



# Three Phase Voltage Relay

# PVCO/L

## Specifications

### Electrical

#### Line Voltage:

110VAC to 600VAC, 3Ø

Frequency: 60Hz, 300 Series 50Hz

#### Line Voltage Ranges:

100 Series - 110VAC to 120VAC, 3Ø

200 Series - 208VAC to 240VAC, 3Ø

300 Series - 380VAC to 415VAC, 3Ø

400 Series - 440VAC to 480VAC, 3Ø

600 Series - 575VAC to 600VAC, 3Ø

#### Maximum Overvoltage:

10% of highest nominal voltage

Maximum Frequency Shift: 0.1Hz

Undervoltage: 10% below set point

Phase Imbalance: 5% typical

Phase Rotation: A - B - C

#### Phase Loss:

Complete loss to 95% of nominal

#### Time Delays:

Pick-up: 5 Sec. Fixed

Drop-out: 5 Sec. Fixed

Power Consumption: 16VA

#### Output Contacts:

7 Amps @ 120VAC

5 Amps @ 240VAC

100,000 Full Load Electrical Cycles

10,000,000 Mechanical Cycles

### Physical

Mounting: Surface

Termination: Screw Terminals

Packaging: Dust Cover

Weight: 8 Oz. Approx.

### Ambient Temperatures

Operating: -20°C to 40°C

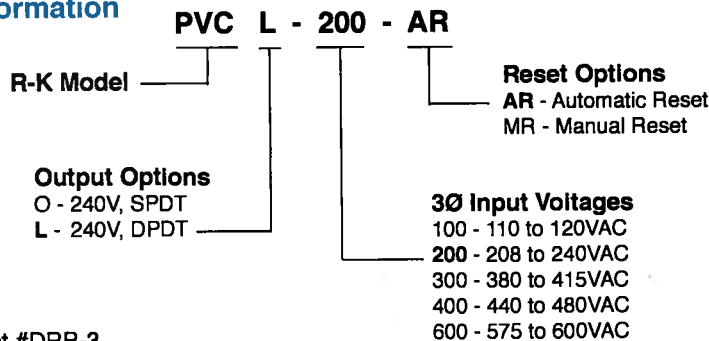
Storage: -20°C to 85°C



- 10 Amp Relay
- SPDT or DPDT
- Undervoltage
- Phase Loss (Single Phase)
- Phase Imbalance
- Phase Rotation
- Pick-up & Drop-out Delays
- Normal Condition LED

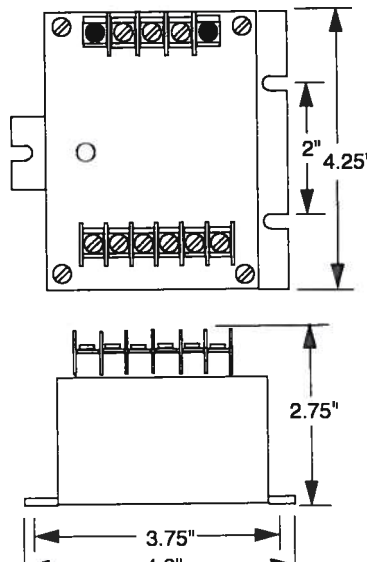


## Ordering Information



DIN Rail Bracket #DRB-3

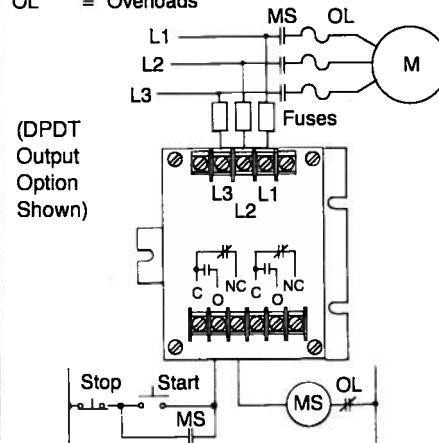
## Dimensions



## Connections

The PVCs should be connected to the line voltage on the load side on the last line fuse before the motor and on the line side of the starter (MS).

M = Motor MS = Motor Starter  
Fuses = ≤1 amp (optional)  
OL = Overloads



## Operation

The PVC's output contacts energize when:

1. All the phases are present;
2. The voltages are within 10% of the setting;
3. The phases are in the proper rotation
4. The phases are balanced;
5. The frequency is within tolerance. Built into the PVC series is a 5 second pick-up delay to allow the three phase line to stabilize. If any of these conditions shift beyond the setpoints, the output contact will de-energize after a 5 second time delay. Single phase conditions will be detected when the voltage in one phase is 5% different from the voltages in the other two phases (Phase Imbalance).

