SIEMENS

Data sheet 3UG4512-2BR20

Analog monitoring relay Phase failure and sequence 3 x 160...690 V 50...60 Hz AC 2 change-over contacts 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
• Type of voltage 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	

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• 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 DIN EN 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
• Phase unbalance	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

Auxiliary circuit

Number of NC contacts	
• delayed switching	0
Number of NO contacts	
• delayed switching	0
Number of CO contacts	
• delayed switching	2
Operating frequency with 3RT2 contactor maximum	5 000 1/h

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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
Operating 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-bound parasitic coupling 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 entrance and outlet	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 conductors solid	2x (24 ... 16)
• at AWG conductors stranded	2x (24 ... 16)
Connectable conductor cross-section	
• solid	0.25 ... 1.5 mm²
• finely stranded with core end processing	0.25 ... 1.5 mm²

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• finely stranded without core end processing	0.25 ... 1.5 mm²
AWG number as coded connectable conductor cross section	
• solid	24 ... 16
• stranded	24 ... 16

Installation/ mounting/ dimensions

Mounting position	any
Mounting type	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

Certificates/ approvals

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General Product Approval			EMC	Declaration of Conformity	
CCC	UL	EAC	RCM	EG-Konf.	Miscellaneous

Test Certificates		Marine / Shipping		other	Railway
Special Test Certificate	Type Test Certificates/Test Report	LRS	DNVGL.COM/AF	Confirmation	Vibration and Shock

Further information

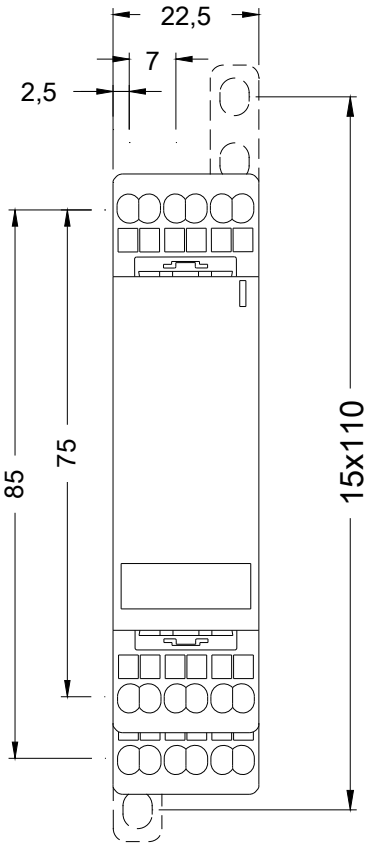
Information- and Downloadcenter (Catalogs, Brochures,…)
https://www.siemens.com/ic10

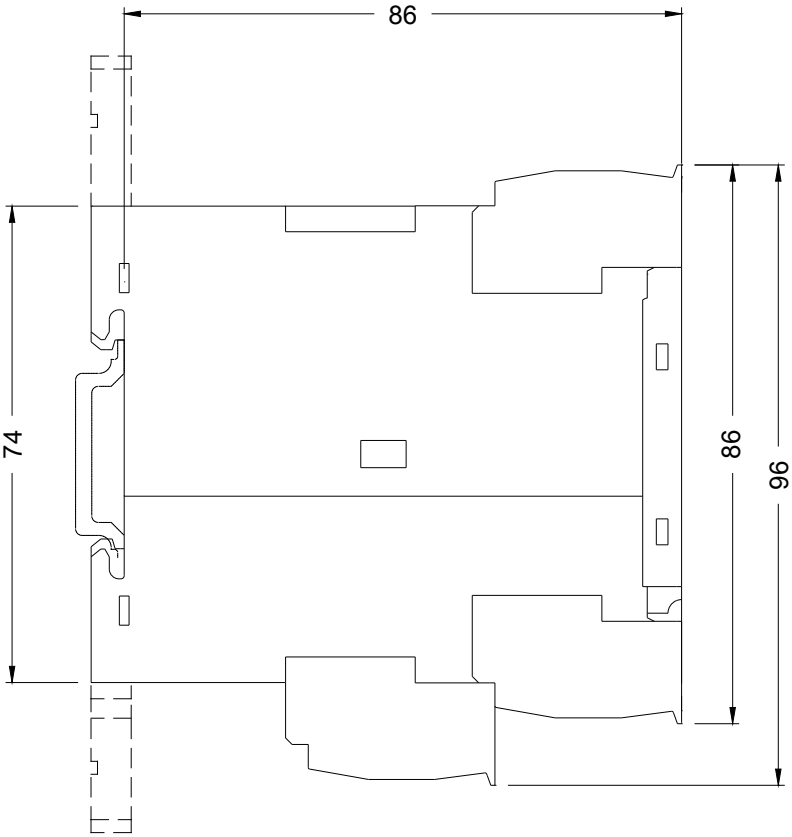
Industry Mall (Online ordering system)
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3UG4512-2BR20

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





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