

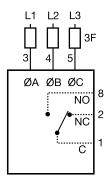
# PLR SERIES







# Wiring Diagram



F = Fuses	
ØA = Phase A	λ = L1
ØB = Phase E	3 = L2
ØC = Phase (	C = L3

NO = Normally Open NC = Normally Closed

Relay contacts are isolated

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

## Description

The PLR Series provides a cost effective means of preventing 3-phase motor startup during adverse voltage conditions. Proper A-B-C sequence must occur in order for the PLR's output contacts to energize. In addition, the relay will not energize when an undervoltage or phase loss condition is present. The PLR Series protects a motor against undervoltage operation. The adjustment knob sets the undervoltage trip point.

#### Operation

The output relay is energized and the LED glows when all voltages are acceptable and the phase sequence is correct. Undervoltage must be sensed for a continuous dropout 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.

Field Adjustment: Turn the adjustment knob fully counterclockwise and apply three-phase power. The LED should be ON. Increase adjustment until the LED goes OFF. Decrease adjustment until LED glows again. If nuisance tripping occurs, decrease the adjustment slightly.

NOTE: When properly adjusted and operating in an average system, a voltage unbalance of 10% or more is required for phase loss detection. When a phase is lost while the motor is running, a voltage will be induced into the open phase nearly equal in magnitude to the normal phase-to-phase voltage. This condition is known as regeneration. When regenerated voltages are present, the voltage unbalance during single phasing may not exceed 10% for some motors. The PLR Series may not provide protection under this condition. For systems that require superior phase loss protection, select the PLMU Series.

## Features & Benefits

FEATURES	BENEFITS
Continuous monitoring	Prevents 3-phase motor startup when undervoltage or phase loss condition is present
Industry standard 8-pin octal plug connection	Eliminates need for special connectors
LED indication	Quick visual indication of output status and correct phase sequence

## **Ordering Information**

MODEL	LINE VOLTAGE
PLR120A	95 to 140VAC
PLR240A	190 to 270VAC
PLR380A	340 to 450VAC
PLR480A	380 to 500VAC

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## Accessories

PLR SERIES



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

Provides an easy method of through-the-panel mounting of 8- 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

Nominal Voltage 120VAC 240VAC 380VAC 480VAC AC Line Frequency Phase Sequence Response Times Pull-in Drop-out Hysterisis Pull-in/Drop-out Output Type

#### Form Rating Maximum Voltage Protection Phase Reversal/Failure Motors and Generators Surge Isolation Voltage 120 & 240VAC 380 & 480VAC Mechanical Dimensions

Mounting\* Termination Environmental Operating/Storage Temperature Weight

Undervoltage Dropout Adj. Range Line Voltage Max. 85 to 130VAC 143VAC 170 to 240VAC 270VAC 310 to 410VAC 480VAC 350 to 480VAC 530VAC 50/60Hz ABC ≤ 400ms ≤ 100ms ≅2% Electromechanical relay, energized when all voltages are acceptable SPDT 5A resistive @ 240VAC, 1/4 Hp @ 120VAC 250VAC ASME A17.1 Rule 210.6 NEMA MG1 14:30, 14:35 IEEE C62.41-1991 Level B  $\geq$  1500V RMS input to output ≥ 2500V RMS input to output

3-phase delta or wye with no connection

to neutral

H 81.3 mm (3.2"); W 60.7 mm (2.39"); D 45.2 mm (1.78") Plug-in socket Octal 8-pin, plug-in

0° to 55°C / -40° to 85°C ≅ 6 oz (170 g)

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

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