

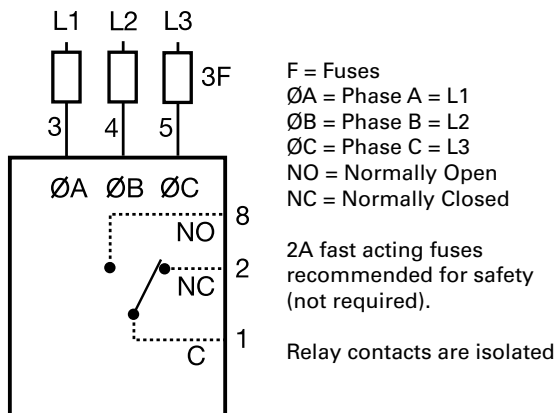
## PLM SERIES

### Voltage Monitor



8-PIN

### Wiring Diagram



### Ordering Information

MODEL	LINE VOLTAGE	VOLTAGE UNBALANCE (FIXED)	TRIP DELAY (FIXED)
PLM6405	240VAC	4%	5 sec
PLM6502	240VAC	5%	2 sec
PLM6805	240VAC	8%	5 sec
PLM8405	380VAC	4%	5 sec
PLM9405	480VAC	4%	5 sec
PLM9502	480VAC	5%	2 sec
PLM9805	480VAC	8%	5 sec

If you don't find the part you need, call us for a custom product 800-843-8848

### Description

The PLM Series is a 3-phase voltage monitor that continuously monitors each of the three phases. Monitors both delta and wye systems and no connection to neutral is required. The microcontroller circuit design protects against undervoltage, voltage unbalance, phase loss and phase reversal. Protection is assured when regenerated voltages are present.

### Operation

The output relay is energized and the LED glows green when all voltages are acceptable and the phase sequence is correct. Under and unbalanced voltages must be sensed for a continuous trip delay period before the relay de-energizes. Reset is automatic upon correction of the fault condition. The output relay will not energize if a fault condition is sensed as power is applied. The LED flashes red during the trip delay, then glows red when the output de-energizes. The LED flashes green/red if phase reversal is sensed.

### Field Adjustment

Set voltage adjustment knob at the desired operating line voltage for the equipment. This adjustment automatically sets the undervoltage trip point. Apply power. If the PLM fails to energize, (LED glows red) check wiring of all three phases, voltage, and phase sequence. If phase sequence is incorrect, the LED flashes green/red. To correct this, swap any two line voltage connections at the mounting socket. No further adjustment should be required.

### Features & Benefits

FEATURES	BENEFITS
<b>Quick octal 8-pin mounting</b>	Small footprint with universal mounting: ideal replacement for hundreds of competitive part numbers.
<b>Proprietary microcontroller based circuitry</b>	Constant monitoring of single-phase, low voltage, high voltage, voltage unbalance, phase reversal.
<b>LED diagnostics</b>	Quick visual indicator for trip versus normal operation.
<b>Isolated, 10A, SPDT output contacts</b>	Allows control of loads for AC voltages
<b>Adjustable nominal voltage set point</b>	Allows setting for specific application voltage to optimize protection
<b>Simple 3-wire connection for delta or wye systems</b>	Allows flexibility across wide range of systems
<b>ASME A17.1 Rule 210.6</b>	Complies with safety codes for elevators, escalators, moving walkways
<b>NEMA MG1 14:30, 14:35</b>	Complies with safety codes for motors and generators
<b>IEEE C62.41-1991 Level B</b>	Complies with safety codes for surge and voltage protection

## PLM SERIES

### Accessories



#### **BZ1 Front Panel Mount Kit**

Provides an easy method of through-the-panel mounting of 8-pin or 11-pin plug-in timers, flashers, and other controls.



#### **OT08PC Octal 8-pin Socket**

8-pin 35mm DIN rail or surface mount. Rated at 10A @ 600VAC. Surface mounted with two #6 screws or snaps onto a 35 mm DIN rail.



#### **LPSM003ZXID (Indicating), LPSM003Z (Non-indicating) Fuse Holders**

Littelfuse POWR-SAFE Dead Front holders provide optimum protection to personnel for Class CC and Midget-Style fuses. 600 VAC/DC



#### **OKLK002.T Midget Fuse (2 Amp)**

10 x 38 fast acting, high-interrupting capacity, current-limiting type fuse. 600 Vac/500 Vdc



#### **C103PM (AL) DIN Rail**

35 mm aluminum DIN rail available in a 36 in. (91.4 cm) length.

### Specifications

#### **Line Voltage**

##### **Type**

3-phase delta or wye with no connection to neutral

#### **Operating Voltage**

##### **Model**

**240**  
**380**  
**480**

##### **Adj. Line Voltage Range**

200-240VAC  
360-430VAC  
400-480VAC

##### **Line Voltage Max**

270VAC  
480VAC  
530VAC

#### **AC Line Frequency**

50/100 Hz

#### **Phase Sequence**

ABC

#### **Power Consumption**

≅ 2W for 240V units  
≅ 3W for 380 - 480V units

#### **Low Voltage & Voltage Unbalance**

##### **Type**

Voltage detection with delayed trip & automatic reset

##### **Low Voltage**

##### **Trip**

88 - 92% of adjusted line voltage

##### **Reset Voltage**

Plus 3% of trip voltage

##### **Voltage Unbalance**

##### **Trip**

Factory fixed from 4 - 8%

##### **Reset on Balance**

-0.7% unbalance typical

##### **Trip Delay**

##### **Range**

Factory fixed from 2 - 20s

##### **Tolerance**

±15%

#### **Phase Reversal & Phase Loss**

##### **Response Time**

≤ 200ms

##### **Phase Loss**

> 35% unbalance

##### **Reset**

Automatic

#### **Output**

##### **Type**

Electromechanical relay

##### **Form**

Isolated, SPDT

##### **Rating**

10A resistive @ 240VAC, 277VAC max;  
1/2 Hp @ 240VAC; 1/4 Hp @ 120VAC  
Mechanical - 1 x 10<sup>7</sup>; Electrical - 1 x 10<sup>5</sup>

#### **Life**

##### **Protection**

##### **Surge**

IEEE C62.41-1991 Level B

##### **Isolation Voltage**

≥ 2500V RMS input to output

##### **Mechanical**

##### **Mounting\***

8-pin plug-in socket rated 600VAC

##### **Dimensions**

**H** 81.3 mm (3.2"); **W** 60.7 mm (2.39");  
**D** 45.2 mm (1.78")

#### **Environmental**

##### **Operating/Storage**

##### **Temperature**

-40° to 60°C / -40° to 85°C

##### **Weight**

≅ 4.4 oz (125 g)

\*CAUTION: Select an octal socket rated for 600VAC operation.

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