SIEMENS

Data sheet 3UG5618-1CR20



digitally adjustable monitoring relay phase failure, phase sequence, asymmetry, frequency, over- and under-voltage monitoring with phase sequence correction 3x 90-690 V AC, 15-70 Hz 2 changeover contacts screw terminal

product brand name	SIRIUS	
product designation	Network monitoring relay with digital setting	
design of the product	automatic correction of the direction of rotation in case of wrong phase sequence, phase failure, with/without N conductor failure, asymmetry, frequency, overvoltage/undervoltage	
product type designation	3UG5	
General technical data		
product function	line monitoring	
display version LED	No	
design of the display	LCD	
power loss [W] maximum	2 W	
power loss [V·A] maximum	5.1 VA	
insulation voltage for overvoltage category III according to IEC 60664		
 with degree of pollution 2 rated value 	690 V	
with degree of pollution 3 rated value	690 V	
degree of pollution	3	
type of voltage		
• for monitoring	AC	
 of the operating voltage for actuation 	AC/DC	
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	
switching behavior	monostable	
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	
adjustable OFF-delay time	0.1 30 s	
reference code according to IEC 81346-2	К	
relative repeat accuracy	0.4 %	
Substance Prohibitance (Date)	06/01/2023	
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		
suitability for use safety-related circuits	No		
Control circuit/ Control			
control supply voltage at AC			
 at 50 Hz rated value 	120 690 V		
at 60 Hz rated value	120 690 V		
operating range factor control supply voltage rated value at AC at 50 Hz			
• initial value	0.85		
full-scale value	1.1		
operating range factor control supply voltage rated value at AC at 60 Hz			
• initial value	0.85		
• full-scale value	1.1		
Supply voltage			
supply voltage frequency rated value	70 15 Hz		
Measuring circuit			
measurable voltage at AC	90 760 V		
adjustable operating delay time initial value	0 s		
adjustable response delay time			
when starting	0.1 30 s		
with lower or upper limit violation	0.1 30 s		
buffering time in the event of power failure minimum	20 ms		
response time maximum	500 ms		
accuracy of digital display	+/-1 digit		
relative temperature-related measurement deviation	1 %		
Precision			
relative metering precision	3 %		
temperature drift per °C	0.001 %/°C		
Short-circuit protection			
design of the fuse link			
 for short-circuit protection of the NO contacts of the relay outputs required 	gL/gG: 6 A or MCB type C: 1 A		
for short circuit protection of the NC contacts of the relay outputs required	gL/gG: 6 A or MCB type C: 1 A		
Communication/ Protocol			
protocol is supported IO-Link protocol	No		
type of voltage supply via input/output link master	No		
Auxiliary circuit			
material of switching contacts	AgSnO2		
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		
contact reliability of auxiliary contacts	one incorrect switching operation of 100 million switching operations (17 V, 5		
- · · · · ·	mA)		
contact rating of auxiliary contacts according to UL	R300 / B300		
Main circuit			
number of poles for main current circuit	4		
ampacity of the output relay at AC-15			
• at 250 V at 50/60 Hz	3 A		
ampacity of the output relay at DC-13			
• at 24 V	1 A		
• at 110 V	0.2 A		
1.405.1/	0.2 A		
● at 125 V	0.271		

1000.1/	0.4.4	
• at 230 V	0.1 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	6 A	
Electromagnetic compatibility		
EMC emitted interference according to IEC 60947-1	class A	
conducted interference		
 due to burst according to IEC 61000-4-4 	2 kV (power ports), 2 kV (signal ports)	
 due to conductor-earth surge according to IEC 61000-4-5 	2 kV	
 due to conductor-conductor surge according to IEC 	1 kV	
61000-4-5	10 V/m	
field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2	6 kV contact discharge / 8 kV air discharge	
Galvanic isolation	o kv contact discharge / o kv ali discharge	
	nationia isolation	
design of the electrical isolation	galvanic isolation	
galvanic isolation	Von	
between input and output between the custouts	Yes	
between the outputs A between the voltage cumply and other circuits.	Yes	
between the voltage supply and other circuits Connections/ Terminals	Yes	
Connections/ Terminals	Vec	
product component removable terminal for main circuit	Yes	
product component removable terminal for auxiliary and control circuit	Yes	
type of electrical connection	screw-type terminals	
design of terminals with cross-head screw	PZ 1	
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 4 mm²), 2x (0.5 2.5 mm²)	
 for AWG cables solid 	1x (20 12), 2x (20 14)	
connectable conductor cross-section		
• solid	0.5 4 mm²	
 finely stranded with core end processing 	0.5 4 mm²	
AWG number as coded connectable conductor cross section		
• solid	20 12	
stranded	20 12	
tightening torque with screw-type terminals	0.6 0.8 N·m	
stripped length	10 mm	
Installation/ mounting/ dimensions		
mounting position	any	
fastening method	screw and snap-on mounting onto 35 mm DIN rail	
height	100 mm	
width	22.5 mm	
depth	90 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
relative humidity during operation maximum	70 %
Approvals Certificates	

General Product Approval

Confirmation











Test Certificates	other	Environment

Type Test Certificates/Test Report

Confirmation

Environmental Confirmations

Further information

Information on the packaging

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

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=3UG5618-1CR20

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG5618-1CR20

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

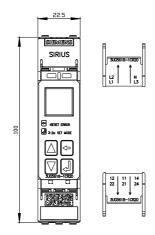
https://support.industry.siemens.com/cs/ww/en/ps/3UG5618-1CR20

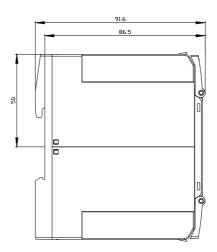
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

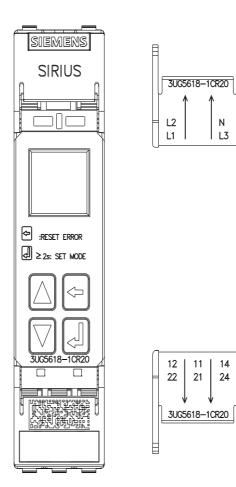
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG5618-1CR20&lang=en

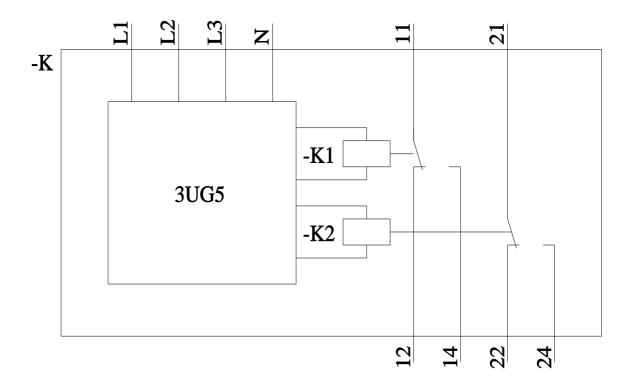
Characteristic: Derating

https://support.industry.siemens.com/cs/ww/en/ps/3UG5618-1CR20/manual









last modified: 3/11/2024 🖸