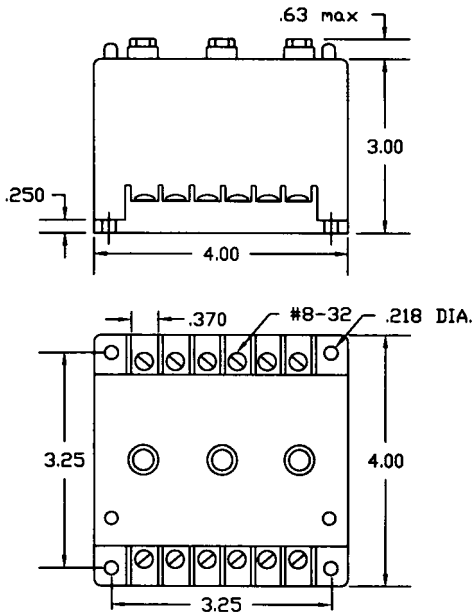


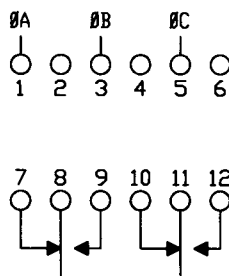


3 Phase Sequence & Voltage Band Monitor/Relays

DIMENSIONS (INCHES)



WIRING



The **PBD Series** offers protection to three-phase sequence sensitive equipment that is required to operate between two voltage limits. All three phases are monitored individually for a pre-selected **UNDER** and **OVER VOLTAGE** limit, with adjustable release delay.

OPERATION

With normal operating voltages applied in the proper ABC sequence, the internal relay will energize (PICK-UP). When the voltages on any or all phases fall outside the preset Over/Under trip points for longer than the Adjustable Release delay, the relay will de-energize (DROPOUT). When line conditions return to normal, the PBD Series Monitor automatically resets and the internal relay energizes.

Both Delta and Wye systems may be monitored. In Wye systems, connections to neutral are not required.

The LED fault indicators aid in set up and system troubleshooting, and glow on fault condition. The LED indicators have an immediate response to voltage conditions and operate independently of the relay. In a phase reversal condition the LED responds to voltage conditions but the relay will NOT energize.

The Adjustable Release Delay is provided to ignore momentary voltage fluctuations that cause nuisance tripping.

The HYSTERESIS in each unit provides a differential of 4% between the PICK-UP and DROP-OUT trip points.

The PBD Series is UL Listed under UL File Number E55826.

SPECIFICATIONS

| | | |
|---------------------------|---|-------------------------------|
| OUTPUT RATING | DPDT, 3 Amps @ 600 VAC, Resistive; 360 VA @ 600 VAC, Inductive; 1/2 hp | |
| POWER REQUIRED | Models Up to 300 VAC | 7 VA, Max |
| | Models Over 300 VAC | 6 VA, Max |
| RESET | Automatic | |
| PHASE SEQUENCE | ABC (Will Not Operate CBA) | |
| HYSTERESIS | 4% | |
| REPEAT ACCURACY | 0.1% @ Fixed Condition | |
| INDICATORS LED | Glow On Fault; (1) For Over, (1) For Under | |
| RESPONSE TIMES | Operate | 100 mSEC |
| | Release | 0.1 to 30 SEC, Adjustable |
| TEMPERATURE RATING | Operate | 32° to +104°F (0° to +40°C) |
| | Storage | -49° to 185°F (-45° to +85°C) |
| WEIGHT | 19 oz. | |

| MODEL NUMBER | MAXIMUM VOLTAGE | ADJUSTABLE RANGES | |
|--------------|-----------------|-------------------|---------|
| | | UNDER | OVER |
| PBD-120-ALE | 155 VAC | 90-120 | 120-150 |
| PBD-230-ALE | 275 VAC | 185-240 | 208-265 |
| PBD-400-ALE | 485 VAC | 325-385 | 415-475 |
| PBD-440-ALE | 550 VAC | 390-480 | 440-540 |
| PBD-480-ALE | 570 VAC | 400-490 | 460-560 |
| PBD-575-ALE | 700 VAC | 500-610 | 540-690 |

All voltages referenced on this page are phase-to-phase.