

# THREE PHASE VOLTAGE MONITOR

## Model SPVR



E229164

### APPLICATION:

Protection of three phase electrical equipment sensitive to damage from a phase loss or phase unbalance. Phase reversal, undervoltage.

### AMBIENT TEMPERATURE RANGE:

Operation:  $-30^{\circ}\text{C}$ . to  $+60^{\circ}\text{C}$ .  
Storage:  $-40^{\circ}\text{C}$ . to  $+85^{\circ}\text{C}$ .

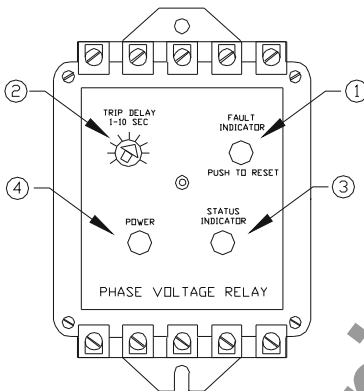
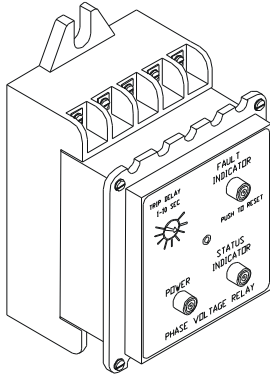
- Terminal screws are #8-32 nickel plated brass.

### NORMAL INPUT VOLTAGES:

208 TO 480 VAC - 60Hz

- Shipping Weight: 3.0 lbs.

The Model SPVR Voltage Sensing Relay is designed to protect against phase loss and phase unbalance in a power system. The output contacts change their normal state only when a phase loss, unbalance, undervoltage or phase reverse occurs for longer than the preset trip delay. A total power loss or de-energization of the SPVR relay will not change the output contacts position. Recommended for manually reset switches and breaker applications.



1. Electro-mechanical Fault Indicator  
Phase loss/under voltage/phase unbalance.
2. Adjustable System Delay  
Phase loss/phase unbalance/under voltage.
3. LED Status Indicator  
Trip (Red)
4. Power System Condition  
Power present (Green)

### STANDARD FEATURES:

- Phase Unbalance: 8%
- Phase Loss Protection
- Adjustable Trip Delay: 1 to 10 seconds after failure occurs: prevents nuisance operations.
- Output Relay: normally de-energized: Form C contacts for easy circuit configuration.
- Automatic Reset to Normal: upon removal of fault conditions.
- Electro-Mechanical Indicator: retains memory of fault until manually reset.
- Door or panel mounting.
- Status Indicator:
  - Green: Power present.
  - Red: Output Relay Energized (Fault Condition).
  - Dark: Output Relay De-energized (Input Power Off).
- Phase Reversal Protection: Operates the output relay LED diagnostic indicator.
- Phase Sequence Protection: operates the output relay LED diagnostic indicator.
- Undervoltage Protection: Operates when voltage goes below 80% for a preset time. LED Status indicator.

### OPTIONAL FEATURE:

- Mounting: Panel or Door Mount

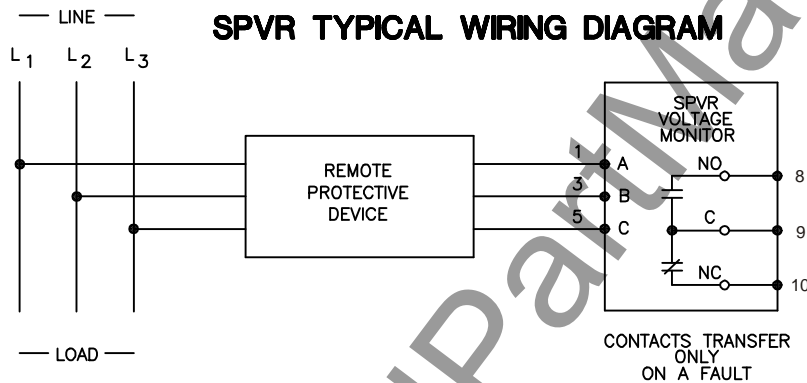
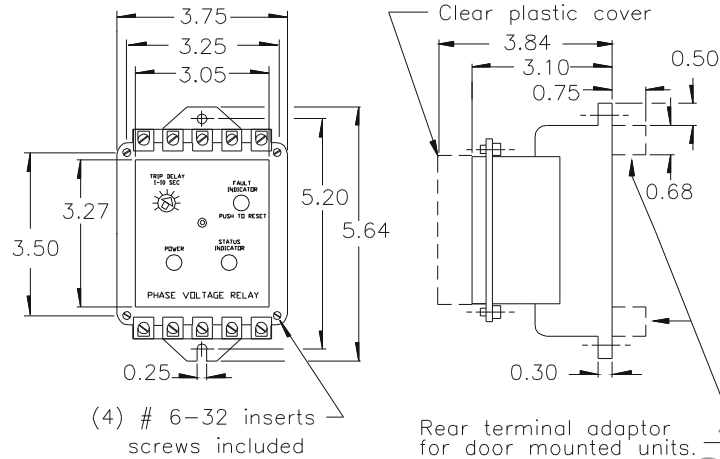
### CONTACT RATINGS

- 16A at 250VAC
- 16A at 30VDC

### AVAILABLE MODELS

MODEL No.	NOMINAL Vac	Vac Range	FREQ.
SPVR 208	208	166 - 238	60
SPVR 240	240	192 - 276	60
SPVR 480	480	384 - 552	60

## SPVR DIMENSIONS



## STANDARD SPVR OPERATION

When installed in a power system and conditions are normal, the output relay contacts will be in the de-energized state. At this time a Green LED ("Power") on the face of the unit will be on. If a "phase loss" or "phase unbalance" occurs for longer than the user selected (1 Sec. to 10 Sec.) time delay, the output relay contacts change state and the red LED comes on indicating that a fault condition exists and the output relay is in the energized state.

All indicators, adjustments, and LED's are easily accessible on the face of the relay. An electromechanical pop-up device physically maintains a "phase loss" fault indication until reset.

The output relay has a single Form C contact and is rated for up to 250 volts AC, 30 volts DC. For additional contacts or higher current and voltage ratings, an external relay will be required.

The SPVR relay is packaged in a high impact thermoplastic enclosure which can be either panel or door mounted. A clear Lexan cover is provided to prevent accidental adjustment and indicator condition changes.

## ORDERING INFORMATION

SPVR - XXX - X

Input Voltage:  
208/240/480 Vac, (60Hz)

Optional Features:

P - Panel Mount  
D - Door Mount