SIEMENS

Data sheet 3UG4633-1AL30



Digital monitoring relay Voltage monitoring, 22.5 mm from 17-275 V AC/DC Overshoot and undershoot Self-powered Spike delay 0.1 to 20 s Hysteresis 0.1 to 150 V 1 CO contact With or without error buffer Screw terminals Successor product for 3UG3534, 3UG3535

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	
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 o phases	No	
undervoltage detection DC	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	17 275 V
at 60 Hz rated value	17 275 V
control supply voltage at DC rated value	
•	17 275 V
operating range factor control supply voltage rated value at DC	
• initial value	1
• full-scale value	1
operating range factor control supply voltage rated value at AC at 50 Hz	
	4
• 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 line frequency	40 500 Hz
measurable voltage at AC	17 275 V
measurable voltage at DC	17 275 V
adjustable response delay time	
when starting	0.1 20 s
with lower or upper limit violation	0.1 20 s
accuracy of digital display	+/-1 digit
and the form of the second sec	0.1 %
relative temperature-related measurement deviation	0.1 76
relative temperature-related measurement deviation Precision	0.1 76
Precision	5 %
Precision relative metering precision	
Precision relative metering precision Auxiliary circuit	5 %
Precision relative metering precision Auxiliary circuit number of NC contacts delayed switching	5 % 0
Precision relative metering precision Auxiliary circuit number of NC contacts delayed switching number of NO contacts delayed switching	5 % 0 0
Precision relative metering precision Auxiliary circuit number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts delayed switching	5 % 0 0 1
Precision relative metering precision Auxiliary circuit number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts delayed switching operating frequency with 3RT2 contactor maximum	5 % 0 0
Precision relative metering precision Auxiliary circuit number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts delayed switching operating frequency with 3RT2 contactor maximum Main circuit	5 % 0 0 1 5 000 1/h
relative metering precision Auxiliary circuit number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts delayed switching operating frequency with 3RT2 contactor maximum Main circuit number of poles for main current circuit	5 % 0 0 1 5 000 1/h
relative metering precision Auxiliary circuit number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts delayed switching operating frequency with 3RT2 contactor maximum Main circuit number of poles for main current circuit ampacity of the output relay at AC-15 at 400 V at 50/60 Hz	5 % 0 0 1 5 000 1/h
Precision relative metering precision Auxiliary circuit number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts delayed switching operating frequency with 3RT2 contactor maximum Main circuit number of poles for main current circuit ampacity of the output relay at AC-15 at 400 V at 50/60 Hz ampacity of the output relay at DC-13	5 % 0 0 1 5 000 1/h 1 3 A
Precision relative metering precision Auxiliary circuit number of NC contacts delayed switching number of NC contacts delayed switching number of CO contacts delayed switching operating frequency with 3RT2 contactor maximum Main circuit number of poles for main current circuit ampacity of the output relay at AC-15 at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V	5 % 0 0 1 5 000 1/h 1 3 A
relative metering precision Auxiliary circuit number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts delayed switching operating frequency with 3RT2 contactor maximum Main circuit number of poles for main current circuit ampacity of the output relay at AC-15 at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 125 V	5 % 0 0 1 5 000 1/h 1 3 A 1 A 0.2 A
relative metering precision Auxiliary circuit number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts delayed switching operating frequency with 3RT2 contactor maximum Main circuit number of poles for main current circuit ampacity of the output relay at AC-15 at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 125 V • at 250 V	5 % 0 0 1 5 000 1/h 1 3 A 1 A 0.2 A 0.1 A
relative metering precision Auxiliary circuit number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts delayed switching operating frequency with 3RT2 contactor maximum Main circuit number of poles for main current circuit ampacity of the output relay at AC-15 at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 125 V • at 250 V operational current at 17 V minimum	5 % 0 0 1 5 000 1/h 1 3 A 1 A 0.2 A 0.1 A 5 mA
relative metering precision Auxiliary circuit number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts delayed switching operating frequency with 3RT2 contactor maximum Main circuit number of poles for main current circuit ampacity of the output relay at AC-15 at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 125 V • at 250 V	5 % 0 0 1 5 000 1/h 1 3 A 1 A 0.2 A 0.1 A
relative metering precision Auxiliary circuit number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts delayed switching operating frequency with 3RT2 contactor maximum Main circuit number of poles for main current circuit ampacity of the output relay at AC-15 at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 125 V • at 250 V operational current at 17 V minimum continuous current of the DIAZED fuse link of the output	5 % 0 0 1 5 000 1/h 1 3 A 1 A 0.2 A 0.1 A 5 mA
relative metering precision Auxiliary circuit number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts delayed switching operating frequency with 3RT2 contactor maximum Main circuit number of poles for main current circuit ampacity of the output relay at AC-15 at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 125 V • at 250 V operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay	5 % 0 0 1 5 000 1/h 1 3 A 1 A 0.2 A 0.1 A 5 mA
Precision relative metering precision Auxiliary circuit number of NC contacts delayed switching number of NC contacts delayed switching number of CO contacts delayed switching operating frequency with 3RT2 contactor maximum Main circuit number of poles for main current circuit ampacity of the output relay at AC-15 at 400 V at 50/60 Hz ampacity of the output relay at DC-13 at 24 V at 125 V at 250 V operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay Electromagnetic compatibility conducted interference	5 % 0 0 1 5 000 1/h 1 3 A 1 A 0.2 A 0.1 A 5 mA
Precision relative metering precision Auxiliary circuit number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts delayed switching operating frequency with 3RT2 contactor maximum Main circuit number of poles for main current circuit ampacity of the output relay at AC-15 at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 125 V • at 250 V operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay Electromagnetic compatibility conducted interference • due to burst according to IEC 61000-4-4	5 % 0 0 1 5 000 1/h 1 3 A 1 A 0.2 A 0.1 A 5 mA 4 A
Precision relative metering precision Auxiliary circuit number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts delayed switching operating frequency with 3RT2 contactor maximum Main circuit number of poles for main current circuit ampacity of the output relay at AC-15 at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 125 V • at 250 V operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay Electromagnetic compatibility conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC	5 % 0 0 1 5 000 1/h 1 3 A 1 A 0.2 A 0.1 A 5 mA 4 A
relative metering precision Auxiliary circuit number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts delayed switching operating frequency with 3RT2 contactor maximum Main circuit number of poles for main current circuit ampacity of the output relay at AC-15 at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 125 V • at 250 V operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay Electromagnetic compatibility conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5	5 % 0 0 1 5 000 1/h 1 3 A 1 A 0.2 A 0.1 A 5 mA 4 A 2 kV 2 kV 1 kV
relative metering precision Auxiliary circuit number of NC contacts delayed switching number of CO contacts delayed switching number of CO contacts delayed switching operating frequency with 3RT2 contactor maximum Main circuit number of poles for main current circuit ampacity of the output relay at AC-15 at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 125 V • at 250 V operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay Electromagnetic compatibility conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 field-based interference according to IEC 61000-4-3	5 % 0 0 1 5 000 1/h 1 3 A 1 A 0.2 A 0.1 A 5 mA 4 A 2 kV 2 kV 1 kV
relative metering precision Auxiliary circuit number of NC contacts delayed switching number of CO contacts delayed switching number of CO contacts delayed switching operating frequency with 3RT2 contactor maximum Main circuit number of poles for main current circuit ampacity of the output relay at AC-15 at 400 V at 50/60 Hz ampacity of the output relay at DC-13 at 24 V at 125 V at 250 V operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay Electromagnetic compatibility conducted interference due to burst according to IEC 61000-4-4 due to conductor-earth surge according to IEC 61000-4-5 due to conductor-conductor surge according to IEC 61000-4-5 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2	5 % 0 0 1 5 000 1/h 1 3 A 1 A 0.2 A 0.1 A 5 mA 4 A 2 kV 2 kV 1 kV
relative metering precision Auxiliary circuit number of NC contacts delayed switching number of CO contacts delayed switching number of CO contacts delayed switching operating frequency with 3RT2 contactor maximum Main circuit number of poles for main current circuit ampacity of the output relay at AC-15 at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 125 V • at 250 V operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay Electromagnetic compatibility conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 field-based interference according to IEC 61000-4-2 galvanic isolation	5 % 0 0 1 5 000 1/h 1 3 A 1 A 0.2 A 0.1 A 5 mA 4 A 2 kV 2 kV 1 kV 10 V/m 6 kV contact discharge / 8 kV air discharge
relative metering precision Auxiliary circuit number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts delayed switching operating frequency with 3RT2 contactor maximum Main circuit number of poles for main current circuit ampacity of the output relay at AC-15 at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 125 V • at 250 V operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay Electromagnetic compatibility conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 Galvanic isolation design of the electrical isolation	5 % 0 0 1 5 000 1/h 1 3 A 1 A 0.2 A 0.1 A 5 mA 4 A 2 kV 2 kV 1 kV
relative metering precision Auxiliary circuit number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts delayed switching operating frequency with 3RT2 contactor maximum Main circuit number of poles for main current circuit ampacity of the output relay at AC-15 at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 125 V • at 250 V operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay Electromagnetic compatibility conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 Galvanic isolation design of the electrical isolation galvanic isolation	5 % 0 0 1 5 000 1/h 1 3 A 1 A 0.2 A 0.1 A 5 mA 4 A 2 kV 2 kV 1 kV 10 V/m 6 kV contact discharge / 8 kV air discharge
relative metering precision Auxiliary circuit number of NC contacts delayed switching number of NO contacts delayed switching number of CO contacts delayed switching operating frequency with 3RT2 contactor maximum Main circuit number of poles for main current circuit ampacity of the output relay at AC-15 at 400 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 125 V • at 250 V operational current at 17 V minimum continuous current of the DIAZED fuse link of the output relay Electromagnetic compatibility conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 Galvanic isolation design of the electrical isolation	5 % 0 0 1 5 000 1/h 1 3 A 1 A 0.2 A 0.1 A 5 mA 4 A 2 kV 2 kV 1 kV 10 V/m 6 kV contact discharge / 8 kV air discharge

 between the voltage supply and other circuits 	No
Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection	screw terminal
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)
 for AWG cables solid 	2x (20 14)
 for AWG cables stranded 	2x (20 14)
connectable conductor cross-section	
• solid	0.5 4 mm²
 finely stranded with core end processing 	0.5 2.5 mm²
AWG number as coded connectable conductor cross section	
• solid	20 14
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
during storage	-40 +85 °C
during transport	-40 +85 °C
Approvals Certificates	
General Product Approval	

General Product Approval







Confirmation





EMV Test Certificates Marine / Shipping



<u>KC</u>

Type Test Certificates/Test Report

Special Test Certific-<u>ate</u>





other	Railway	Environment
Confirmation	Special Test Certificate	Environmental Con-

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=3UG4633-1AL30

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG4633-1AL30

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3UG4633-1AL30

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG4633-1AL30&lang=en

Characteristic: Derating

https://support.industry.siemens.com/cs/ww/en/ps/3UG4633-1AL30/manual

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