SIEMENS

Data sheet 3UG4631-1AA30



Digital monitoring relay Voltage monitoring, 22.5 mm from 0.1-60 V AC/DC 0vershoot 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 for overvoltage category III according to IEC 60664	
● with degree of pollution 3 rated value	690 V
type of voltage	
● for monitoring	AC/DC
● of the control supply voltage	AC/DC
surge voltage resistance rated value	4 kV
maximum permissible voltage for safe isolation	
● between auxiliary and auxiliary circuit	300 V
● between control and auxiliary circuit	300 V
protection class IP	IP20
shock resistance 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 IEC 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

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● 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	24 ... 24 V
● at 60 Hz rated value	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	0.85
● full-scale value	1.15
operating range factor control supply voltage rated value at AC at 50 Hz	
● initial value	0.85
● full-scale value	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 %
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
Outputs	
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 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-based interference 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 input and output	Yes
● between the outputs	Yes
● between the voltage supply and other circuits	No
Connections/ Terminals	
product function removable terminal for auxiliary and	Yes

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control circuit	
type of electrical connection	screw-type terminals
type of connectable conductor cross-sections	
● solid	1x (0.5 ... 4 mm2), 2x (0.5 ... 2.5 mm2)
● finely stranded with core end processing	1x (0.5 ... 2.5 mm2), 2x (0.5 ... 1.5 mm2)
● at AWG cables solid	2x (20 ... 14)
● at AWG cables stranded	2x (20 ... 14)
● connectable conductor cross-section solid	0.5 ... 4 mm²
● connectable conductor cross-section finely stranded with core end processing	0.5 ... 2.5 mm²
● AWG number as coded connectable conductor cross section solid	20 ... 14
● AWG number as coded connectable conductor cross section stranded	20 ... 14
● tightening torque with screw-type terminals	1.2 ... 0.8 N·m
Installation/ mounting/ dimensions	
mounting position	any
fastening method	snap-on mounting
height	92 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
— 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
● ambient temperature during storage	-40 ... +85 °C
● ambient temperature during transport	-40 ... +85 °C

Certificates/ approvals

General Product Approval	EMC	Declaration of Conformity	Test Certificates
CCC UL RCM EG-Konf.		Miscellaneous	Type Test Certificates/Test Report

Test Certificates	Marine / Shipping	other	Railway

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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=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

Characteristic: Derating
https://support.industry.siemens.com/cs/ww/en/ps/3UG4631-1AA30/manual

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