

Digital monitoring relay for 3-phase voltage with N-conductor Phase sequence can be activated Phase failure 3 x 90 to 400 V 50 to 60 Hz AC Undervoltage and overvoltage 90-400 V Hysteresis 1-20 V 0-20 s each for Umin and Umax 1 CO for Umin 1 CO for Umax screw terminal Successor product for 3UG3042-1BP50



Figure similar

product brand name	SIRIUS
product designation	Network monitoring relay with digital setting
design of the product	5 functions
product type designation	3UG4

General technical data	
• product function	Phase monitoring relay
display version LED	No
design of the display	LCD
• — 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
• Type of voltage 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
• vibration resistance acc. to IEC 60068-2-6	1 ... 6 Hz: 15 mm, 6 ... 500 Hz: 2g
• 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 EN 81346-2	K
relative repeat accuracy	1 %

Product Function

• Product function undervoltage detection	Yes
• Product function Overvoltage detection	Yes
• Product function phase sequence recognition	Yes
• product function phase failure detection	Yes
• Product function Phase unbalance	Yes
• product function overvoltage detection 3 phase	Yes
• product function undervoltage detection 3 phases	Yes
• product function voltage window recognition 3 phase	Yes
• Product function Adjustable open/closed-circuit current principle	Yes
• Product function Auto-reset	Yes

Control circuit/ Control

• control supply voltage at AC at 50 Hz rated value	90 ... 400 V
• control supply voltage at AC at 60 Hz rated value	90 ... 400 V
operating range factor control supply voltage rated value at AC at 50 Hz	
• initial value	1
• full-scale value	1
operating range factor control supply voltage rated value at AC at 60 Hz	
• initial value	1
• full-scale value	1

Measuring circuit

adjustable response delay time	
• with lower or upper limit violation	0.1 ... 20 s
Accuracy of digital display	+/-1 digit

Precision

Relative metering precision	5 %
Auxiliary circuit	
• number of NC contacts delayed switching	0
• number of NO contacts delayed switching	0
• number of CO contacts 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	
• at 250 V at 50/60 Hz	3 A
• at 400 V at 50/60 Hz	3 A
Ampacity of the output relay at DC-13	
• at 24 V	1 A
• at 125 V	0.2 A
• at 250 V	0.1 A
Operating current at 17 V minimum	5 mA
Continuous current of the DIAZED fuse link of the output relay	4 A
Electromagnetic compatibility	
• 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
field-bound parasitic coupling acc. to IEC 61000-4-3	10 V/m
electrostatic discharge acc. to IEC 61000-4-2	6 kV contact discharge / 8 kV air discharge
Galvanic isolation	
• galvanic isolation between entrance and outlet	Yes
• galvanic isolation between the outputs	Yes
• Galvanic isolation between the voltage supply and other circuits	Yes
Connections/ Terminals	
• product function removable terminal for auxiliary and control circuit	Yes
• type of electrical connection	screw-type terminals
• type of connectable conductor cross-sections solid	1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²)
• Type of connectable conductor cross-sections finely stranded with core end processing	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²)

<ul style="list-style-type: none"> • Type of connectable conductor cross-sections at AWG conductors solid 	2x (20 ... 14)
<ul style="list-style-type: none"> • type of connectable conductor cross-sections at AWG conductors stranded 	2x (20 ... 14)
<ul style="list-style-type: none"> • connectable conductor cross-section solid 	0.5 ... 4 mm ²
<ul style="list-style-type: none"> • connectable conductor cross-section finely stranded with core end processing 	0.5 ... 2.5 mm ²
AWG number as coded connectable conductor cross section	
<ul style="list-style-type: none"> • solid 	20 ... 14
<ul style="list-style-type: none"> • stranded 	20 ... 14
<ul style="list-style-type: none"> • tightening torque with screw-type terminals 	0.8 ... 1.2 N·m

Installation/ mounting/ dimensions	
<ul style="list-style-type: none"> • mounting position 	any
<ul style="list-style-type: none"> • mounting type 	snap-on mounting
height	102 mm
width	22.5 mm
depth	91 mm
required spacing	
<ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards — backwards — upwards — downwards — at the side 	0 mm
	0 mm
	0 mm
	0 mm
	0 mm
<ul style="list-style-type: none"> • for grounded parts <ul style="list-style-type: none"> — forwards — backwards — upwards — at the side — downwards 	0 mm
	0 mm
	0 mm
	0 mm
	0 mm
<ul style="list-style-type: none"> • for live parts <ul style="list-style-type: none"> — forwards — backwards — upwards — downwards — at the side 	0 mm
	0 mm
	0 mm
	0 mm
	0 mm






Ambient conditions	
<ul style="list-style-type: none"> • installation altitude at height above sea level maximum 	2 000 m
<ul style="list-style-type: none"> • ambient temperature during operation 	-25 ... +60 °C

- ambient temperature during storage
- ambient temperature during transport

-40 ... +85 °C

-40 ... +85 °C

Certificates/ approvals

General Product Approval		EMC	Declaration of Conformity	
 CCC	 UL	 EAC	 RCM	 EG-Konf.

[Miscellaneous](#)

Test Certificates	Marine / Shipping	other	Railway
Type Test Certificates/Test Report	Special Test Certificate	Confirmation	Vibration and Shock
	 LRS	 DNVGL.COM/AF	

Further information

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=3UG4616-1CR20>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4616-1CR20>

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

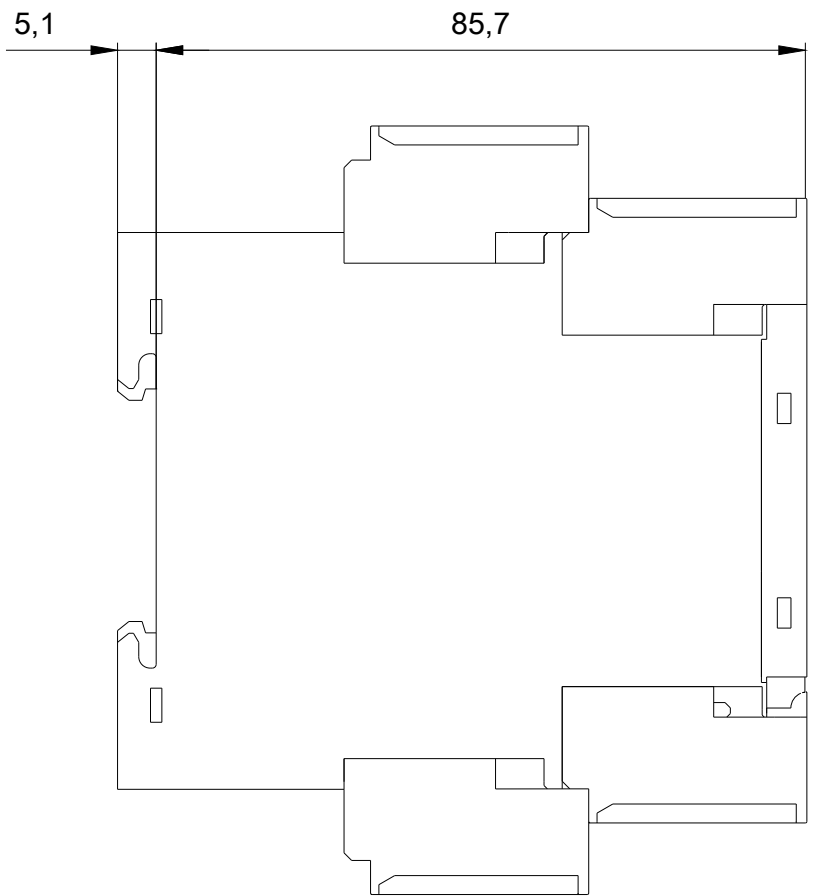
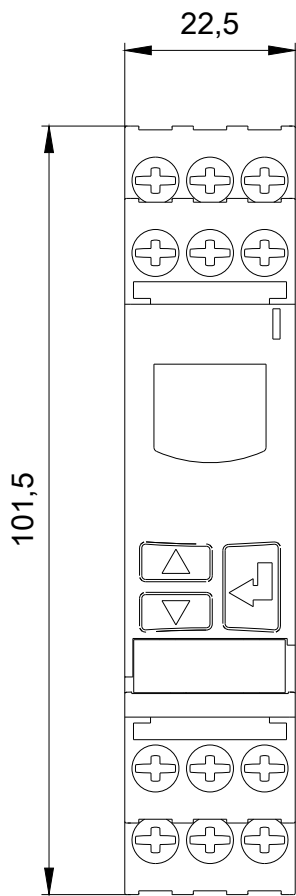
<https://support.industry.siemens.com/cs/ww/en/ps/3UG4616-1CR20>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4616-1CR20&lang=en

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4616-1CR20/manual>



last modified:

09/01/2020