SIEMENS

Data sheet 3UG5511-2AR20



monitoring relay phase sequence monitoring 3x 160-690 V AC, 15-70 Hz 1 changeover contact spring-loaded terminal

product brand name	SIRIUS
product designation	Line monitoring relay
design of the product	monitoring of phase sequence
product type designation	3UG5
General technical data	
product function	line monitoring
display version LED	Yes
design of the display	LED
power loss [W] maximum	1.8 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
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	10 000 000
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	K
Substance Prohibitance (Date)	06/01/2023
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol - 119-47-1
Weight	0.165 kg
Product Function	
product function	
undervoltage detection	No
overvoltage detection	No
 phase sequence recognition 	Yes
phase failure detection	No; available but limited, detection is problematic with high levels of regenerative power recovery
asymmetry detection	No; not adjustable, indirectly by monitoring the voltage limit values

and the second s	No
overvoltage detection 3 phase	No No
undervoltage detection 3 phases	No.
voltage window recognition 3 phase	No.
adjustable open/closed-circuit current principle	No Var
auto-RESET Auto-RESET Auto-RESET	Yes
suitability for use safety-related circuits Control circuit/ Control	No
control supply voltage at AC • at 50 Hz rated value	200 690 V
at 50 Hz rated value at 60 Hz rated value	200 690 V
operating range factor control supply voltage rated value at	200 090 V
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
buffering time in the event of power failure minimum	20 ms
response time maximum	500 ms
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 Auxiliary circuit	No
	A-0-00
material of switching contacts	AgSnO2 0
number of NC contacts delayed switching number of NO contacts delayed switching	0
number of CO contacts	Ü
for auxiliary contacts	1
delayed switching	0
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	3
ampacity of the output relay at AC-15	
• at 250 V at 50/60 Hz	3 A
at 250 V at 50/60 Hzat 400 V at 50/60 Hz	3 A 3 A
 at 250 V at 50/60 Hz at 400 V at 50/60 Hz ampacity of the output relay at DC-13	3 A
 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 	3 A 1 A
 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 	3 A 1 A 0.2 A
 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 	1 A 0.2 A 0.2 A
 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 	1 A 0.2 A 0.2 A 0.1 A
 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 	1 A 0.2 A 0.2 A 0.1 A 0.1 A
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 operational current at 17 V minimum continuous current of the DIAZED fuse link of the output	1 A 0.2 A 0.2 A 0.1 A
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 operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay	1 A 0.2 A 0.2 A 0.1 A 0.1 A
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 operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay Electromagnetic compatibility	1 A 0.2 A 0.2 A 0.1 A 0.1 A 5 mA 6 A
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 operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay Electromagnetic compatibility EMC emitted interference according to IEC 60947-1	1 A 0.2 A 0.2 A 0.1 A 0.1 A
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 operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay Electromagnetic compatibility	1 A 0.2 A 0.2 A 0.1 A 0.1 A 5 mA 6 A

• due to conductor conthicurae according to IEC 61000 4.5	2 kV
due to conductor-earth surge according to IEC 61000-4-5 due to conductor conductor curre according to IEC.	1 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	
design of the electrical isolation	galvanic isolation
galvanic isolation	
between input and output	Yes
 between the voltage supply and other circuits 	Yes
Electrical Safety	
protection class IP on the front according to IEC 60529	IP20
Connections/ Terminals	
product component removable terminal for main circuit	Yes
product component removable terminal for auxiliary and	Yes
control circuit	
type of electrical connection	spring-loaded terminal (push-in)
type of connectable conductor cross-sections	
• solid	0.5 4 mm²
 finely stranded with core end processing 	0.5 2.5 mm²
 finely stranded without core end processing 	0.5 4 mm²
• for AWG cables solid	20 12
for AWG cables stranded	20 12
connectable conductor cross-section	
• solid	0.5 4 mm²
finely stranded with core end processing	0.5 2.5 mm²
finely stranded without core end processing	0.25 1.5 mm²
AWG number as coded connectable conductor cross section	
• solid	24 12
stranded	20 12
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	00
required spacing	90 mm
with side-by-side mounting	90 mm
— forwards	90 mm
· - · · - · - · - · - · · · · · · · · ·	0 mm
— backwards	
	0 mm
— backwards	0 mm 0 mm
— backwards — upwards	0 mm 0 mm 0 mm
backwardsupwardsdownwards	0 mm 0 mm 0 mm 0 mm
backwardsupwardsdownwardsat the side	0 mm 0 mm 0 mm 0 mm
 backwards upwards downwards at the side for grounded parts 	0 mm 0 mm 0 mm 0 mm 0 mm
 backwards upwards downwards at the side for grounded parts forwards 	0 mm 0 mm 0 mm 0 mm 0 mm 0 mm
 backwards upwards downwards at the side for grounded parts forwards backwards 	0 mm
 backwards upwards downwards at the side for grounded parts forwards backwards upwards at the side downwards 	0 mm
 backwards upwards downwards at the side for grounded parts forwards backwards upwards at the side downwards for live parts 	0 mm
 backwards upwards downwards at the side for grounded parts forwards backwards upwards at the side downwards for live parts forwards 	0 mm
 backwards upwards downwards at the side for grounded parts forwards backwards upwards at the side downwards for live parts forwards backwards 	0 mm
 backwards upwards downwards at the side for grounded parts forwards backwards upwards at the side downwards for live parts backwards upwards upwards 	0 mm
 backwards upwards downwards at the side for grounded parts forwards backwards upwards at the side downwards for live parts forwards backwards upwards downwards for live parts forwards backwards upwards downwards 	0 mm
 backwards upwards downwards at the side for grounded parts forwards backwards upwards at the side downwards for live parts forwards upwards at the side downwards backwards downwards at the side 	0 mm
- backwards - upwards - downwards - at the side • for grounded parts - forwards - backwards - upwards - at the side - downwards • for live parts - forwards - backwards - at the side - downwards - forwards - forwards - backwards - backwards - upwards - downwards - downwards - at the side Ambient conditions	0 mm
- backwards - upwards - downwards - at the side • for grounded parts - forwards - backwards - upwards - at the side - downwards • for live parts - forwards - backwards - backwards - at the side - downwards - for live parts - forwards - backwards - backwards - upwards - downwards - at the side Ambient conditions installation altitude at height above sea level maximum	0 mm
- backwards - upwards - downwards - at the side • for grounded parts - forwards - backwards - upwards - at the side - downwards • for live parts - forwards - backwards - at the side - downwards - for wards - forwards - backwards - backwards - upwards - downwards - at the side Ambient conditions	0 mm

during storage	-40 +85 °C		
during transport	-40 +85 °C		
relative humidity during operation maximum	70 %		
Environmental footprint			
Environmental Product Declaration(EPD)	Yes		
global warming potential [CO2 eq] total	18 kg		
global warming potential [CO2 eq] during manufacturing	5.65 kg		
global warming potential [CO2 eq] during operation	12.3 kg		
global warming potential [CO2 eq] after end of life	-0.03 kg		
Approvals Certificates			
General Product Approval		EMV	













Test Certificates

other

Environment

Type Test Certificates/Test Report

Confirmation



Siemens EcoTech 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=3UG5511-2AR20

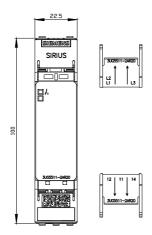
Cax online generator

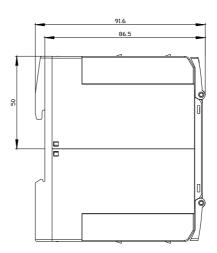
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG5511-2AR20

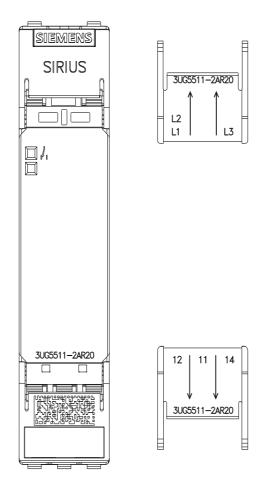
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

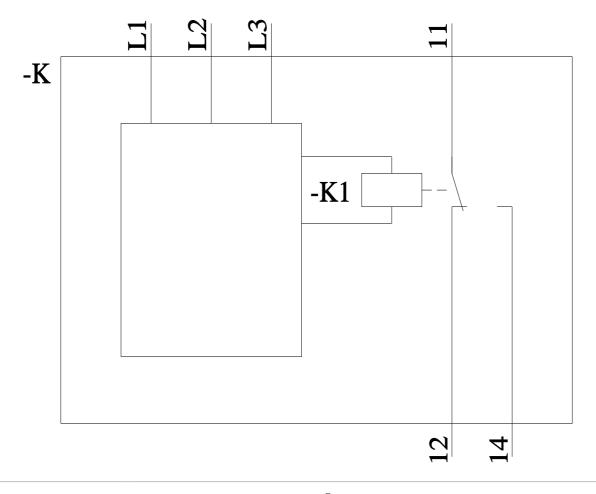
https://support.industry.siemens.com/cs/ww/en/ps/3UG5511-2AR20

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG5511-2AR20&lang=en









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