

Siemens
EcoTech



analog monitoring relay voltage monitoring from 20 to 275 V AC/DC overshoot and undershoot with internal power supply 24 to 240 V DC and AC 50 to 60 Hz ON delay and tripping delay 0.1 .. 30 s 1 changeover contact spring-loaded terminal

product brand name	SIRIUS
product designation	Analog setting voltage monitoring relay
design of the product	monitoring of undervoltage and overvoltage, internally powered without auxiliary voltage
product type designation	3UG5
General technical data	
product function	Voltage monitoring relay
power loss [W] maximum	1.5 W
power loss [V·A] maximum	3 VA
consumed active power	1.5 W
insulation voltage for overvoltage category III according to IEC 60664	
• with degree of pollution 2 rated value	690 V
• with degree of pollution 3 rated value	690 V
degree of pollution	3
type of voltage	
• for monitoring	AC
• of the control supply voltage	AC/DC
surge voltage resistance rated value	6 kV
shock resistance according to IEC 60068-2-27	sinusoidal half-wave 15 g / 11 ms
vibration resistance according to IEC 60068-2-6	f = 4 ... 5,81 Hz, dmax = 15 mm; f = 5,81 ... 500 Hz, Amax = 20 m/s ² ; 10 cycles
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 (day/month/year)	06/01/2023
SVHC substance name	Lead CAS-No. 7439-92-1 Lead monoxide (lead oxide) CAS-No. 1317-36-8
Net Weight	0.142 kg
Product Function	
product function	
• undervoltage detection	Yes
• overvoltage detection	Yes
• phase sequence recognition	No
• phase failure detection	No

• asymmetry detection	No
• voltage monitoring	Yes
• current monitoring	No
• 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
• auto-RESET	Yes
measurable line frequency initial value	15 Hz
measurable line frequency full-scale value	500 Hz
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
starting time after the control supply voltage has been applied	1 300 ms
Measuring circuit	
measurable line frequency	15 ... 500 Hz
measurable voltage at AC	20 ... 275 V
adjustable response delay time	
• with lower or upper limit violation	0.5 ... 30 s
response time maximum	500 ms
relative temperature-related measurement deviation	0.1 %
Precision	
relative metering precision	20 %
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
operating voltage	
• at AC at 60 Hz rated value	24 ... 240 V
• at DC rated value	24 ... 240 V
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	6 A

relay	
Electromagnetic compatibility	
conducted interference	
<ul style="list-style-type: none"> • due to burst according to IEC 61000-4-4 	2 kV
<ul style="list-style-type: none"> • due to conductor-earth surge according to IEC 61000-4-5 	2 kV
<ul style="list-style-type: none"> • 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	galvanic isolation
galvanic isolation	
<ul style="list-style-type: none"> • between input and output 	Yes
<ul style="list-style-type: none"> • between the voltage supply and other circuits 	Yes
Safety related data	
product function suitable for safety function	No
Electrical Safety	
protection class IP on the front according to IEC 60529	IP20
Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection	spring-loaded terminal (push-in)
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • solid 	1x (0.5 ... 4 mm ²)
<ul style="list-style-type: none"> • finely stranded with core end processing 	1x (0.5 ... 2.5 mm ²)
<ul style="list-style-type: none"> • finely stranded without core end processing 	0.5 ... 4 mm ²
<ul style="list-style-type: none"> • for AWG cables solid 	1x (20 ... 12)
<ul style="list-style-type: none"> • for AWG cables stranded 	20 ... 12
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
<ul style="list-style-type: none"> • finely stranded without core end processing 	0.5 ... 4 mm ²
AWG number as coded connectable conductor cross section	
<ul style="list-style-type: none"> • solid 	20 ... 12
<ul style="list-style-type: none"> • stranded 	20 ... 12
Installation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting
height	100 mm
width	22.5 mm
depth	90 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 ... +80 °C
• during transport	-40 ... +80 °C

Approvals Certificates

Environment	General Product Approval
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[Environmental Confirmations](#)



General Product Approval	Test Certificates	Maritime application	other
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[Type Test Certificates/Test Report](#)



[Confirmation](#)



[Confirmation](#)

Further information

Information on the packaging

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

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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=3UG5533-2AL30>

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UG5533-2AL30>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3UG5533-2AL30>

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

https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UG5533-2AL30&lang=en





