The Series SLU Universal Phase Monitor is a cost-effective means to provide Wye and Delta 3-Phase systems protection against equipment failure caused by voltage faults. Just one Series SLU universal phase monitor can be adjusted for the voltage, imbalance percentage, and time delay requirements to protect against single phasing and unbalanced voltages regardless of regenerative voltages. This product is perfect for electricians, maintenance managers, and engineers by protecting valuable electrical equipment from damage.

1. Follow all Local, State, and National Electrical Codes when installing this equipment.
2. Mount the unit in or near the control panel of the equipment to be protected.
3. Connect wires from the fused 3 phase line voltage to the proper terminals as shown in Figure 1 wiring diagram. In WYE connected systems, connection to neutral is not required.
4. Set-up: Set RESTART DELAY to Manual position, adjust LINE-LINE to the nominal line voltage using the applicable 50Hz or 60Hz scales. (The Microprocessor determines which scale applies by measuring frequency and voltage at each power-up.) Adjust % UNBAL to 10 or Maximum. Adjust FAULT DELAY as desired for the response time to a voltage fault.

**SPECIFICATIONS**

*Auto Ranging Scales*: See Auto Ranging Scales Table.
*Maximum Voltage*: 550 VAC (line-to-line).
*Phase Sequence*: ABC (Will not operate on CBA Sequence).
*Power Required*: 90 VA Max.
*Phase Unbalance*: 2% to 10%, Adjustable Drop-out.
*Hysteresis*: 10% of Setting.
*Phase Shift*: 13° drop-out, 12° Pick-up (ø-Loss).
*Frequency Shift*: 50/60 Hz, Drop out: ±4%, Pick up: ±3%.
*Reset*: Automatic or Manual Mode.
*Relay Output*: SPDT: 10A @ 240 VAC, Resistive: 1/2 Hp @ 240 VAC.
*Indicators*: Normal (Green LED): Flashing - Fault Delay Active; Continuous – Relay Energized; Fault (Red LED): Flashing - Restart Delay Active; Continuous - Relay De-Energized.
*Response Times*: Power Up: 2.5 sec Minimum; Fault Delay: 0.1 to 25 sec Adjustable; Severe Fault: 100 msec (phase-Loss, Unbalance or Phase Reversal); Restart: 0.5 to 300 sec, Adjustable (Auto Reset).
*Temperature Ratings*: Operate: 32 to 131°F (0 to 55°C), Storage: -49 to 185°F (-45 to 85°C).
*Repeat Accuracy*: 1% at Fixed Condition.
*Terminals (DIN)*: Slotted Screw Terminal Clamps, 12 AWG Max.
*Enclosure*: Polycarbonate Dust cover, Din Rail Mounting option: 35 mm Din Rail, 14 Term Polycarbonate Housing.
*Weight*: 0.35 to 0.5 lbs (158.8 to 226.8 g).

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**Auto Ranging Scales**

<table>
<thead>
<tr>
<th>Freq.</th>
<th>Nominal Line-to-Line Voltages</th>
<th>Adjustable Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>60Hz</td>
<td>208, 220, 240 380, 415, 440, 460, 480</td>
<td>200-250 360-500</td>
</tr>
<tr>
<td>50Hz</td>
<td>208, 220, 240 346, 380, 415</td>
<td>200-250 330-430</td>
</tr>
</tbody>
</table>
NOTE: In Manual mode, the output relay will not respond without RESET. However, for safety, disconnect the load or do not wire the output contacts until step 8.

5. TURN POWER ON. The red Fault indicator will glow constant for 3 seconds, then flash. Red flashing indicates the nominal voltage is within the proper LINE-LINE voltage zone but the relay is de-energized. Adjust LINE-LINE up and down to find the limits of the acceptable flash zone (Nominal ±10% fixed). Leave the adjustment as desired within the zone.

6. If the flash zone does not occur, TURN POWER OFF and swap any two (2) of the (3) input wires to the phase monitor. This corrects the phase sequence if it was previously reversed.

7. Find the present level of unbalance by reducing %UNBAL adjustment until the red indicator is on continuous (fault) and then increase the adjustment back into the flashing zone to the desired setting. It is not recommended to exceed 5-6% UNBAL. If the red indicator continues to flash at minimum (no unbalance detected), set adjustment as desired.

8. FINAL - Ready for load to energize. For manual operation, depress the manual RESET pushbutton switch. For automatic restart operation, adjust RESTART DELAY to desired delay in seconds. The Normal green indicator will glow and the internal relay will energize.

MAINTENANCE

Upon final installation of the Series SLU Universal Phase Monitor, no routine maintenance is required. A periodic check of system is recommended. The Series SLU is not field serviceable and should be returned if repair is needed (field repair should not be attempted and may void warranty). Be sure to include a brief description of the problem plus any relevant application notes. Contact customer service to receive a return goods authorization number before shipping.