

Digital monitoring relay for 3-phase voltage with N-conductor Phase sequence can be activated Phase failure 3 x 90 to 400 V 50 to 60 Hz AC Undervoltage and overvoltage 90-400 V Hysteresis 1-20 V 0-20 s each for Umin and Umax 1 CO for Umin 1 CO for Umax Spring-type terminal



Product brand name	SIRIUS
Product designation	Network monitoring relay with digital setting
Design of the product	5 functions
Product type designation	3UG4

General technical data	
Product function	Phase monitoring relay
Display version LED	No
Design of the display	LCD
Insulation voltage	<ul style="list-style-type: none"> for overvoltage category III according to IEC 60664 — with degree of pollution 3 rated value
Degree of pollution	3
<ul style="list-style-type: none"> Type of voltage for monitoring Type of voltage of the control supply voltage 	AC
Surge voltage resistance rated value	6 kV
Protection class IP	IP20
Shock resistance	<ul style="list-style-type: none"> acc. to IEC 60068-2-27
	sinusoidal half-wave 15g / 11 ms

Vibration resistance	
<ul style="list-style-type: none"> • acc. to IEC 60068-2-6 	1 ... 6 Hz: 15 mm, 6 ... 500 Hz: 2g
Mechanical service life (switching cycles)	
<ul style="list-style-type: none"> • typical 	10 000 000
Electrical endurance (switching cycles)	
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • undervoltage detection • Overvoltage detection • phase sequence recognition • Phase failure detection • Phase unbalance • Overvoltage detection 3 phase • undervoltage detection 3 phases • Voltage window recognition 3 phase • Adjustable open/closed-circuit current principle • Auto-reset 	<ul style="list-style-type: none"> Yes Yes Yes Yes Yes Yes Yes Yes Yes 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 	<ul style="list-style-type: none"> 90 ... 400 V 90 ... 400 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 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 1 1

Measuring circuit

Adjustable response delay time	
<ul style="list-style-type: none"> • with lower or upper limit violation 	0.1 ... 20 s
Accuracy of digital display	+/-1 digit

Precision

Relative metering precision	5 %
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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

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 mm ²)

<ul style="list-style-type: none"> finely stranded with core end processing 	2 x (0.25 ... 1.5 mm ²)
<ul style="list-style-type: none"> finely stranded without core end processing 	2x (0.25 ... 1.5 mm ²)
<ul style="list-style-type: none"> at AWG conductors solid 	2x (24 ... 16)
<ul style="list-style-type: none"> at AWG conductors stranded 	2x (24 ... 16)
Connectable conductor cross-section	
<ul style="list-style-type: none"> solid 	0.25 ... 1.5 mm ²
<ul style="list-style-type: none"> finely stranded with core end processing 	0.25 ... 1.5 mm ²
<ul style="list-style-type: none"> finely stranded without core end processing 	0.25 ... 1.5 mm ²
AWG number as coded connectable conductor cross section	
<ul style="list-style-type: none"> solid 	24 ... 16
<ul style="list-style-type: none"> stranded 	24 ... 16

Installation/ mounting/ dimensions

Mounting position	any
Mounting type	snap-on mounting
Height	103 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 — Backwards — upwards — downwards — at the side 	0 mm
	0 mm
	0 mm
	0 mm
	0 mm
<ul style="list-style-type: none"> for grounded parts <ul style="list-style-type: none"> — forwards — Backwards — upwards — at the side — downwards 	0 mm
	0 mm
	0 mm
	0 mm
	0 mm
<ul style="list-style-type: none"> for live parts <ul style="list-style-type: none"> — forwards — Backwards — upwards — downwards — at the side 	0 mm
	0 mm
	0 mm
	0 mm
	0 mm

Ambient conditions

Installation altitude at height above sea level	
<ul style="list-style-type: none"> maximum 	2 000 m
Ambient temperature	

- during operation
- during storage
- during transport

-25 ... +60 °C

-40 ... +85 °C

-40 ... +85 °C

Certificates/ approvals

General Product Approval



[Miscellaneous](#)

Test Certificates

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



other

[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=3UG4616-2CR20>

Cax online generator

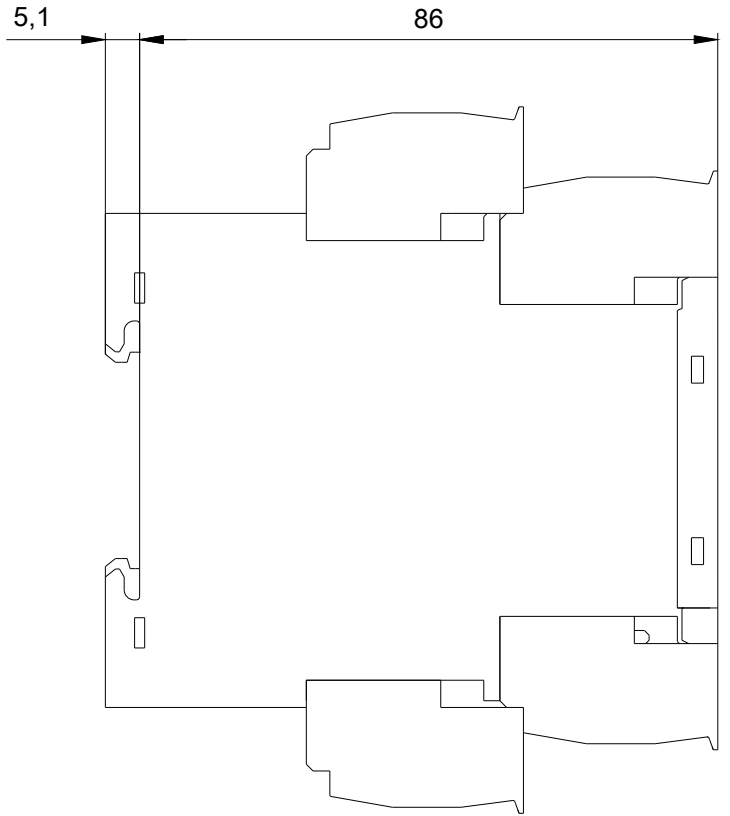
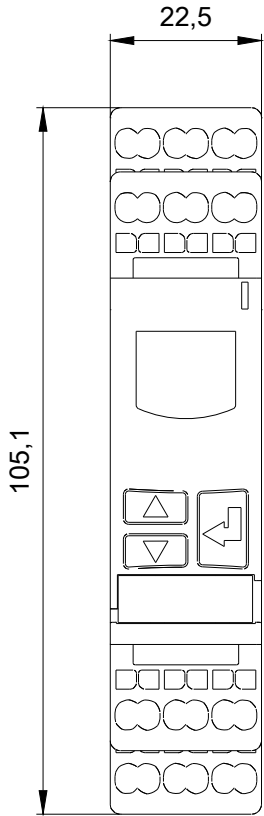
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4616-2CR20>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4616-2CR20>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4616-2CR20&lang=en



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