SIEMENS

Data sheet 3UG4616-1CR20



!!! product phase-out !!! The preferred successor type is 3UG5616-1CR20 phase sequence phase failure 3x160-690 V screw digital monitoring relay for 3-phase voltage with N-conductor connectable phase sequence 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

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
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
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	К
relative repeat accuracy	1 %
Substance Prohibitance (Date)	05/01/2012
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8
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 50 Hz rated value at 60 Hz rated value	90 400 V 90 400 V
operating range factor control supply voltage rated value at	30 4 00 V
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	90 400 V
adjustable response delay time	0.4 00
with lower or upper limit violation	0.1 20 s
response time maximum	450 ms
accuracy of digital display Precision	+/-1 digit
relative metering precision	5 %
Auxiliary circuit	J /0
number of NC contacts delayed switching	0
number of NO contacts delayed switching	0
number of CO contacts	
• for auxiliary contacts	2
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	4 A
relay	
Electromagnetic compatibility conducted interference	
due to burst according to IEC 61000-4-4	2 kV
 due to burst according to IEC 61000-4-4 due to conductor-earth surge according to IEC 61000-4-5 	2 kV
due to conductor-conductor surge according to IEC due to conductor-conductor surge according to IEC	1 kV
61000-4-5	
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	screw-type terminals
type of connectable conductor cross-sections	
• solid	1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)
 finely stranded with core end processing 	1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²)
• for AWG cables solid	2x (20 14)
for AWG cables stranded	2x (20 14)
connectable conductor cross-section	

• solid	0.5 4 mm²
	0.5 4 mm²
• finely stranded with core end processing AWG number as coded connectable conductor cross	0.5 2.5 IIIIIF
section	
• solid	20 14
• stranded	20 14
tightening torque with screw-type terminals	0.8 1.2 N·m
Installation/ mounting/ dimensions	
mounting position	any
fastening method	snap-on mounting
height	102 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
Approvals Certificates	

General Product Approval







Confirmation





EMV Test Certificates Marine / Shipping



<u>KC</u>

Type Test Certificates/Test Report

Special Test Certificate





other Railway Environment

Confirmation Special Test Certificate

Environmental Confirmations

Further information

Information on the packaging

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

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

Industry Mall (Online ordering system)
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3UG4616-1CR20

Cax online generator

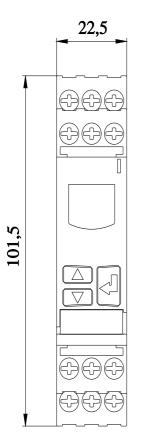
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4616-1CR20

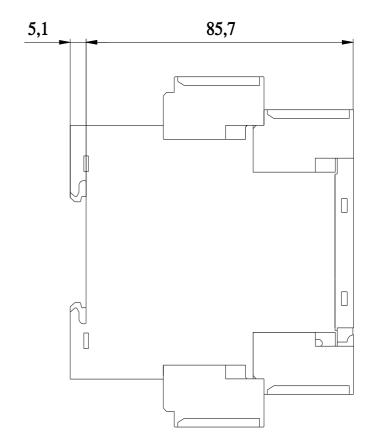
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

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





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