SIEMENS

Data sheet 3UG4616-2CR20

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 Spring-type terminal

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
● 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
vibration resistance according 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 according to IEC 81346-2	K
relative repeat accuracy	1 %
Substance Prohibitance (Date)	05/01/2012
Product Function	
product function	
● undervoltage detection	Yes
● overvoltage detection	Yes
● phase sequence recognition	Yes
● phase failure detection	Yes
● asymmetry detection	Yes
● overvoltage detection 3 phase	Yes
● undervoltage detection 3 phases	Yes
● voltage window recognition 3 phase	Yes
● adjustable open/closed-circuit current principle	Yes
● auto-RESET	Yes
Control circuit/ Control	

control supply voltage at AC	
● at 50 Hz rated value	90 ... 400 V
● 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	
measurable voltage at AC	400 ... 90 V
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
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
operational 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 according to IEC 61000-4-4	2 kV
● due to conductor-earth surge according to IEC 61000-4-5	2 kV
● due to conductor-conductor surge according to IEC 61000-4-5	1 kV
field-based interference according to IEC 61000-4-3	10 V/m
electrostatic discharge according to IEC 61000-4-2	6 kV contact discharge / 8 kV air discharge
Galvanic isolation	
galvanic isolation	
● between input and output	Yes
● between the outputs	Yes
● between the voltage supply and other circuits	Yes
Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection	spring-loaded terminals
type of connectable conductor cross-sections	
● solid	2x (0.25 ... 1.5 mm²)
● finely stranded with core end processing	2 x (0.25 ... 1.5 mm²)
● finely stranded without core end processing	2x (0.25 ... 1.5 mm²)
● at AWG cables solid	2x (24 ... 16)
● at AWG cables stranded	2x (24 ... 16)
connectable conductor cross-section	
● solid	0.25 ... 1.5 mm²

● finely stranded with core end processing	0.25 ... 1.5 mm²
● finely stranded without core end processing	0.25 ... 1.5 mm²
AWG number as coded connectable conductor cross section	
● solid	24 ... 16
● stranded	24 ... 16
Installation/ mounting/ dimensions	
mounting position	any
fastening method	snap-on mounting
height	103 mm
width	22.5 mm
depth	91 mm
required spacing	
● 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
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
● during operation	-25 ... +60 °C
● during storage	-40 ... +85 °C
● during transport	-40 ... +85 °C

Certificates/ approvals

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

Test Certificates		Marine / Shipping		other	Railway
Special Test Certific-ate	Type Test Certific-ates/Test Report	LRS	DNV-GL	Confirmation	Vibration and Shock

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=3UG4616-2CR20
Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4616-2CR20
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3UG4616-2CR20
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4616-2CR20&lang=en
Characteristic: Derating
https://support.industry.siemens.com/cs/ww/en/ps/3UG4616-2CR20/manual

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