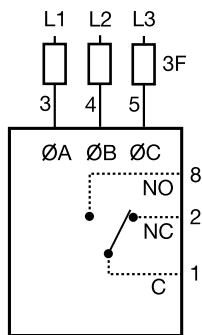


# PLR SERIES



8-PIN

## Wiring Diagram



F = Fuses  
 ØA = Phase A = L1  
 ØB = Phase B = 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
<b>Continuous monitoring</b>	Prevents 3-phase motor startup when undervoltage or phase loss condition is present
<b>Industry standard 8-pin octal plug connection</b>	Eliminates need for special connectors
<b>LED indication</b>	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

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

## PLR SERIES

### Accessories



**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

3-phase delta or wye with no connection to neutral

#### Nominal Voltage

**120VAC**  
**240VAC**  
**380VAC**  
**480VAC**

Undervoltage Dropout Adj. Range	Line Voltage Max.
85 to 130VAC	143VAC
170 to 240VAC	270VAC
310 to 410VAC	480VAC
350 to 480VAC	530VAC

#### AC Line Frequency

50/60Hz

#### Phase Sequence

ABC

#### Response Times

##### Pull-in

≤ 400ms

##### Drop-out

≤ 100ms

##### Hysteresis

≈ 2%

##### Pull-in/Drop-out

##### Output Type

Electromechanical relay, energized when all voltages are acceptable

#### Form

SPDT

#### Rating

5A resistive @ 240VAC, 1/4 Hp @ 120VAC

#### Maximum Voltage

250VAC

#### Protection

##### Phase Reversal/Failure

ASME A17.1 Rule 210.6

##### Motors and Generators

NEMA MG1 14:30, 14:35

##### Surge

IEEE C62.41-1991 Level B

#### Isolation Voltage

**120 & 240VAC**  
**380 & 480VAC**

≥ 1500V RMS input to output  
≥ 2500V RMS input to output

#### Mechanical Dimensions

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

#### Mounting\*

Plug-in socket

#### Termination

Octal 8-pin, plug-in

#### Environmental

##### Operating/Storage

##### Temperature

0° to 55°C / -40° to 85°C

##### Weight

≈ 6 oz (170 g)

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