

Single Phase Over / Under Voltage Monitor



Description

Single phase monitoring plug-in relay for separate upper and lower voltage control. Often used where the generated electrical power is un-stable in order to secure the equipment.

FEATURES

- Monitoring relay and measuring relay for upper / lower phase to neutral voltage control
- Measures if phase to neutral voltage are within set limits, present
- Measures on own power supply
- Upper and lower limits separately adjustable
- LED indication for over / under volts
- Latch facility incorporated
- 10 second start-up delay
- 180 second response delay
- Output 10A SPDT

Input Specifications

| | |
|-------------------------|---------------------------|
| Input | Pin 2,10 L & N |
| Measuring Ranges (VAC) | |
| Range | 230V |
| Upper Limit | 184 - 276V |
| Lower Limit | 241.5 - 276V |
| Scale | ± 5 - 20% |
| Voltage Interruption | < 40ms |
| Dielectric Voltage | None (supply/electronics) |
| Rated Impulse Withstand | 4kV (1.2/50 s line/line) |

Supply Specifications

| | |
|----------------------|----------------------|
| Power Supply AC Type | 110, 230, 400V ± 10% |
| (Galvanic) | 50 Hz ± 5Hz |
| Isolation | 4kV |
| Consumption | ± 3VA |
| | ± 6VA 525 V |

Output Specifications

| | |
|-----------------------|--|
| Output Specifications | SPDT |
| Rated Isolation | 6000 VAC (contact / electric) |
| Voltage | 1000 VAC (contact / contact) |
| Nominal Rate in AC1 | 1500 VA (Ag-Ni) |
| Rated Current | 10A |
| Rated Voltage | 250V |
| Mechanical Life | 10x10 ⁶ cycles |
| Electrical Life | 110x10 ³ cycles (at max load) |
| Operation Frequency | ≤ 1800 cycles/h |

General Specifications

| | |
|-----------------------|---------------|
| Power ON Delay | ≤ 300 ms |
| Power OFF Delay | ≤ 200 ms |
| Indication for | |
| Power Supply ON | LED red |
| Over Voltage | LED yellow |
| Under Voltage | LED yellow |
| Environment | |
| Degree Of Protection | IP 20 |
| Operating Temperature | -10 to + 50°C |
| Storage Temperature | -50 to + 85°C |
| Weight | 200g |

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Mode of Operations

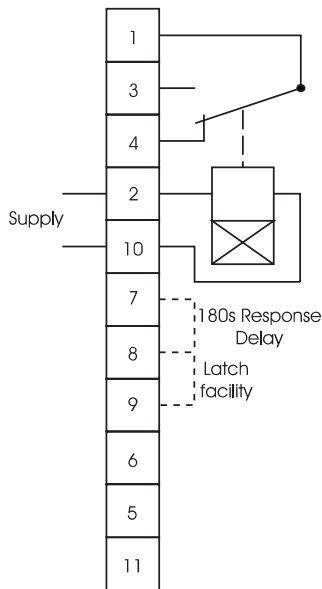
Voltage Monitoring

Connected to a supply, the V1E measures sinusoidal voltage. The relay operates as long as the phase - neutral voltage is within the set upper and lower limits. The two limits can be adjusted separately. If the voltage rises above the upper limit or drops below the lower limit the relay releases immediately. The relay operates again when the voltage is within set limits. Hysteresis on operate is 3% (e.g. If the unit has tripped at 260VAC it will recover at 252 VAC).

Example

Protecting sensitive equipment to over/under voltage fluctuations.

Wiring Diagram



Operations Diagram

