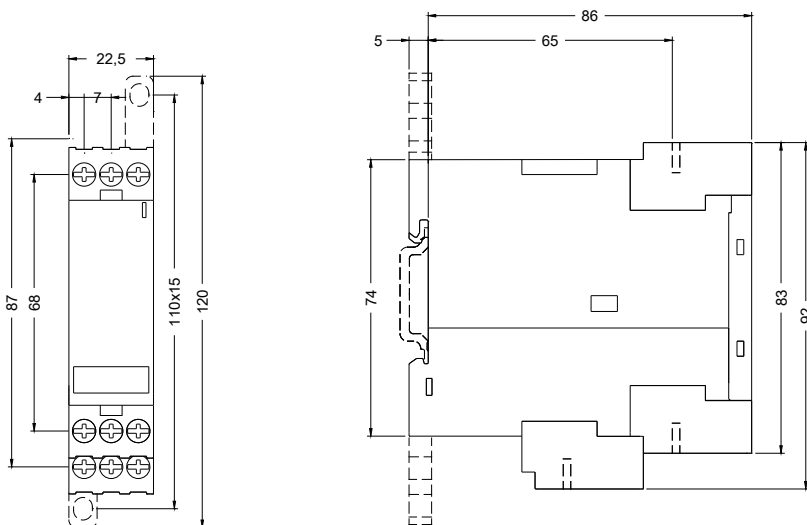
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3UG45121BR20>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3UG45121BR20>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3UG45121BR20&lang=en



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