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
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
vibration resistance according to IEC 60068-2-6	10 55 Hz: 0.35 mm
switching behavior	monostable
mechanical service life (operating cycles) typical	10 000
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
Substance Prohibitance (Date)	06/01/2023
Product Function	
product function	
 undervoltage detection 	Yes
 overvoltage detection 	Yes
 phase sequence recognition 	Yes
phase failure detection	Yes; available but limited, detection is problematic with high levels of regenerative power recovery
 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	200 690 V
at 60 Hz rated value	200 690 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	160 760 V
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
accuracy of digital display	+/-1 digit
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
Communication/ Protocol	
protocol is supported IO-Link protocol	No
type of voltage supply via input/output link master	No
Auxiliary circuit	
Auxiliary circuit	A 0 00
material of switching contacts	AgSnO2
material of switching contacts number of NC contacts delayed switching	0
material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching	•
material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts	0
material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts • for auxiliary contacts	0 0 2
material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts • for auxiliary contacts • delayed switching	0 0 2 2
material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts • for auxiliary contacts • delayed switching operating frequency with 3RT2 contactor maximum	0 0 2 2 2 5 000 1/h
material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts • for auxiliary contacts • delayed switching operating frequency with 3RT2 contactor maximum contact reliability of auxiliary contacts	0 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA)
material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts • for auxiliary contacts • delayed switching operating frequency with 3RT2 contactor maximum contact reliability of auxiliary contacts contact rating of auxiliary contacts according to UL	0 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5
material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts • for auxiliary contacts • delayed switching operating frequency with 3RT2 contactor maximum contact reliability of auxiliary contacts contact rating of auxiliary contacts according to UL Main circuit	0 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300
material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts	0 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA)
material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts	0 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300
material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts • for auxiliary contacts • delayed switching operating frequency with 3RT2 contactor maximum contact reliability of auxiliary contacts contact rating of auxiliary contacts according to UL Main circuit number of poles for main current circuit ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz	0 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300
material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts • for auxiliary contacts • delayed switching operating frequency with 3RT2 contactor maximum contact reliability of auxiliary contacts contact rating of auxiliary contacts according to UL Main circuit number of poles for main current circuit ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz	0 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300
material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts	0 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300 4 3 A 3 A
material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts • for auxiliary contacts • delayed switching operating frequency with 3RT2 contactor maximum contact reliability of auxiliary contacts contact rating of auxiliary contacts according to UL Main circuit number of poles for main current circuit ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz	0 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300
material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts	0 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300 4 3 A 3 A 3 A
material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts • for auxiliary contacts • delayed switching operating frequency with 3RT2 contactor maximum contact reliability of auxiliary contacts contact rating of auxiliary contacts contact rating of auxiliary contacts according to UL Main circuit number of poles for main current circuit ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 110 V	0 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300 4 3 A 3 A 1 A 0.2 A
material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts • for auxiliary contacts • delayed switching operating frequency with 3RT2 contactor maximum contact reliability of auxiliary contacts contact rating of auxiliary contacts according to UL Main circuit number of poles for main current circuit ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 110 V • at 125 V	0 0 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300 4 3 A 3 A 1 A 0.2 A 0.2 A
material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts • for auxiliary contacts • delayed switching operating frequency with 3RT2 contactor maximum contact reliability of auxiliary contacts contact rating of auxiliary contacts according to UL Main circuit number of poles for main current circuit ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 110 V • at 125 V • at 230 V	0 0 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300 4 3 A 3 A 1 A 0.2 A 0.2 A 0.1 A
material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts • for auxiliary contacts • delayed switching operating frequency with 3RT2 contactor maximum contact reliability of auxiliary contacts contact rating of auxiliary contacts according to UL Main circuit number of poles for main current circuit ampacity of the output relay at AC-15 • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 110 V • at 125 V • at 230 V • at 250 V	0 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300 4 3 A 3 A 1 A 0.2 A 0.2 A 0.1 A 0.1 A
material of switching contacts number of NC contacts delayed switching number of CO contacts	0 0 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300 4 3 A 3 A 3 A 1 A 0.2 A 0.2 A 0.1 A 0.1 A 5 mA
material of switching contacts number of NC contacts delayed switching number of CO contacts	0 0 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300 4 3 A 3 A 3 A 1 A 0.2 A 0.2 A 0.1 A 0.1 A 5 mA
material of switching contacts number of NC contacts delayed switching number of CO contacts	0 0 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300 4 3 A 3 A 3 A 1 A 0.2 A 0.2 A 0.1 A 0.1 A 5 mA
material of switching contacts number of NC contacts delayed switching number of CO contacts	0 0 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300 4 3 A 3 A 1 A 0.2 A 0.2 A 0.1 A 0.1 A 5 mA 6 A
number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts	0 0 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300 4 3 A 3 A 1 A 0.2 A 0.2 A 0.1 A 0.1 A 5 mA 6 A class A 2 kV (power ports), 2 kV (signal ports)
material of switching contacts number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts	0 0 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300 4 3 A 3 A 1 A 0.2 A 0.2 A 0.1 A 0.1 A 5 mA 6 A

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	
design of the electrical isolation	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 main circuit	Yes
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 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
nstallation/ 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
- at the side Ambient conditions	V mm
installation altitude at height above sea level maximum	2 000 m
·	2 000 III
ambient temperature	25 ±60 °C
during operation during storage	-25 +60 °C
during storage	-40 +85 °C
during transport	-40 +85 °C
relative humidity during operation	70 %
Certificates/ approvals	
Further information	

Siemens has decided to exit the Russian market (see here). https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

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

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

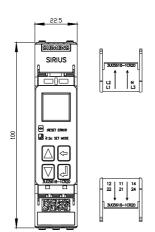
https://support.industry.siemens.com/cs/ww/en/ps/3UG5618-1CR20

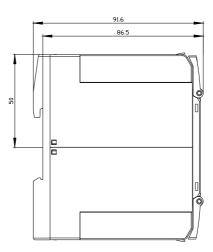
 $Image\ database\ (product\ images,\ 2D\ dimension\ drawings,\ 3D\ models,\ device\ circuit\ diagrams,\ EPLAN\ macros,\ ...)$

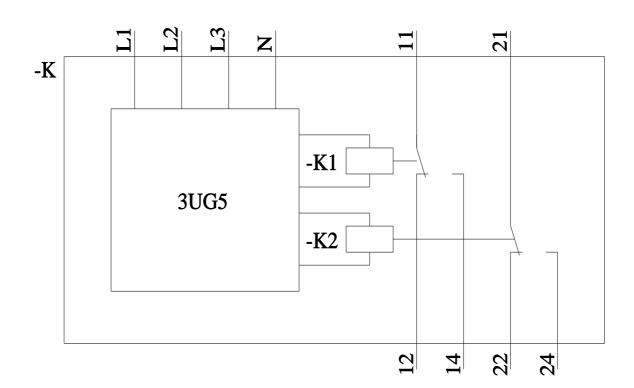
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG5618-1CR20&lang=en

Characteristic: Derating

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







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