



Digital monitoring relay Voltage monitoring, 22.5 mm from 0.1-60 V
 AC/DC Overshoot and undershoot Supply voltage: 24 V AC/DC 50 to
 60 Hz DC and AC without galvanic isolation to measuring circuit
 Noise pulses delay 0.1 to 20 s Hysteresis 0.1 to 30 V 1 change-over
 contact with or without fault buffer screw terminal Successor product
 for 3UG3531-1AC..

Product brand name	SIRIUS
Product designation	Voltage monitoring relay with digital setting
Product type designation	3UG4

General technical data

Product function	Voltage monitoring relay
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 	690 V
<ul style="list-style-type: none"> Type of voltage for monitoring 	AC/DC
<ul style="list-style-type: none"> Type of voltage of the control supply voltage 	AC/DC
Surge voltage resistance rated value	4 kV
maximum permissible voltage for safe isolation	
<ul style="list-style-type: none"> between auxiliary and auxiliary circuit 	300 V
<ul style="list-style-type: none"> between control and auxiliary circuit 	300 V
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 • 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	Yes
• Overvoltage detection	Yes
• Overvoltage detection 1 phase	Yes
• Overvoltage detection 3 phase	No
• Overvoltage detection DC	Yes
• undervoltage detection 1 phase	Yes
• undervoltage detection 3 phases	No
• undervoltage detection DC	Yes
• Voltage window recognition 1 phase	Yes
• Voltage window recognition 3 phase	No
• Voltage window recognition DC	Yes
• Adjustable open/closed-circuit current principle	Yes
• External reset	Yes
• Auto-reset	Yes

Control circuit/ Control

Control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value	24 ... 24 V 24 ... 24 V
Control supply voltage at DC • rated value	24 ... 24 V
Operating range factor control supply voltage rated value at DC • initial value • Full-scale value	0.85 1.15
Operating range factor control supply voltage rated value at AC at 50 Hz • initial value • Full-scale value	0.85 1.15
Operating range factor control supply voltage rated value at AC at 60 Hz	

- initial value 0.85
- Full-scale value 1.15

Measuring circuit

Measurable line frequency	40 ... 500 Hz
Measurable voltage at DC	0.1 ... 60 V
Adjustable response delay time	
• with lower or upper limit violation	0.1 ... 20 s
Accuracy of digital display	+/-1 digit
Relative temperature-related measurement deviation	0.1 %

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	1
Operating frequency with 3RT2 contactor maximum	5 000 1/h

Main circuit

Number of poles for main current circuit	1
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Outputs

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

Design of the electrical isolation	Protective separation
Galvanic isolation	
• between entrance and outlet	Yes
• between the outputs	Yes
• between the voltage supply and other circuits	No

Connections/ Terminals

Product function	
<ul style="list-style-type: none"> removable terminal for auxiliary and control circuit 	Yes
Type of electrical connection	screw-type terminals
Type of connectable conductor cross-sections	
<ul style="list-style-type: none"> solid 	1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²)
<ul style="list-style-type: none"> finely stranded with core end processing 	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²)
<ul style="list-style-type: none"> at AWG conductors solid 	2x (20 ... 14)
<ul style="list-style-type: none"> at AWG conductors stranded 	2x (20 ... 14)
Connectable conductor cross-section	
<ul style="list-style-type: none"> solid 	0.5 ... 4 mm ²
<ul style="list-style-type: none"> finely stranded with core end processing 	0.5 ... 2.5 mm ²
AWG number as coded connectable conductor cross section	
<ul style="list-style-type: none"> solid 	20 ... 14
<ul style="list-style-type: none"> stranded 	20 ... 14
Tightening torque	
<ul style="list-style-type: none"> with screw-type terminals 	1.2 ... 0.8 N·m

Installation/ mounting/ dimensions

Mounting position	any
Mounting type	snap-on mounting
Height	92 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
<ul style="list-style-type: none"> for grounded parts <ul style="list-style-type: none"> — forwards — Backwards — upwards — at the side — downwards 	0 mm
<ul style="list-style-type: none"> for live parts <ul style="list-style-type: none"> — forwards — Backwards — upwards 	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

General Product Approval



CCC



UL



RCM



EG-Konf.

[Miscellaneous](#)

Test Certificates

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



LRS



DNV-GL
DNVGL.COM/AF

Marine / Shipping

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=3UG4631-1AA30>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4631-1AA30>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4631-1AA30>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4631-1AA30&lang=en

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