## **SIEMENS**

Data sheet 3UG5514-2BR20



analog adjustment monitoring relay phase failure, phase sequence, asymmetry and under-voltage monitoring  $3x\ 160\text{-}690\ V\ AC}$ , 15-70 Hz 2 changeover contacts spring-loaded terminal

product brand name	SIRIUS	
product designation	Network monitoring relay with analog setting	
design of the product	monitoring of phase sequence, phase failure, phase asymmetry, and undervoltage	
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		
<ul> <li>with degree of pollution 2 rated value</li> </ul>	690 V	
<ul> <li>with degree of pollution 3 rated value</li> </ul>	690 V	
degree of pollution	3	
type of voltage		
<ul> <li>for monitoring</li> </ul>	AC	
<ul> <li>of the operating voltage for actuation</li> </ul>	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	
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	0.164 kg	
Product Function		
product function		
undervoltage detection	Yes	
<ul> <li>overvoltage detection</li> </ul>	No	
<ul> <li>phase sequence recognition</li> </ul>	Yes	
phase failure detection	Yes	

asymmetry detection	Yes		
overvoltage detection 3 phase	No		
<ul> <li>undervoltage detection 3 phases</li> </ul>	Yes		
<ul> <li>voltage window recognition 3 phase</li> </ul>	No		
<ul> <li>adjustable open/closed-circuit current principle</li> </ul>	No		
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		
Initial value     full-scale value	1.1		
	1.1		
Supply voltage	70 45 Liz		
supply voltage frequency rated value	70 15 Hz		
Measuring circuit	100 700 1/		
measurable voltage at AC	160 760 V		
adjustable operating delay time initial value	0.1 s		
adjustable response delay time			
with lower or upper limit violation	0.1 20 s		
buffering time in the event of power failure minimum	20 ms		
response time maximum	500 ms		
relative temperature-related measurement deviation	1 %		
Precision			
relative metering precision	5 %		
temperature drift per °C	0.003 %/°C		
Short-circuit protection			
design of the fuse link			
<ul> <li>for short-circuit protection of the NO contacts of the relay outputs required</li> </ul>	gL/gG: 6 A or MCB type C: 1 A		
<ul> <li>for short circuit protection of the NC contacts of the relay</li> </ul>			
outputs required	gL/gG: 6 A or MCB type C: 1 A		
	gL/gG: 6 A or MCB type C: 1 A		
outputs required	gL/gG: 6 A or MCB type C: 1 A  No		
outputs required  Communication/ Protocol			
outputs required  Communication/ Protocol  protocol is supported IO-Link protocol	No		
outputs required  Communication/ Protocol  protocol is supported IO-Link protocol  type of voltage supply via input/output link master	No		
outputs required  Communication/ Protocol  protocol is supported IO-Link protocol  type of voltage supply via input/output link master  Auxiliary circuit	No No		
outputs required  Communication/ Protocol  protocol is supported IO-Link protocol  type of voltage supply via input/output link master  Auxiliary circuit  material of switching contacts	No No AgSnO2		
outputs required  Communication/ Protocol  protocol is supported IO-Link protocol  type of voltage supply via input/output link master  Auxiliary circuit  material of switching contacts  number of NC contacts delayed switching	No No AgSnO2		
outputs required  Communication/ Protocol  protocol is supported IO-Link protocol  type of voltage supply via input/output link master  Auxiliary circuit  material of switching contacts  number of NC contacts delayed switching  number of NO contacts delayed switching	No No AgSnO2		
outputs required  Communication/ Protocol  protocol is supported IO-Link protocol  type of voltage supply via input/output link master  Auxiliary circuit  material of switching contacts  number of NC contacts delayed switching  number of NO contacts delayed switching  number of CO contacts	No No AgSnO2 0		
outputs required  Communication/ Protocol  protocol is supported IO-Link protocol  type of voltage supply via input/output link master  Auxiliary circuit  material of switching contacts  number of NC contacts delayed switching  number of NO contacts delayed switching  number of CO contacts  • for auxiliary contacts	No No No 2		
outputs required  Communication/ Protocol  protocol is supported IO-Link protocol  type of voltage supply via input/output link master  Auxiliary circuit  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	No No AgSnO2 0 0 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5		
outputs required  Communication/ Protocol  protocol is supported IO-Link protocol  type of voltage supply via input/output link master  Auxiliary circuit  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	No No AgSnO2 0 0 2 2 2 5 000 1/h		
outputs required  Communication/ Protocol  protocol is supported IO-Link protocol  type of voltage supply via input/output link master  Auxiliary circuit  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	No No AgSnO2 0 0 2 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA)		
outputs required  Communication/ Protocol  protocol is supported IO-Link protocol  type of voltage supply via input/output link master  Auxiliary circuit  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	No No AgSnO2 0 0 2 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA)		
outputs required  Communication/ Protocol  protocol is supported IO-Link protocol  type of voltage supply via input/output link master  Auxiliary circuit  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	No No No AgSnO2 0 0 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300		
outputs required  Communication/ Protocol  protocol is supported IO-Link protocol  type of voltage supply via input/output link master  Auxiliary circuit  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	No No No AgSnO2 0 0 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300		
outputs required  Communication/ Protocol  protocol is supported IO-Link protocol  type of voltage supply via input/output link master  Auxiliary circuit  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	No No AgSnO2 0 0 2 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300		
outputs required  Communication/ Protocol  protocol is supported IO-Link protocol  type of voltage supply via input/output link master  Auxiliary circuit  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	No No AgSnO2 0 0 2 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300		
outputs required  Communication/ Protocol  protocol is supported IO-Link protocol  type of voltage supply via input/output link master  Auxiliary circuit  material of switching contacts  number of NC 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  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	No No AgSnO2 0 0 2 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300		
outputs required  Communication/ Protocol  protocol is supported IO-Link protocol  type of voltage supply via input/output link master  Auxiliary circuit  material of switching contacts  number of NC 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  ampacity of the output relay at DC-13  • at 24 V	No No AgSnO2 0 0 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300  3 3 A 3 A 3 A		
outputs required  Communication/ Protocol  protocol is supported IO-Link protocol  type of voltage supply via input/output link master  Auxiliary circuit  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	No No No AgSnO2 0 0 2 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300  3 3 A 3 A 3 A 1 A 0.2 A		
outputs required  Communication/ Protocol  protocol is supported IO-Link protocol  type of voltage supply via input/output link master  Auxiliary circuit  material of switching contacts  number of NC 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  ampacity of the output relay at DC-13  • at 24 V	No No AgSnO2 0 0 2 2 5 000 1/h one incorrect switching operation of 100 million switching operations (17 V, 5 mA) R300 / B300  3 3 A 3 A 3 A		

	0.4.0
• at 250 V	0.1 A
operational current at 17 V minimum	5 mA 6 A
continuous current of the DIAZED fuse link of the output relay	
Electromagnetic compatibility	
EMC emitted interference according to IEC 60947-1	class A
conducted interference	
<ul> <li>due to burst according to IEC 61000-4-4</li> </ul>	2 kV (power ports), 2 kV (signal ports)
<ul> <li>due to conductor-earth surge according to IEC 61000-4-5</li> </ul>	2 kV
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	
design of the electrical isolation	galvanic isolation
galvanic isolation	
<ul> <li>between input and output</li> </ul>	Yes
<ul> <li>between the outputs</li> </ul>	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	0.5 4 mm²
<ul> <li>finely stranded with core end processing</li> </ul>	0.5 2.5 mm²
<ul> <li>finely stranded without core end processing</li> </ul>	0.5 4 mm²
<ul> <li>for AWG cables solid</li> </ul>	20 12
for AWG cables stranded	20 12
connectable conductor cross-section	
• solid	0.5 4 mm²
<ul> <li>finely stranded with core end processing</li> </ul>	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	90 mm
required spacing	
<ul> <li>with side-by-side mounting</li> </ul>	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	0 mm
<ul> <li>for grounded parts</li> </ul>	
— 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			
<ul> <li>during operation</li> </ul>	-25 +60 °C		
<ul> <li>during storage</li> </ul>	-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 informatior

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=3UG5514-2BR20

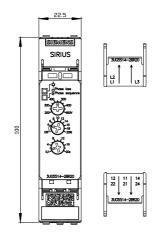
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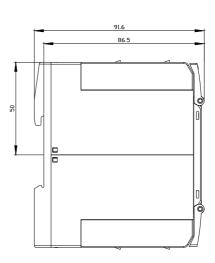
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG5514-2BR20

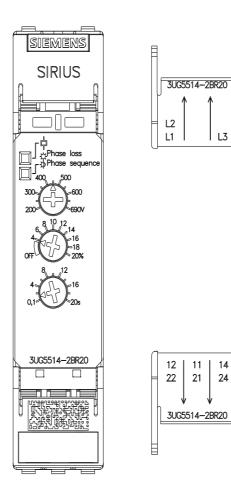
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

https://support.industry.siemens.com/cs/ww/en/ps/3UG5514-2BR20

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) <a href="http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3UG5514-2BR20&lang=en">http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3UG5514-2BR20&lang=en</a>



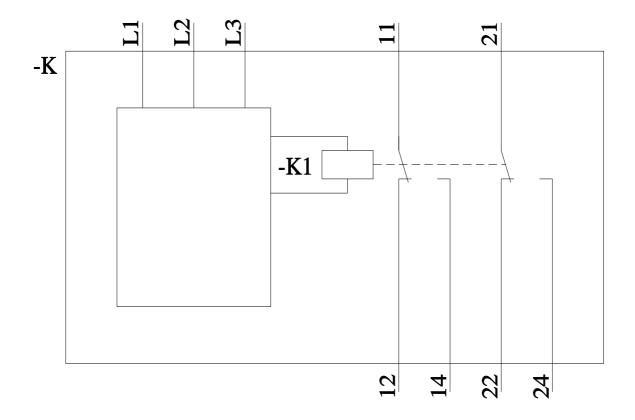




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