



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
• of the control supply voltage	AC
surge voltage resistance rated value	6 kV
protection class IP	IP20
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 (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 according to IEC 81346-2	K
relative repeat accuracy	1 %
Substance Prohibitance (Date)	05/28/2009
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	

<ul style="list-style-type: none"> • at 50 Hz rated value • at 60 Hz rated value 	160 ... 690 V
operating range factor control supply voltage rated value at AC at 50 Hz <ul style="list-style-type: none"> • initial value • full-scale value 	1 1
operating range factor control supply voltage rated value at AC at 60 Hz <ul style="list-style-type: none"> • initial value • full-scale value 	1 1
Measuring circuit	
measurable voltage at AC	690 ... 160 V
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
Main circuit	
number of poles for main current circuit	3
ampacity of the output relay at AC-15 <ul style="list-style-type: none"> • at 250 V at 50/60 Hz • at 400 V at 50/60 Hz 	3 A 3 A
ampacity of the output relay at DC-13 <ul style="list-style-type: none"> • at 24 V • at 125 V • at 250 V 	1 A 0.2 A 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 <ul style="list-style-type: none"> • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 	2 kV 2 kV 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 <ul style="list-style-type: none"> • between input and output • between the outputs • between the voltage supply and other circuits 	Yes Yes Yes
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 <ul style="list-style-type: none"> • solid • finely stranded with core end processing • finely stranded without core end processing • at AWG cables solid • at AWG cables stranded 	2x (0.25 ... 1.5 mm ²) 2 x (0.25 ... 1.5 mm ²) 2x (0.25 ... 1.5 mm ²) 2x (24 ... 16) 2x (24 ... 16)
connectable conductor cross-section <ul style="list-style-type: none"> • solid • finely stranded with core end processing • finely stranded without core end processing 	0.25 ... 1.5 mm ² 0.25 ... 1.5 mm ² 0.25 ... 1.5 mm ²
AWG number as coded connectable conductor cross section <ul style="list-style-type: none"> • solid • stranded 	24 ... 16 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	
<ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards 0 mm — backwards 0 mm — upwards 0 mm — downwards 0 mm — at the side 0 mm • for grounded parts <ul style="list-style-type: none"> — forwards 0 mm — backwards 0 mm — upwards 0 mm — at the side 0 mm — downwards 0 mm • for live parts <ul style="list-style-type: none"> — 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 style="list-style-type: none"> • during operation -25 ... +60 °C • during storage -40 ... +85 °C • during transport -40 ... +85 °C 	

Certificates/ approvals		
General Product Approval	EMC	Declaration of Conformity



[Confirmation](#)



Test Certificates	Marine / Shipping	other	Railway
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[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



[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

Characteristic: Derating

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

last modified:

12/21/2020 