

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS

3UG4512-2BR20

SIRIUS PHASE MONITORING RELAY

Used with the applicable SIRIUS 3UG4 configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Siemens official technical documentation for 3UG4512-2BR20



!!! product phase-out !!! the preferred successor is 3UG5512-2BR20 phase failure and sequence monitoring 3 x 160...690 V, 2 changeover contacts; analog monitoring relay phase failure and sequence monitoring 3 x 160...690 V 50...60 Hz AC 2 changeover contacts spring-loaded connection system

product brand name	SIRIUS
product designation	Line monitoring relay
design of the product	2 functions
product type designation	3UG4
General technical data	
product function	Phase monitoring relay
display version LED	Yes
insulation voltage for overvoltage category III according to IEC 60664	
• with degree of pollution 3 rated value	690 V
degree of pollution	3
type of voltage	
• for monitoring	AC
• 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	1 ... 6 Hz: 15 mm, 6 ... 500 Hz: 2g
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	1 %
Substance Prohibitance (Date)	05/28/2009
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	0.14 kg
Product Function	
product function	
• undervoltage detection	No
• overvoltage detection	No
• phase sequence recognition	Yes
• phase failure detection	Yes
• asymmetry detection	No
• overvoltage detection 3 phase	No
• undervoltage detection 3 phases	No
• voltage window recognition 3 phase	No
• adjustable open/closed-circuit current principle	No
• auto-RESET	Yes
Control circuit/ Control	

control supply voltage at AC	
• at 50 Hz rated value	160 ... 690 V
• at 60 Hz rated value	160 ... 690 V
operating range factor control supply voltage rated value at AC at 50 Hz	
• initial value	1
• full-scale value	1
operating range factor control supply voltage rated value at AC at 60 Hz	
• initial value	1
• full-scale value	1
Measuring circuit	
measurable voltage at AC	160 ... 690 V
response time maximum	450 ms
Auxiliary circuit	
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
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 400 V at 50/60 Hz	3 A
ampacity of the output relay at DC-13	
• at 24 V	1 A
• at 125 V	0.2 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	4 A
Electromagnetic compatibility	
conducted interference	
• due to burst according to IEC 61000-4-4	2 kV
• 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	
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 auxiliary and control circuit	Yes
type of electrical connection	spring-loaded terminals
type of connectable conductor cross-sections	
• solid	2x (0.25 ... 1.5 mm ²)
• finely stranded with core end processing	2 x (0.25 ... 1.5 mm ²)
• finely stranded without core end processing	2x (0.25 ... 1.5 mm ²)
• for AWG cables solid	2x (24 ... 16)
• for AWG cables stranded	2x (24 ... 16)
connectable conductor cross-section	
• solid	0.25 ... 1.5 mm ²
• finely stranded with core end processing	0.25 ... 1.5 mm ²
• finely stranded without core end processing	0.25 ... 1.5 mm ²

AWG number as coded connectable conductor cross section			
• solid	24 ... 16		
• stranded	24 ... 16		
Installation/ mounting/ dimensions			
mounting position	any		
fastening method	snap-on mounting		
height	94 mm		
width	22.5 mm		
depth	91 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		
Environmental footprint			
Environmental Product Declaration (EPD)	Yes		
global warming potential [CO2 eq] total	16.1 kg		
global warming potential [CO2 eq] during manufacturing	3.51 kg		
global warming potential [CO2 eq] during operation	13.7 kg		
global warming potential [CO2 eq] after end of life	-1.12 kg		
Approvals Certificates			
General Product Approval			
EMV			
<div><div> CCC</div><div></div><div> EG-Konf.</div><div> UL</div><div></div><div> RCM</div></div>			
EMV	Test Certificates	Marine / Shipping	other
KC	Type Test Certificates/Test Report	Special Test Certificate	<div> DNV</div> <div> LRS</div> Confirmation
Railway	Environment		

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=3UG4512-2BR20>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4512-2BR20>

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

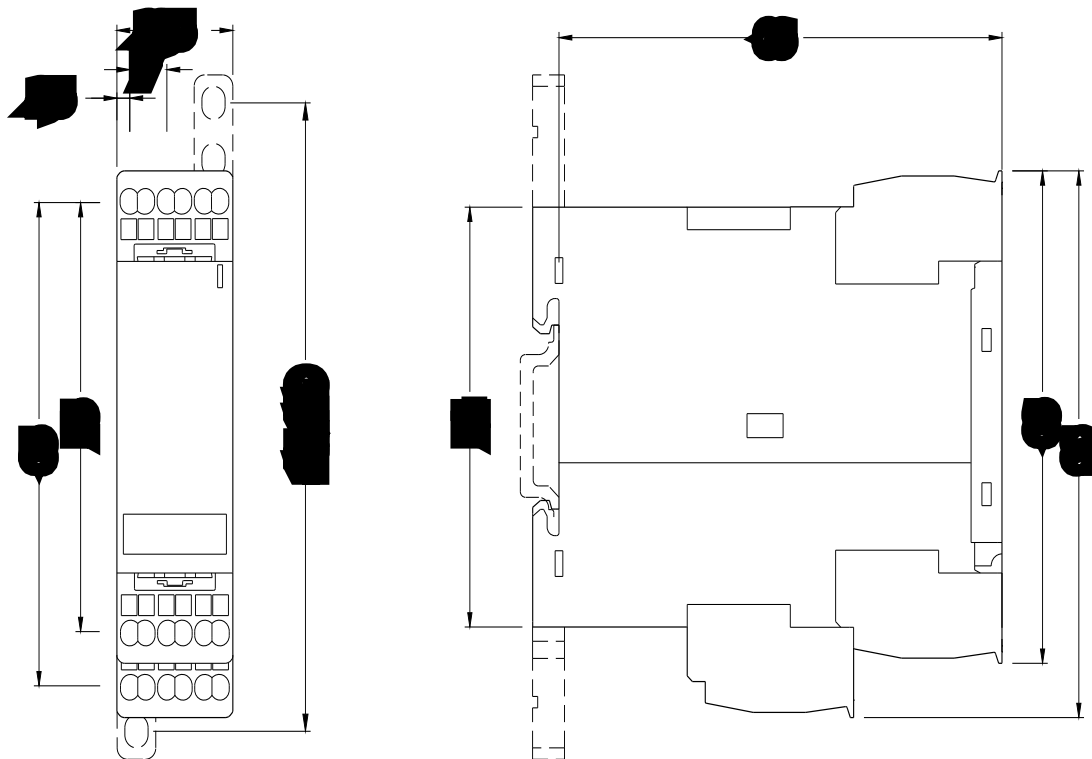
<https://support.industry.siemens.com/cs/ww/en/ps/3UG4512-2BR20>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4512-2BR20&lang=en

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4512-2BR20/manual>



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