



Analog monitoring relay Phase failure and sequence Adjustable undervoltage Asymmetry 20% fixed 3 x 160 to 690 V 50 to 60 Hz AC Hysteresis 5% fixed Delay time 0-20 s 2 change-over contacts spring-type connection system

product brand name	SIRIUS
product designation	Network monitoring relay with analog setting
design of the product	4 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)	05/01/2012

### Product Function

product function	
• undervoltage detection	Yes
• overvoltage detection	No
• phase sequence recognition	Yes
• phase failure detection	Yes
• asymmetry detection	Yes
• overvoltage detection 3 phase	No
• undervoltage detection 3 phases	Yes
• 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

#### Precision

**relative metering precision** 5 %

#### 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**  

- 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

#### 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<sup>2</sup>)
- finely stranded with core end processing 2 x (0.25 ... 1.5 mm<sup>2</sup>)
- finely stranded without core end processing 2x (0.25 ... 1.5 mm<sup>2</sup>)
- at AWG cables solid 2x (24 ... 16)
- at AWG cables stranded 2x (24 ... 16)

**connectable conductor cross-section**  

- solid 0.25 ... 1.5 mm<sup>2</sup>
- finely stranded with core end processing 0.25 ... 1.5 mm<sup>2</sup>
- finely stranded without core end processing 0.25 ... 1.5 mm<sup>2</sup>

**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
<b>ambient temperature</b>	
• during operation	-25 ... +60 °C
• during storage	-40 ... +85 °C
• during transport	-40 ... +85 °C

#### Certificates/ approvals

General Product Approval	EMC	Declaration of Conformity
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[Confirmation](#)



Declaration of Conformity	Test Certificates	Marine / Shipping	other
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[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



[Confirmation](#)

#### Railway

[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=3UG4513-2BR20>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4513-2BR20>

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

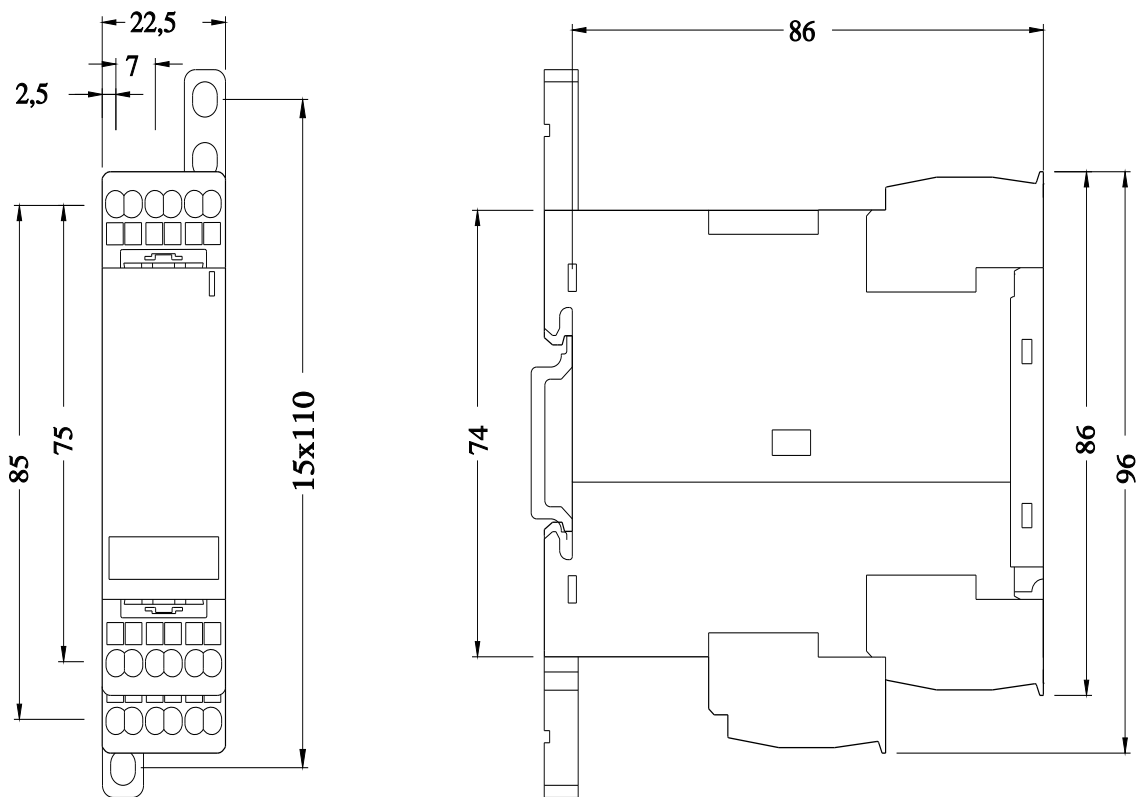
<https://support.industry.siemens.com/cs/ww/en/ps/3UG4513-2BR20>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3UG4513-2BR20&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4513-2BR20&lang=en)

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4513-2BR20/manual>



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