

Features

- Protection Against Under / Over Voltage
- DIN Rail Mounting
- 230VAC Operating Voltage
- Between 0.1-20 sec OFF Delay and ON Delay Time Adjustment
- IP20 terminals and IP40 front panel protection class
- 1 x 8A CO relay output

RS PRO Monitoring Relays

RS Stock No.: 0558901



RS Professionally Approved Products bring to you professional quality parts across all product categories. Our product range has been tested by engineers and provides a comparable quality to the leading brands without paying a premium price.

Product Description

Voltage monitoring relays are designed to protect 1-phase or 3-phase systems from voltage changes. Our wide range of voltage monitoring relays provides to detect phase loss, incorrect phase sequence and to control under/over voltage with adjustable voltage limits.

They are used in protection of compressors, electrical motors, capacitors in compensation systems, air conditioning/ industrial cooling systems, telecom base stations and railway applications.

Utilization and Working Principle:

By using the Over Voltage (Max.) and Under Voltage (Min.) adjustment knobs on the front side, the over and under voltage limits of the system that will be protected is determined.

The delay knob on the front is used commonly for both the adjusted over voltage faults and adjusted under voltage faults.

The Reset Delay knob on the front is used commonly for all faults. The over voltage and under voltage protection options can be deactivated separately. (By adjusting the Max. and Min. knobs to OFF position.)

Protection Functions:

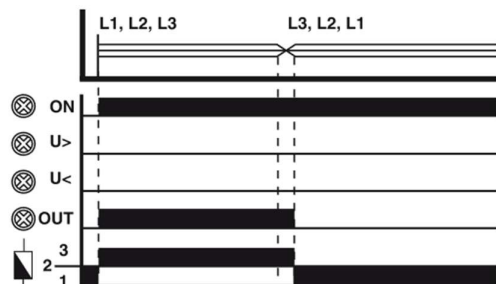
a) *Over Voltage Monitoring:*

If one or many of the measured voltage (Phase/Phase-Phase) values are over the limit of the adjusted Over Voltage Value (U_{max}) the "U>" light turns on and the adjusted delay time starts to count. When the delay time is up, the relay of the device breaks the connection and the "OUT" light turns off. When all the measured voltages fall under the adjusted Over Voltage Value, "U>" light turns off and adjusted Reset Delay Time starts to count. When the reset delay time is up, the relay of the device makes contact and "OUT" light turns on. If one or many of the measured voltage (Phase / Phase-Phase) values go over the " $1,5 \times U_n$ " limit, "U>" light turns on, the relay of the device breaks the connection and "OUT" light turns off. When the Over Voltage Adjustment (Max.) knob is adjusted to the "OFF" position, the over voltage protection function is disabled.

b) *Under Voltage Monitoring:*

If one or many of the measured voltage (Phase/Phase-Phase) values are under the limit of the adjusted Under Voltage Value (U_{min}) the "U<" light turns on and the adjusted delay time starts to count. When the delay time is up, the relay of the device breaks the connection and the "OUT" light turns off. When all the measured voltages rise over the adjusted Over Voltage Value, "U<" light turns off and adjusted Reset Delay Time starts to count. When the reset delay time is up, the relay of the device makes contact and "OUT" light turns on. If one or many of the measured voltage (Phase / Phase-Phase) values go under the " $0,5 \times U_n$ " limit, "U<" light turns on, the relay of the device breaks the connection and "OUT" light turns off. When the Under Voltage Adjustment (Min.) knob is adjusted to the "OFF" position, the over voltage protection function is disabled.

c) Phase Sequence Protection:



If there is a change in the phase sequence for whatever the reason, only the "ON" light turns on and the relay of the device breaks the connection without any delay.

d) Insufficient Supply Voltage:

The supply voltage on these device equals to the mean value of voltages from all phases. If this mean value is less than half the supply voltage, the relay gives an insufficient supply voltage warning (U< and U> LEDs flash in that order) and the relay breaks contact without delay.

General Specifications

Operating Voltage (Un)	230VAC $\pm 10\%$
Operating Range (ΔU)	150-300 VAC
Operating Frequency	50-60Hz
Power Consumption (Max.)	30VA / 2W
Measurement Method	True RMS

Enclosure Specifications

Dimensions	90 x 59,7 x 36mm (DIN Rail Mounting)
Width	36mm
Length	59mm
Height	90mm
Weight	0,25kg/pcs
Protection Class	IP 20 (Terminals), IP 40 (Front Panel)

Measurement Specifications

Under Voltage Setting Range	150-210 VAC*
Over Voltage Setting Range	240-300 VAC*
Instant Tripping Value	0,5xUn 1,5xUn
Instant Tripping Time	100ms.
Hysteresis	3%

*These features can be switched-off by user

Output Specifications

Operating Voltage	95-270 VAC/DC
Operating Frequency	50/60Hz
Power Consumption	<6VA

Ambient Specifications

Ambient Temperature/Humidity	-5 / +55 °C; % 90
Over Voltage Category	III

Connection Specifications

Mounting	Rail Mounting; Terminal with Screw
Connection Types	1 phase, neutral

Standards

Standards	EC 60255-3, EC 60255-6, EC 60870-5, EC 60529
-----------	--

