# imall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# PLM SERIES

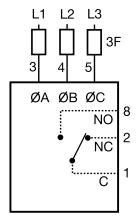
# Voltage Monitor

# (€**Я**)®





# Wiring Diagram



F = Fuses ØA = Phase A = L1 ØB = Phase B = L2 ØC = Phase C = L3 NO = Normally Open NC = Normally Closed

2A fast acting fuses recommended for safety (not required).

Relay contacts are isolated

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





### 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



**0KLK002.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 Operating Voltage

AC Line Frequency Phase Sequence Power Consumption

#### Low Voltage & Voltage Unbalance

Туре

Low Voltage Trip Reset Voltage Voltage Unbalance Trip Reset on Balance Trip Delay Range Tolerance Phase Reversal & Phase Loss Response Time

Phase Loss Reset Output Type Form Rating

#### Life

Protection Surge Isolation Voltage Mechanical Mounting\* Dimensions

#### Environmental

Operating/Storage Temperature

Weight

3-phase delta or wye with no connection to neutral

Adj. Line Voltage Range 200-240VAC 360-430VAC 400-480VAC

Line Voltage Max 270VAC 480VAC 530VAC

50/100 Hz ABC ≅ 2W for 240V units ≅ 3W for 380 - 480V units

Voltage detection with delayed trip & automatic reset

88 - 92% of adjusted line voltage Plus 3% of trip voltage

Factory fixed from 4 - 8% -0.7% unbalance typical

Factory fixed from 2 - 20s ±15%

< 200ms > 35% unbalance Automatic

Electromechanical relay Isolated, SPDT 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>

IEEE C62.41-1991 Level B  $\geq$  2500V RMS input to output

8-pin plug-in socket rated 600VAC H 81.3 mm (3.2"); W 60.7 mm (2.39"); D 45.2 mm (1.78")

-40° to 60°C / -40° to 85°C ≅ 4.4 oz (125 g)

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