



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

product brand name	SIRIUS
product designation	Network monitoring relay with digital setting
design of the product	monitoring of phase sequence, phase failure, phase asymmetry, N-conductor (adjustable), frequency, undervoltage and overvoltage
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
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
adjustable OFF-delay time	0.1 ... 30 s
reference code according to IEC 81346-2	K
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 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol - 119-47-1
Weight	0.168 kg
Product Function	
product function	
• undervoltage detection	Yes
• overvoltage detection	Yes
• phase sequence recognition	Yes

<ul style="list-style-type: none"> • phase failure detection • asymmetry detection • overvoltage detection 3 phase • undervoltage detection 3 phases • voltage window recognition 3 phase • adjustable open/closed-circuit current principle • auto-RESET • neutral conductor monitoring adjustable 	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>
suitability for use safety-related circuits	No
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage 1 at AC	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	<p>200 ... 690 V</p> <p>200 ... 690 V</p>
control supply voltage 2 at AC	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	<p>120 ... 400 V</p> <p>120 ... 400 V</p>
operating range factor control supply voltage rated value at AC at 50 Hz	
<ul style="list-style-type: none"> • initial value • full-scale value 	<p>0.85</p> <p>1.1</p>
operating range factor control supply voltage rated value at AC at 60 Hz	
<ul style="list-style-type: none"> • initial value • full-scale value 	<p>0.85</p> <p>1.1</p>
Supply voltage	
supply voltage frequency rated value	70 ... 15 Hz
Interfaces	
design of the interface bluetooth	No
Measuring circuit	
measurable voltage 1 at AC	160 ... 760 V
measurable voltage 2 at AC	90 ... 440 V
adjustable operating delay time initial value	0 s
adjustable response delay time	
<ul style="list-style-type: none"> • when starting • with lower or upper limit violation 	<p>0.1 ... 999.9 s</p> <p>0.1 ... 30 s</p>
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	
<ul style="list-style-type: none"> • for short-circuit protection of the NO contacts of the relay outputs required • for short circuit protection of the NC contacts of the relay outputs required 	<p>gL/gG: 6 A or MCB type C: 1 A</p> <p>gL/gG: 6 A or MCB type C: 1 A</p>
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	
<ul style="list-style-type: none"> • for auxiliary contacts • delayed switching 	<p>2</p> <p>2</p>
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
operating voltage	
• at AC	
— at 50 Hz rated value	690 ... 690 V
— at 60 Hz rated value	690 ... 690 V
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
• at 125 V	0.2 A
• 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 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 outputs	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 control circuit	Yes
type of electrical connection	spring-loaded terminal (push-in)
type of connectable conductor cross-sections	
• solid	1x (0.5 ... 4 mm ²)
• finely stranded with core end processing	1x (0.5 ... 2.5 mm ²)
• finely stranded without core end processing	0.5 ... 4 mm ²
• for AWG cables solid	1x (20 ... 12)
• for AWG cables stranded	20 ... 12
connectable conductor cross-section	
• solid	0.5 ... 4 mm ²
• finely stranded with core end processing	0.5 ... 2.5 mm ²
• finely stranded without core end processing	0.25 ... 1.5 mm ²
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	90 mm
required spacing	
<ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards 0 mm — backwards 0 mm — upwards 0 mm — downwards 0 mm — at the side 0 mm • for grounded parts <ul style="list-style-type: none"> — forwards 0 mm — backwards 0 mm — upwards 0 mm — at the side 0 mm — downwards 0 mm • for live parts <ul style="list-style-type: none"> — 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	
<ul style="list-style-type: none"> • during operation -25 ... +60 °C • 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	17.3 kg
global warming potential [CO2 eq] during manufacturing	5.06 kg
global warming potential [CO2 eq] during operation	12.3 kg
global warming potential [CO2 eq] after end of life	-0.132 kg

Approvals Certificates

General Product Approval	EMV	Test Certificates
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[Type Test Certificates/Test Report](#)

other Environment

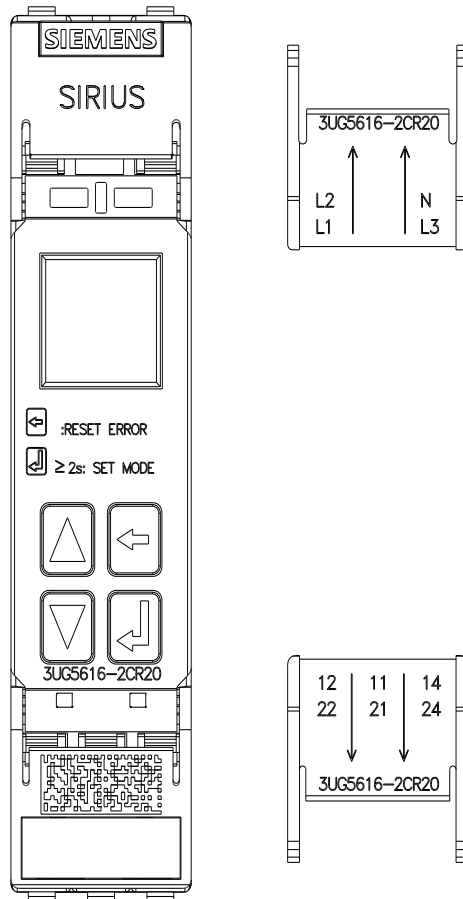
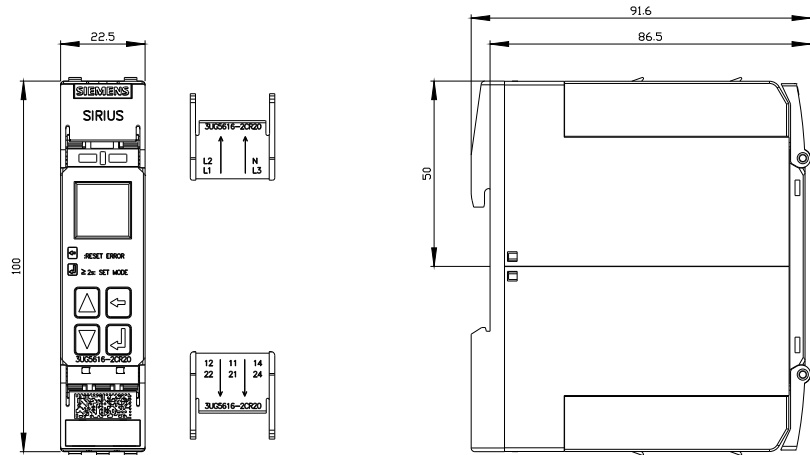
[Confirmation](#)

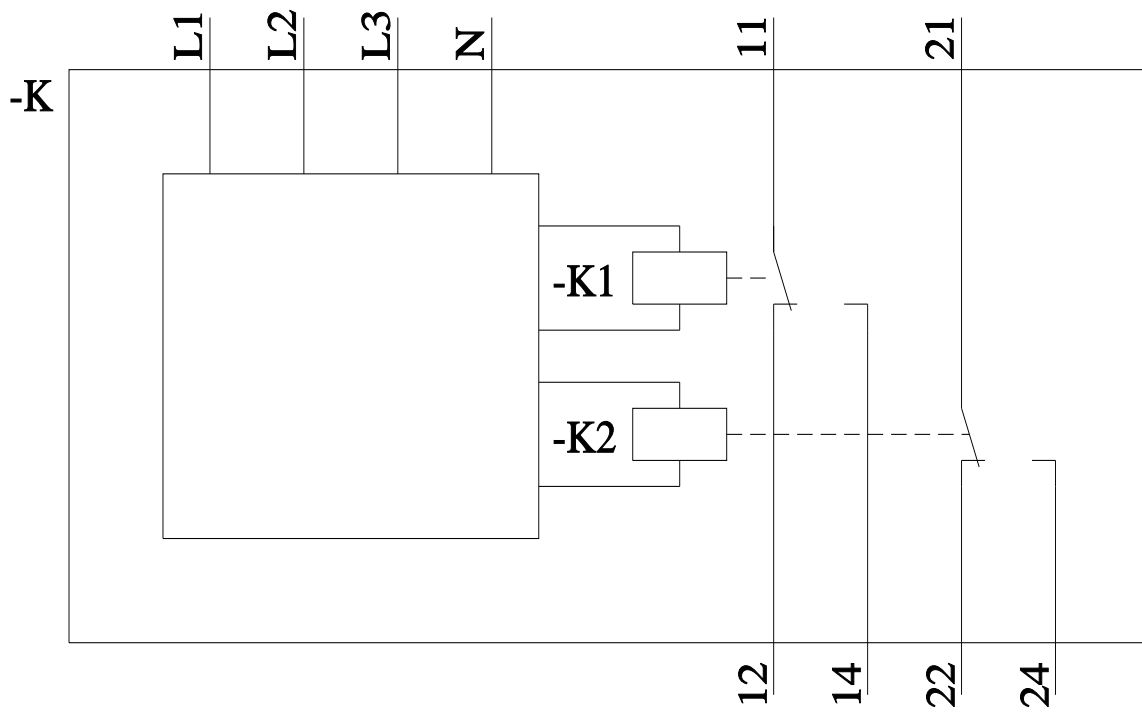


[Environmental Confirmations](#)

Further information

- Information on the packaging
<https://support.industry.siemens.com/cs/ww/en/view/109813875>
- Information for data generation and storage
<https://support.industry.siemens.com/cs/ww/en/view/109995012>
- 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=3UG5616-2CR20>
- Cax online generator
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG5616-2CR20>





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