












Digital monitoring relay Voltage monitoring, 22.5 mm from 0.1-60 V AC/DC
 Overshoot and undershoot 24 to 240 V AC/DC 50 to 60 Hz DC and AC 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 3UG3531-1AL20,
 3UG3531-1AG20

Figure similar

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 protective separation	
• between auxiliary and auxiliary circuit	300 V
• between control and auxiliary circuit	300 V
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 (operating cycles) typical	10 000 000
electrical endurance (operating 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
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 Dicyclohexyl phthalate (DCHP) - 84-61-7
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	24 ... 240 V
• at 60 Hz rated value	24 ... 240 V
control supply voltage at DC rated value	
•	24 ... 240 V
operating range factor control supply voltage rated value at DC	
• initial value	0.85
• full-scale value	1.1
operating range factor control supply voltage rated value at AC at 50 Hz	
• initial value	0.85
• full-scale value	1.1
operating range factor control supply voltage rated value at AC at 60 Hz	
• initial value	0.85
• full-scale value	1.1
Measuring circuit	
measurable line frequency	40 ... 500 Hz
measurable voltage at AC	0.1 ... 60 V
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
ampacity of the output relay at AC-15 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	
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	Yes

Connections/ Terminals		
product component removable terminal for auxiliary and control circuit	Yes	
type of electrical connection	screw terminal	
type of connectable conductor cross-sections		
<ul style="list-style-type: none"> • solid • finely stranded with core end processing • for AWG cables solid • for AWG cables stranded 	1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²) 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²) 2x (20 ... 14) 2x (20 ... 14)	
connectable conductor cross-section		
<ul style="list-style-type: none"> • solid • finely stranded with core end processing 	0.5 ... 4 mm ² 0.5 ... 2.5 mm ²	
AWG number as coded connectable conductor cross section		
<ul style="list-style-type: none"> • solid • stranded 	20 ... 14 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		
<ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards — backwards — upwards — downwards — at the side • for grounded parts <ul style="list-style-type: none"> — forwards — backwards — upwards — at the side — downwards • for live parts <ul style="list-style-type: none"> — forwards — backwards — upwards — at the side 	0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 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 • during storage • during transport 	-25 ... +60 °C -40 ... +85 °C -40 ... +85 °C	
Approvals Certificates		
General Product Approval		
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <small>EG-Konf.</small> </div> <div style="text-align: center;"> Confirmation </div> <div style="text-align: center;">  <small>CCC</small> </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  <small>UL</small> </div> <div style="text-align: center;">  </div> </div>		
EMV	Test Certificates	Marine / Shipping
<div style="text-align: center;">  <small>RCM</small> </div>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> KC </div> <div style="text-align: center;"> Type Test Certificates/Test Report </div> <div style="text-align: center;"> Special Test Certificate </div> </div>	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <small>DNV</small> </div> <div style="text-align: center;">  <small>LRS</small> </div> </div>

other	Railway	Environment
Confirmation	Special Test Certificate	 Environmental Confirmations

Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

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=3UG4631-1AW30>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4631-1AW30>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4631-1AW30>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4631-1AW30&lang=en

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3UG4631-1AW30/manual>

last modified:

4/8/2024 