

Single-phase voltage monitoring ZUZ S



The electronic AC voltage monitoring relay ZUZ S is suitable for generators.

Features

- In-line connection
- Measuring voltage is also the supply voltage
- Measuring ranges are determined by the supply
- Different operating voltages can be selected
- Undervoltage and overvoltage can be set separately
- Normally energised mode

Technical Details	ZUZ S
Electrical data	
Measuring voltage = supply voltage	AC: 42, 48, 120, 240 V (can be selected)
Tolerance	75 ... 125 %
Power consumption	300 VAC: 30 ... 40 VA
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
Power consumption (current peak after zero voltage transition)	AC: 24 V/200 mA; 42 V/300 mA; 110 V/600 mA; 300 V/800 mA
Measuring circuit	
Frequency range	AC: 50 ... 60 Hz
Adjustable limit values for measur. range	
Under voltage	Measuring voltage - 25 %
Overvoltage voltage	Measuring voltage + 20 %
Hysteresis	2 %
Reaction time	Max. 700 ms
Environmental data	
Ambient temperature	-15 ... +55 °C
Mechanical data	
Max. cable crosssection of external 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. 1 version is available for operation with 4 AC-voltage levels.

Features:

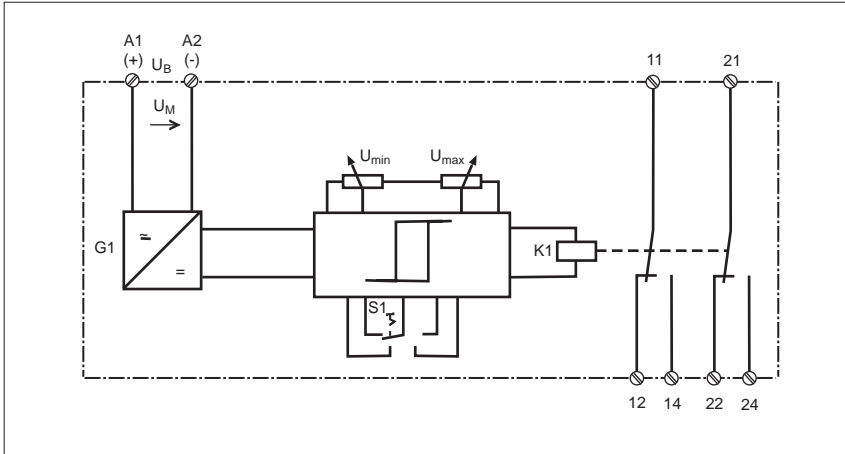
- Relay outputs: 2 auxiliary contacts (C/O)
- Setting options
Response value U_{min} : 75...100 % U_B
Response value U_{max} : 100...120 % U_B
- 4 supply voltage levels can be set using a rotary switch
- LEDs for switching status of the relay and supply voltage.

The ZUZ S is used as a threshold value switch. The response values for undervoltage and overvoltage can be set separately. If the measuring voltage exceeds U_{min} , the relay changes to the operating status.

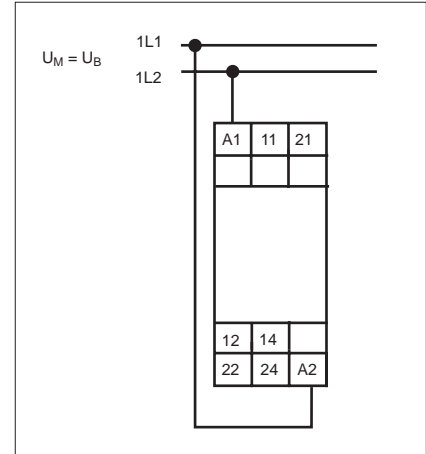
Auxiliary contacts 11-12 and 21-22 open and 11-14 and 21-24 close. If the measuring voltage exceeds U_{max} or falls below U_{min} , the relay changes to the rest condition. Auxiliary contacts 11-12 and 21-22 close and 11-14 and 21-14 open. The LED "FAULT" is illuminated if U_B is outside the permitted range, i.e. falls below U_{min} or exceeds U_{max} .

Single-phase voltage monitoring ZUZ S

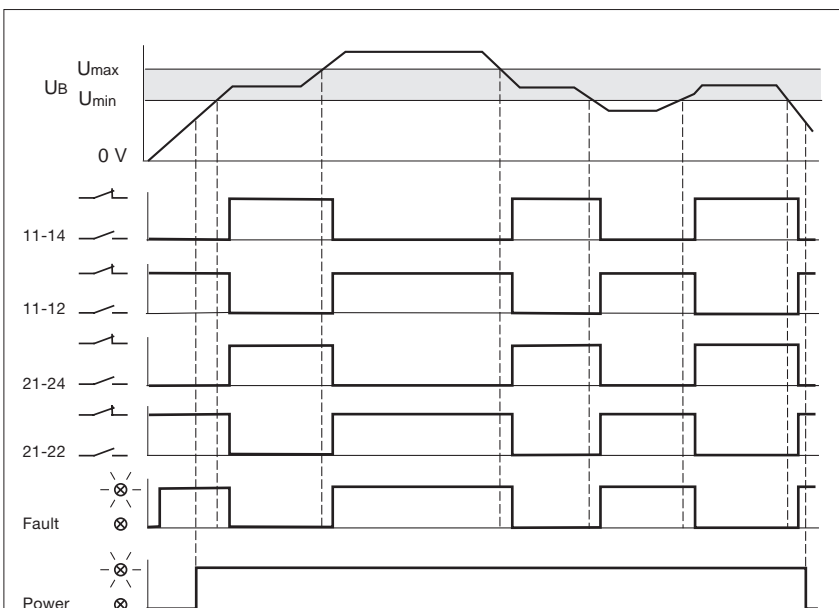
Internal wiring diagram



Connection example



Timing diagram



$U_B > 50\% U_B$:
The LED "mains monitoring" is on.

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

$U_B > U_{max}$:
The relay changes to the rest condition, the switching status LED goes on.

Rest condition
- Contact 11-12 and 21-22 are closed

- Contact 11-14 and 21-24 are open

Operating status:
- Contact 11-12 and 21-22 are open
- Contact 11-14 and 21-24 are closed

Single-phase voltage monitoring ZUZ S

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-S	42, 48, 120, 240 VAC	827 110

Order references key
 U_M Measuring voltage