SIEMENS

Data sheet 3UG4512-1AR20



Analog monitoring relay Phase failure and sequence 3 x 160...690 V 50...60 Hz AC 1 change-over contact screw terminal

Figure similar

product brand name Si	SIRIUS		
product designation N	Network monitoring relay with analog setting		
design of the product 2	2 functions		
product type designation 38	3UG4		
General technical data			
product function Pl	hase monitoring relay		
display version LED You	es		
insulation voltage for overvoltage category III according to IEC 60664			
• with degree of pollution 3 rated value 69	90 V		
degree of pollution 3			
type of voltage			
• for monitoring A	C		
 of the control supply voltage At the control supply voltage	C		
surge voltage resistance rated value 6	kV		
protection class IP IP	220		
shock resistance acc. to IEC 60068-2-27 sin	sinusoidal half-wave 15g / 11 ms		
vibration resistance acc. to IEC 60068-2-6	1 6 Hz: 15 mm, 6 500 Hz: 2g		
mechanical service life (switching cycles) typical	10 000 000		
electrical endurance (switching cycles) at AC-15 at 230 V typical	00 000		
thermal current of the switching element with contacts maximum 5	A		
reference code acc. to IEC 81346-2			
relative repeat accuracy 1	%		
Substance Prohibitance (Date)	1.05.2012		
Product Function			
product function			
undervoltage detection	0		
overvoltage detection	0		
 phase sequence recognition 	es		
 phase failure detection 	es		
asymmetry detection	0		
 overvoltage detection 3 phase 	0		
 undervoltage detection 3 phases 	0		
 voltage window recognition 3 phase 	0		
adjustable open/closed-circuit current principle	0		
	es		
Control circuit/ Control			

control supply voltage at AC • at 50 Hz Trated value • at 60 Hz Trated value • at 60 Hz Trated value • full-scale value •					
* at 60 Hz rated value * operating range factor control supply voltage rated * value at AC at 50 Hz * initial value * initial	control supply voltage at AC				
apperating range factor control supply voltage rated value at AC at 58 lbt initial value initi	 at 50 Hz rated value 	160 690 V			
value at AC at 50 Hz initial value initial v		160 690 V			
• full-scale value operating range factor control supply voltage rated value at AC at 60 Hz • initial value •					
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value at AC at 60 Hz initial value full-scale value 1 Measuring circuit measurable voltage at AC Auxiliary circuit number of NC contacts delayed switching number of NC contact discharge late number of NC	full-scale value	1			
Mossuring circuit					
Measuring circuit measurable voltage at AC 690 160 V					
Measurable voltage at AC masurable voltage at AC Auxillary circuit number of NC contacts delayed switching number of NC contacts delayed switching 1 operating frequency with 3RT2 contactor maximum Main circuit number of OC ontacts delayed switching 1 operating frequency with 3RT2 contactor maximum Main circuit 3 ampacity of the output relay at AC-15 • at 250 v 15 0/60 Hz 3 A • at 400 v at 50/60 Hz 3 A ampacity of the output relay at DC-13 • at 125 v 0.2 A • at 125 v 0.1 A • at 125 v 0.1 A • at 125 v 0.1 A operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay conducted interference • due to burst acc. to IEC 61000-4-2 • due to conductor-onductor surge acc. to IEC 61000-4-5 • due to conductor-onductor surge acc. to IEC 61000-4-2 • due to conductor-onductor surge acc. to IEC 61000-4-2 • due to conductor-onductor surge acc. to IEC 61000-4-2 • due to conductor-onductor surge acc. to IEC 61000-4-2 • due to conductor-onductor surge acc. to IEC 61000-4-2 • due to conductor-onductor surge acc. to IEC 61000-4-2 • due to conductor-onductor surge acc. to IEC 61000-4-2 • due to conductor-onductor surge acc. to IEC 61000-4-2 • due to conductor-onductor surge acc. to IEC 61000-4-2 • due to conductor-onductor surge acc. to IEC 61000-4-2 • due to conductor-onductor surge acc. to IEC 61000-4-2 • due to conductor-onductor surge acc. to IEC 61000-4-2 • due to conductor-onductor surge acc. to IEC 61000-4-2 • due to conductor-onductor surge acc. to IEC 61000-4-2 • due to conductor-onductor surge acc. to IEC 61000-4-2 • due to conductor-onductor surge acc. to IEC 61000-4-2 • due to conductor-onductor surge acc. to IEC 61000-4-2 • devent me output • between the outputs • between the outputs • between the voltage supply and other circuits Yes connectable sordium to one and processing • at AWG cables suranded connectable conductor cross-sections • solid • finely stranded with core end processing • at AWG cables stranded connectable conductor cross-sections • solid • finely stranded					
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type of connectable conductor cross-sections • solid • finely stranded with core end processing • at AWG cables solid • at AWG cables stranded • solid • solid • at AWG cables stranded • at AWG cables stranded • solid	conducted interference • due to burst acc. to IEC 61000-4-4 • due to conductor-earth surge acc. to IEC 61000-4-5 • due to conductor-conductor surge acc. to IEC 61000-4-5 field-based interference acc. to IEC 61000-4-3 electrostatic discharge acc. to IEC 61000-4-2 Galvanic isolation • between input and output • between the outputs • between the voltage supply and other circuits Connections/ Terminals	2 kV 1 kV 10 V/m 6 kV contact discharge / 8 kV air discharge Yes Yes Yes			
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connectable conductor cross-section	conducted interference • due to burst acc. to IEC 61000-4-4 • due to conductor-earth surge acc. to IEC 61000-4-5 • due to conductor-conductor surge acc. to IEC 61000-4-5 field-based interference acc. to IEC 61000-4-3 electrostatic discharge acc. to IEC 61000-4-2 Galvanic isolation • between input and output • between the outputs • between the voltage supply and other circuits Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection type of connectable conductor cross-sections • solid • finely stranded with core end processing	2 kV 1 kV 10 V/m 6 kV contact discharge / 8 kV air discharge Yes Yes Yes Yes Yes 10 V/m 10 kV contact discharge / 8 kV air discharge			
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	conducted interference • due to burst acc. to IEC 61000-4-4 • due to conductor-earth surge acc. to IEC 61000-4-5 • due to conductor-conductor surge acc. to IEC 61000-4-5 field-based interference acc. to IEC 61000-4-3 electrostatic discharge acc. to IEC 61000-4-2 Galvanic isolation galvanic isolation • between input and output • between the outputs • between the voltage supply and other circuits Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection type of connectable conductor cross-sections • solid • finely stranded with core end processing • at AWG cables solid • at AWG cables stranded connectable conductor cross-section • solid	2 kV 1 kV 10 V/m 6 kV contact discharge / 8 kV air discharge Yes Yes Yes Yes Yes screw-type terminals 1x (0.5 4 mm2), 2x (0.5 2.5 mm2) 1x (0.5 2.5 mm2), 2x (0.5 1.5 mm2) 2x (20 14) 2x (20 14) 0.5 4 mm²			
a stranded	conducted interference	2 kV 1 kV 10 V/m 6 kV contact discharge / 8 kV air discharge Yes Yes Yes Yes Yes screw-type terminals 1x (0.5 4 mm2), 2x (0.5 2.5 mm2) 1x (0.5 2.5 mm2), 2x (0.5 1.5 mm2) 2x (20 14) 2x (20 14) 0.5 4 mm²			
• stranded 20 14	conducted interference • due to burst acc. to IEC 61000-4-4 • due to conductor-earth surge acc. to IEC 61000-4-5 • due to conductor-conductor surge acc. to IEC 61000-4-5 field-based interference acc. to IEC 61000-4-3 electrostatic discharge acc. to IEC 61000-4-2 Galvanic isolation galvanic isolation • between input and output • between the outputs • between the voltage supply and other circuits Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection type of connectable conductor cross-sections • solid • finely stranded with core end processing • at AWG cables solid • at AWG cables stranded connectable conductor cross-section • solid • finely stranded with core end processing AWG number as coded connectable conductor cross section	2 kV 1 kV 10 V/m 6 kV contact discharge / 8 kV air discharge Yes Yes Yes Yes 10 V/m 11 V/m 11 V/m 12 V/m 12 V/m 13 V/m 14 V/m 15 V/m 16 V/m 17 V/m 18 V/m			
tightening torque with screw-type terminals 0.8 1.2 N·m	conducted interference • due to burst acc. to IEC 61000-4-4 • due to conductor-earth surge acc. to IEC 61000-4-5 • due to conductor-conductor surge acc. to IEC 61000-4-5 field-based interference acc. to IEC 61000-4-3 electrostatic discharge acc. to IEC 61000-4-2 Galvanic isolation galvanic isolation • between input and output • between the outputs • between the voltage supply and other circuits Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection type of connectable conductor cross-sections • solid • finely stranded with core end processing • at AWG cables solid • at AWG cables stranded connectable conductor cross-section • solid • finely stranded with core end processing AWG number as coded connectable conductor cross section	2 kV 1 kV 10 V/m 6 kV contact discharge / 8 kV air discharge Yes Yes Yes Yes 10 V/m 11 V/m 11 V/m 12 V/m 12 V/m 13 V/m 14 V/m 15 V/m 16 V/m 17 V/m 18 V/m			

Installation/ mounting/ dimensions								
mounting position	any	any						
fastening method	snap	snap-on mounting						
height	83 m	83 mm						
width	22.5	22.5 mm						
depth	91 mm							
required spacing								
with side-by-side mounting								
— forwards	0 mr	0 mm						
— backwards	0 mr	0 mm						
— upwards	0 mr	0 mm						
— downwards	0 mr	0 mm						
— at the side	0 mr	0 mm						
 for grounded parts 								
— forwards	0 mr	0 mm						
— backwards	0 mr	0 mm						
— upwards	0 mr	0 mm						
— at the side	0 mr	0 mm						
— downwards	0 mr	0 mm						
for live parts								
— forwards	0 mr	0 mm						
— backwards	0 mr	0 mm						
— upwards	0 mr	0 mm						
— downwards	0 mr	0 mm						
— at the side	0 mr	0 mm						
Ambient conditions								
installation altitude at height above sea level maximum	2 00	2 000 m						
ambient temperature								
 during operation 	-25 .	-25 +60 °C						
 during storage 	-40 .	-40 +85 °C						
 during transport 	-40 .	-40 +85 °C						
Certificates/ approvals								
General Product Approval		EMC	Declaration of Conformity	Test Certificates				











Special Test Certificate

Test Certificates

Marine / Shipping

other

Railway

Type Test Certificates/Test Report





Confirmation

Vibration and Shock

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

 $\underline{https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3UG4512-1AR20}$

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4512-1AR20

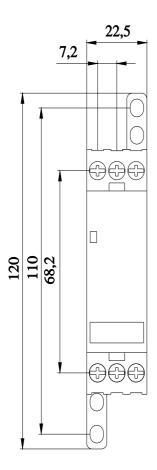
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

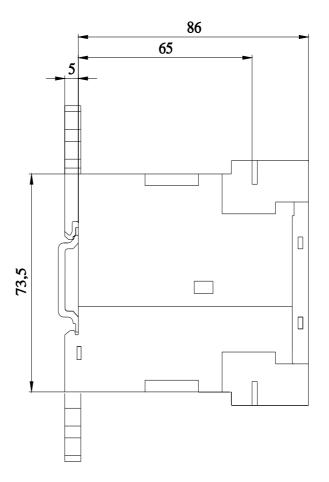
https://support.industry.siemens.com/cs/ww/en/ps/3UG4512-1AR20

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4512-1AR20&lang=en

Characteristic: Derating

https://support.industry.siemens.com/cs/ww/en/ps/3UG4512-1AR20/manual





last modified: 12/21/2020 ☑