

Single-phase voltage monitoring ZUZ




The ZUZ electronic DC and AC voltage monitoring relay is designed for use with generators, accumulators etc.

Features

- In-line connection
- Measuring voltage is also the supply voltage.
- Measuring ranges can be set to the supply voltage
- Operating voltages can be set
- Overvoltage and undervoltage can be set separately.
- Normally energised mode

Approvals

	ZUZ
	●

Technical Details	ZUZ
Electrical data	
Measuring voltage = supply voltage	AC: 24, 110, 230 V, selectable DC: 24 V, selectable
Tolerance	75 ... 125 %
Power consumption	300 V AC: 30 ... 40 VA 24 V DC: 0.5 ... 0.8 W
Switching capability in accordance with EN 60947-4-1, 10/91	AC1: 250 V/0.1 ... 5 A/1100 VA DC1: 24 V/0.1 ... 5 A/120 W
EN 60947-5-1, 10/91	AC15: 230 V/2 A; DC13: 24 V/1.5 A
Output contacts	2 auxiliary contacts (C/O)
Contact material	AgCdO
Contact fuse protection in accordance with EN 60947-5-1, 10/91	6 A quick or 4 A slow
Current consumption (current peak for zero voltage transition)	AC: 24 V, 200 mA; 42 V, 300 mA 110 V, 600 mA; 300 V/800 mA DC: 24 V, 20 ... 30 mA
Measuring circuit	
Frequency range	AC: 50 ... 60 Hz
Adjustable measurement range limit value	
Undervoltage	Measuring voltage - 25 %
Overvoltage	Measuring voltage + 20 %
Hysteresis	2 %
Reaction time max. 700 ms	
Environmental data	
Ambient temperature	-15 ... +55 °C
Mechanical data	
Max. cable cross section of ext. conductor	1 x 4 mm ² or 2 x 1.5 mm ² single-core or multi-core with crimp connector
Dimensions (H x W x D)	87 x 22.5 x 122 mm
Weight	130 g

Description

The voltage monitoring relay is enclosed in an S-95 slimline housing. There is 1 version available for AC or DC operation.

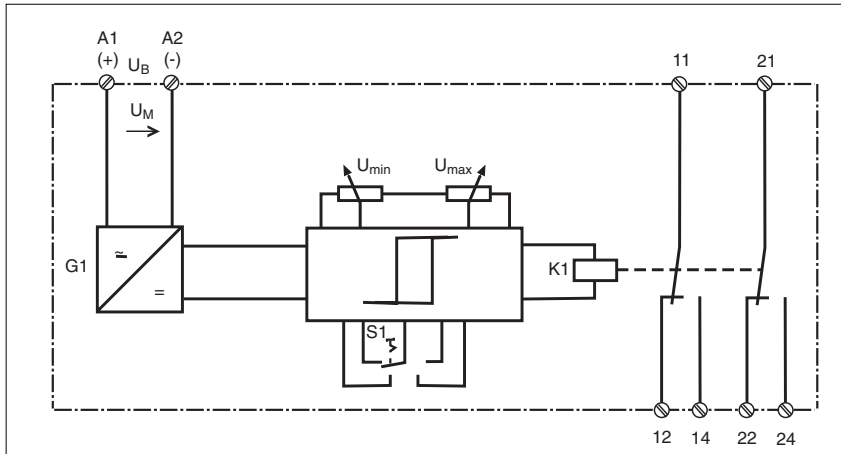
Features:

- Relay outputs: 2 auxiliary contacts (C/O)
- Setting options
Response value U_{min} : 75 ... 100 % U_B
Response value U_{max} : 100 ... 120 % U_B
- 4 supply voltages set using a rotary switch
- LEDs for switching status of the relay and supply voltage.

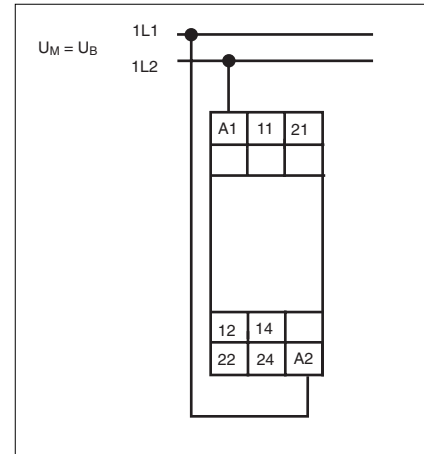
The ZUZ operates as a threshold switch. The response values for undervoltage and overvoltage can be set separately. If the measuring voltage exceeds U_{min} , the relay energises. The auxiliary contacts 11-12 and 21-22 are open, 11-14 and 21-24 are closed. If the measuring voltage exceeds U_{max} or drops below U_{min} , the relay is de-energised. The auxiliary contacts 11-12 and 21-22 close, 11-14 and 21-24 open. The „FAULT“ LED illuminates if U_B is outside the permitted range, i.e. falls below U_{min} or exceeds U_{max} .

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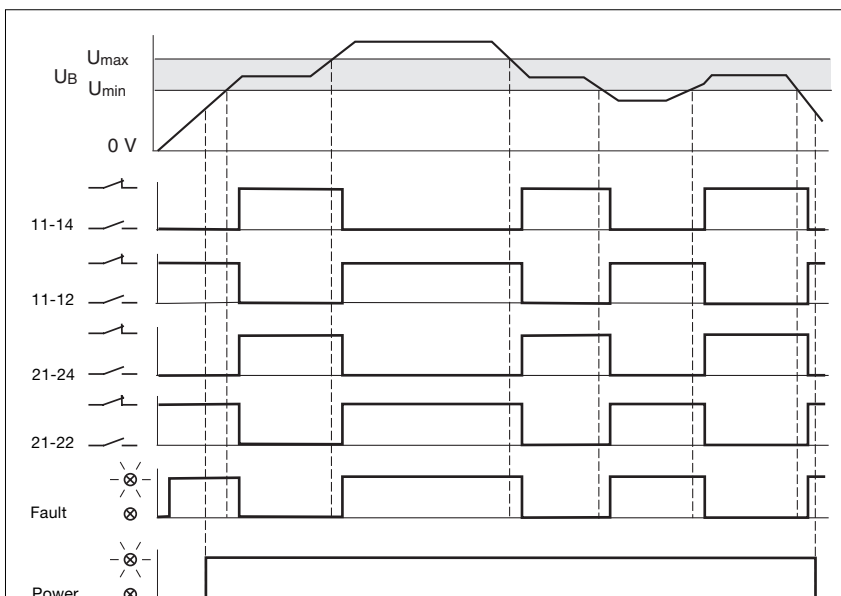
Internal wiring diagram



Connection example



Timing diagram



$U_B > 50\% U_B$:
The LED "Power" illuminates.

$U_B > U_{min}$:
The relay energises, the switching status LED goes out.

$U_B > U_{max}$:
The relay de-energises, the switching status LED illuminates.

Rest condition:
- Contacts 11-12 and 21-22 closed

- Contacts 11-14 and 21-24 open

Operating condition:
- Contacts 11-12 and 21-22 open
- Contacts 11-14 and 21-24 closed

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General Details

Unless stated otherwise in the technical details for the specific unit.

Electrical data

AC frequency range	50 ... 60 Hz
DC residual ripple	160 %
Contact material	AgCdO
Continuous duty	100 %

Environmental data

EMC	EN 50081-1, 01/92, EN 50082-2, 03/95
Vibration in accordance with EN 60068-2-6, 04/95	Frequency: 10 ... 55 Hz, Amplitude: 0.35 mm
Climatic suitability	IEC 60068-2-3, 1969
Airgap creepage	DIN VDE 0110-1, 04/97, 4 kV/3
Ambient temperature	-10 ... +55 °C
Storage temperature	-40 ... +85 °C

Mechanical data

Torque setting for connection terminals	0.6 Nm (screws)
Mounting position	Any
Housing material	Thermoplastic Noryl SE 100
Protection types	Mounting: IP 54 Housing: IP 40 Terminals: IP 20

Order references

Type	U_M	Order no.
ZUZ	24 VDC, 24, 110, 230 V AC	827 100

Order references key
 U_M Measuring voltage