

PLR SERIES



8-PIN

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.

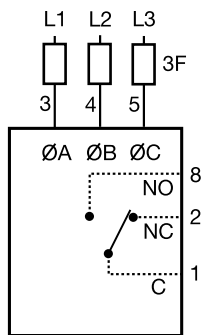
Operation

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.

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).

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

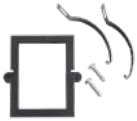
Ordering Information

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

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

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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



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

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

Rating

SPDT

Maximum Voltage

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

Termination

Plug-in socket

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.