Overview

SIRIUS 3UG4631 monitoring relay

The relays monitor single-phase AC voltages (rms value) and DC voltages against the set threshold value for overshoot and undershoot. The devices differ with regard to their power supply (internal or external).

Benefits

- Versions with wide voltage supply range
- Variably adjustable to overshoot, undershoot or range monitoring
- Freely configurable delay times and RESET response
- Width 22.5 mm
- Display of ACTUAL value and status messages
- All versions with removable terminals
- All versions with screw or spring-type terminals

Application

- Protection of a plant against destruction due to overvoltage
- Switch-on of a plant at a defined voltage and higher
- Protection from undervoltage due to overloaded control supply voltages, particularly with battery power
- Threshold switch for analog signals from 0.1 to 10 V

Technical specifications

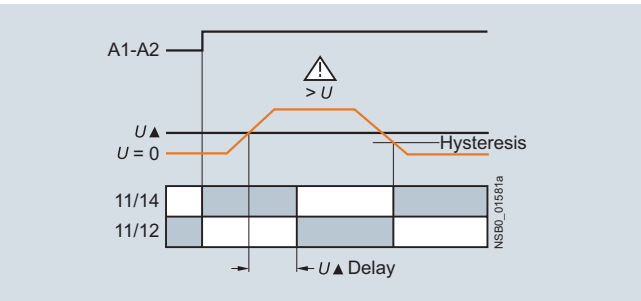
3UG4631/3UG4632 monitoring relays

The 3UG4631/3UG4632 voltage monitoring relay is supplied with an auxiliary voltage of 24 V AC/DC or 24 to 240 V AC/DC and performs overshoot, undershoot or range monitoring of the voltage depending on parameterization. The device is equipped with a display and is parameterized using three buttons.

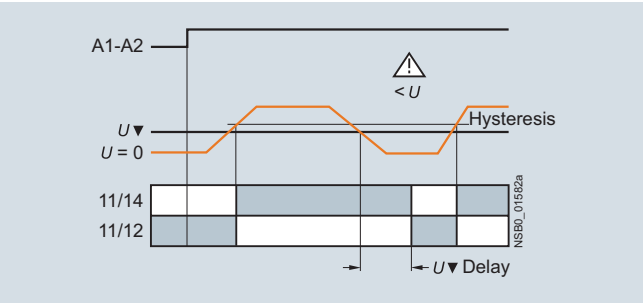
The measuring range extends from 0.1 to 60 V or 10 to 600 V AC/DC. The threshold values for overshoot or undershoot can be freely configured within this range. If one of these threshold values is reached, the output relay responds according to the set principle of operation as soon as the delay time has elapsed. This delay time U_{Del} can be set from 0.1 to 20 s. The hysteresis can be set from 0.1 to 30 V or 0.1 to 300 V. The device can be operated on the basis of either the open-circuit or closed-circuit principle and with manual or Auto RESET. One output changeover contact is available as signaling contact.

With the closed-circuit principle selected

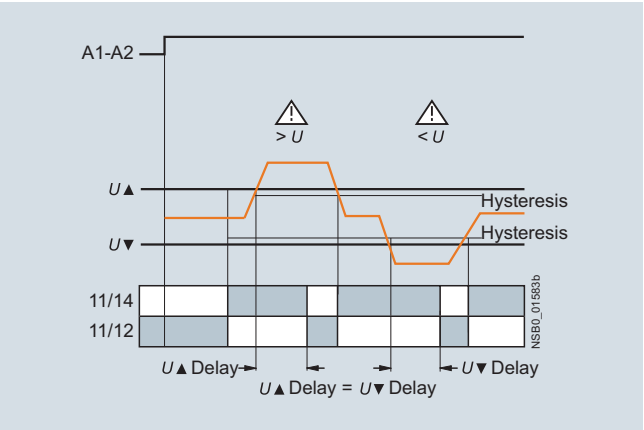
Overvoltage



Undervoltage



Range monitoring



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3UG4633 monitoring relays

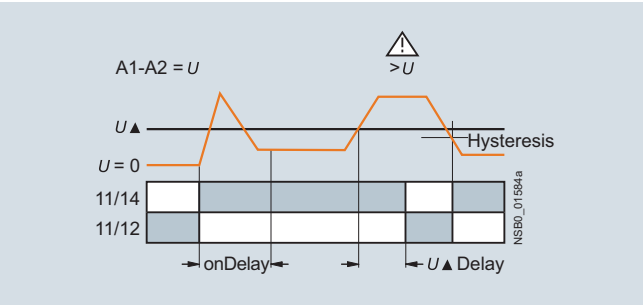
The 3UG4633 voltage monitoring relay has an internal power supply and performs overshoot, undershoot or range monitoring of the voltage depending on parameterization. The device is equipped with a display and is parameterized using three buttons.

The operating and measuring range extends from 17 to 275 V AC/DC. The threshold values for overshoot or undershoot can be freely configured within this range. If one of these threshold values is reached, the output relay responds according to the set principle of operation as soon as the tripping delay time has elapsed. This delay time U_{Del} can be set from 0.1 to 20 s like the ON-delay time on_{Del}.

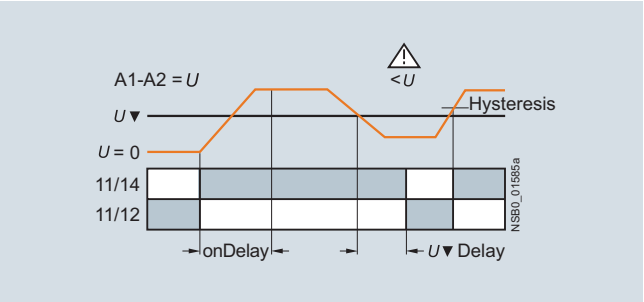
The hysteresis is adjustable from 0.1 to 150 V. The device can be operated on the basis of either the open-circuit or closed-circuit principle and with manual or Auto RESET. One output changeover contact is available as signaling contact.

With the closed-circuit principle selected

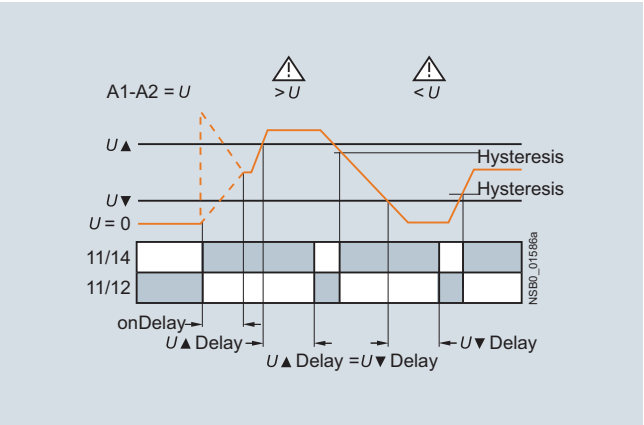
Overvoltage



Undervoltage

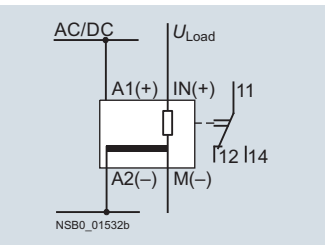


Range monitoring

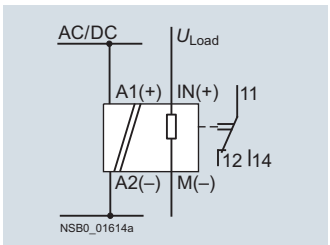


Type		3UG4631	3UG4632	3UG4633
General data				
Rated insulation voltage U_i Pollution degree 3 Overvoltage category III according to VDE 0110	V	690		
Rated impulse withstand voltage U_{imp}	kV	6		
Measuring circuit				
Permissible measuring range single-phase AC/DC voltage	V	0.1 … 68	10 … 650	17 … 275
Setting range single-phase voltage	V	0.1 ... 60	10 ... 600	17 ... 275
Measuring frequency	Hz	40 ... 500		
Control circuit				
Load capacity of the output relay • Conventional thermal current I_{th}	A	5		
Rated operational current I_e at • AC-15/24 ... 400 V • DC-13/24 V • DC-13/125 V • DC-13/250 V	A A A A	3 1 0.2 0.1		
Minimum contact load at 17 V DC	mA	5		

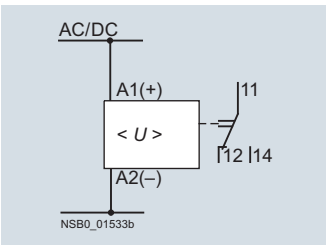
Circuit diagrams



3UG4631-.AA30,
3UG4632-.AA30



3UG4631-.AW30,
3UG4632-.AW30



3UG4633

Note:
It is not necessary to protect the measuring circuit for device protection. The protective device for line protection depends on the cross-section used.

Selection and ordering data

- Digitally adjustable, with illuminated LCD
- Auto or Manual RESET
- Open or closed-circuit principle
- 1 CO contact

PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41H

3UG4631-1AA30

3UG4633-2AL30

Measuring range	Adjustable hysteresis	Rated control supply voltage U_s	DT	**Screw terminals**	DT	**Spring-type terminals**
				Article No. / Price per PU		Article No. / Price per PU
V	V	V				
Internal power supply without auxiliary voltage, ON-delay and tripping delay times can be adjusted separately 0.1 ... 20 s						
17 … 275 AC/DC	0.1 ... 150	17 … 275 AC/DC[1]	A	**3UG4633-1AL30**	A	**3UG4633-2AL30**
Supplied from an external auxiliary voltage, tripping delay time adjustable 0.1 ... 20 s						
0.1 ... 60 AC/DC	0.1 ... 30	24 AC/DC	A	**3UG4631-1AA30**	A	**3UG4631-2AA30**
10 … 600 AC/DC	0.1 ... 300		A	**3UG4632-1AA30**	A	**3UG4632-2AA30**
0.1 ... 60 AC/DC	0.1 ... 30	24 … 240 AC/DC	A	**3UG4631-1AW30**	A	**3UG4631-2AW30**
10 … 600 AC/DC	0.1 ... 300		A	**3UG4632-1AW30**	A	**3UG4632-2AW30**

[1] Absolute limit values.

For accessories, see page 10/132.

* You can order this quantity or a multiple thereof.
Illustrations are approximate