SIEMENS

Data sheet 3UG4512-2AR20



Analog monitoring relay Phase failure and sequence 3 x 160...690 V 50...60 Hz AC 1 change-over contact spring-type connection system

product brand name	SIRIUS
product designation	Network monitoring relay with analog setting
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
protection class IP	IP20
shock resistance acc. to IEC 60068-2-27	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	100 000
thermal current of the switching element with contacts maximum	5 A
reference code acc. to IEC 81346-2	K
relative repeat accuracy	1 %
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	

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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
Auxiliary circuit	
number of NC contacts delayed switching	0
number of NO contacts delayed switching	0
number of CO contacts delayed switching	1
operating frequency with 3RT2 contactor maximum	5 000 1/h
Main circuit	
number of poles for main current circuit	3
Outputs	
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 acc. to IEC 61000-4-4	2 kV
● due to conductor-earth surge acc. to IEC 61000-4-5	2 kV
● due to conductor-conductor surge acc. to IEC 61000-4-5	1 kV
field-based interference acc. to IEC 61000-4-3	10 V/m
electrostatic discharge acc. 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
Connections/ Terminals	
product function 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 mm²)
● finely stranded with core end processing	2 x (0.25 ... 1.5 mm²)
● finely stranded without core end processing	2x (0.25 ... 1.5 mm²)
● at AWG cables solid	2x (24 ... 16)
● at AWG cables stranded	2x (24 ... 16)
● connectable conductor cross-section solid	0.25 ... 1.5 mm²
● connectable conductor cross-section finely stranded with core end processing	0.25 ... 1.5 mm²
● connectable conductor cross-section finely stranded without core end processing	0.25 ... 1.5 mm²
● AWG number as coded connectable conductor cross section solid	24 ... 16

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● AWG number as coded connectable conductor cross section stranded	24 ... 16
Installation/ mounting/ dimensions	
mounting position	any
fastening method	snap-on mounting
height	84 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
● ambient temperature during storage	-40 ... +85 °C
● ambient temperature during transport	-40 ... +85 °C

Certificates/ approvals

General Product Approval	EMC	Declaration of Conformity	Test Certificates
CCC, UL, RCM, EG-Konf.		Miscellaneous	Special Test Certificate

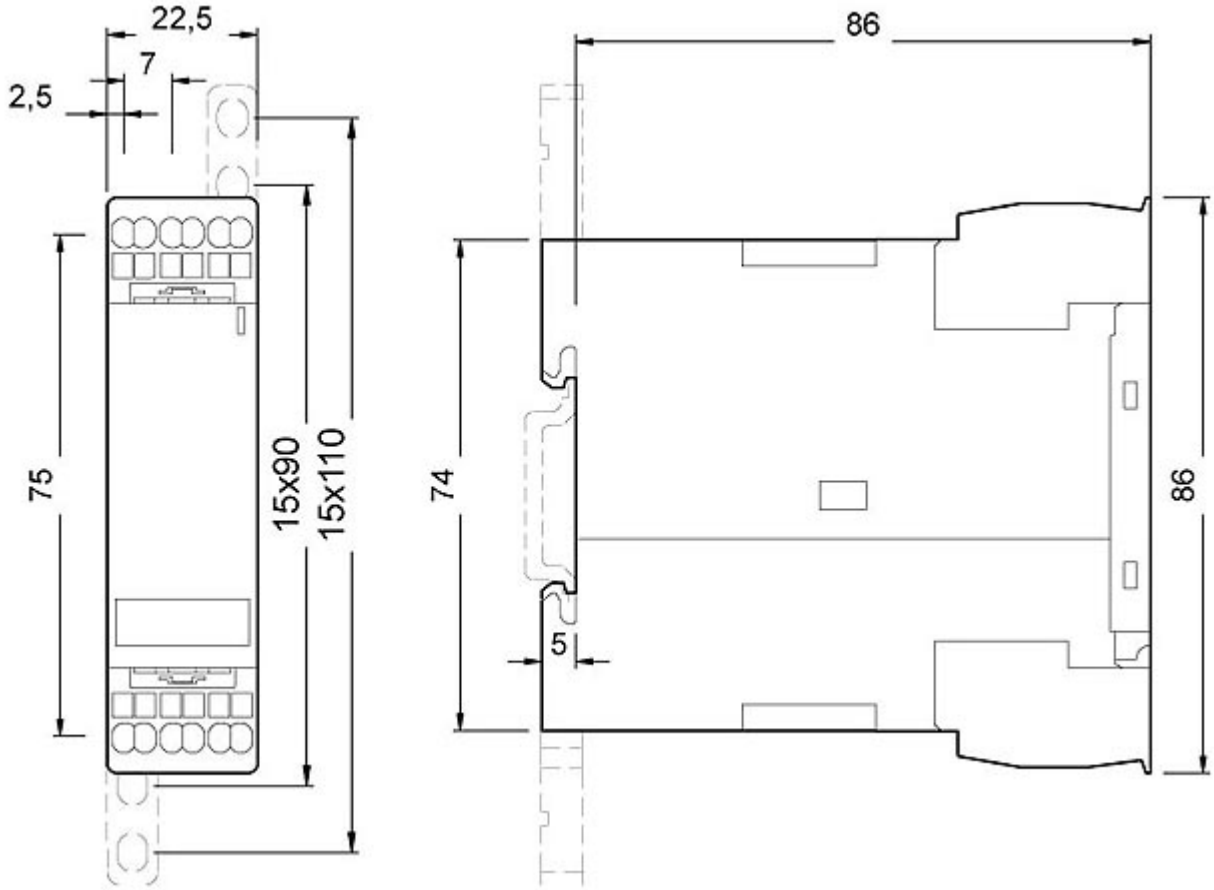
Test Certificates	Marine / Shipping	other	Railway
Type Test Certificates/Test Report	LRS, DNV-GL	Confirmation	Vibration and Shock

Further information

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=3UG4512-2AR20
Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4512-2AR20
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3UG4512-2AR20
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4512-2AR20&lang=en

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https://support.industry.siemens.com/cs/ww/en/ps/3UG4512-2AR20/manual



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