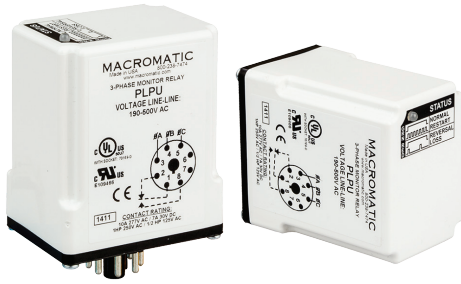
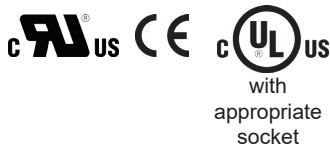


# PHASE LOSS & REVERSAL

## PLP SERIES



- ◆ Protects against phase loss & phase reversal
- ◆ Universal voltage range of 190-500V or 460-600V—greater range that covers more global applications
- ◆ True RMS voltage measurement ensures accurate sensing across more applications
- ◆ Retains fault indication & continues to monitor voltages even with lost phase
- ◆ Full fault indication on top of unit for easy troubleshooting
- ◆ 10A SPDT output contacts



THREE-PHASE MONITOR RELAYS | PLUG-IN



Better. By Design.

**800.238.7474**  
**WWW.MACROMATIC.COM**  
**SALES@MACROMATIC.COM**

The PLP Series Three-Phase Monitor Relays continuously monitor all voltages to protect motors and equipment from expensive damage due to phase loss and phase reversal. These products detect single phasing regardless of any regenerative voltages.

Utilizing an advanced microprocessor-based design allows true RMS voltage measurement with full wave monitoring. This provides a more accurate method to measure the voltages, regardless of load type or wave shape, and results in improved protection across more applications.

True RMS voltage measurement ensures accurate sensing in most generator and other applications with non-sinusoidal wave forms, eliminating nuisance tripping. Full wave monitoring provides a more accurate method to measure the voltages, regardless of load type or wave shape, resulting in improved protection across more applications.

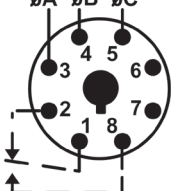
Unlike similar three-phase monitor relays, the PLP Series will continue to function even with a lost phase. They are the only line-powered units in their class to retain fault indication and continuous monitoring of all voltages during a phase loss, increasing the ease of troubleshooting and the level of protection.

The PLP Series is a true universal product, with two units that work on a wide variety of line-line voltages without any adjustment to cover more global applications. They utilize an industry-standard 8 pin octal socket.

### Operation:

When the proper three-phase line voltage is applied to the unit and the phase sequence (rotation) is correct, the relay is energized after the Restart Delay is completed. A phase loss or phase reversal condition will de-energize the relay after a delay. Re-energization is automatic upon correction of the fault condition. A bi-color status LED indicates normal condition and also provides specific fault indication to simplify troubleshooting.

### PLP SERIES

PROTECTS AGAINST	LINE-LINE VOLTAGE▲ (50/60 Hz)	CATALOG NUMBER	WIRING/SOCKET
Phase Reversal & Phase Loss	190-500V	PLPU ●	8 Pin Octal 70169-D ØA ØB ØC  DIAGRAM 23
	460-600V	PLP575 ●	

- ▲ Phase-to-Phase (Line-to-Line).
- Requires a 600V-rated socket when used on system voltages above 300V.

Sockets & Accessories available

# PHASE LOSS & REVERSAL

## PLP SERIES

### APPLICATION DATA

#### Voltage Requirements:

RANGE (50/60HZ ±5%)	MIN VOLTAGE	MAX VOLTAGE	CATALOG NUMBER
190-500V AC	156V AC	550V AC	PLPU
460-600V AC	390V AC	660V AC	PLP575

**Power Consumption:** Less than 40VA.

#### Phase Loss:

Unit trips on loss of any Phase A, B or C, regardless of any regenerative voltages.

#### Phase Reversal (Out-of-Sequence):

Unit trips if sequence (rotation) of the three phases is anything other than A-B-C. It will not work on C-B-A.

#### Response Times:

Restart: 1 second fixed  
 Drop-out Due to Fault:  
 Phase Loss and Reversal: 100ms fixed

**Output Contacts:** SPDT 10 A @ 277V AC / 7A @ 30V DC;  
 1HP @ 250V AC, 1/2HP @ 125V AC,  
 C300 Pilot Duty

**Life:** Mechanical: 10,000,000 operations; Full Load: 100,000 operations

**Temperature:** Operating: -28° to 65°C (-18° to 149°F)  
 Storage: -40° to 85°C (-40° to 185°F)

**Mounting:** Uses an 8 pin octal socket. Requires a 600V-rated socket when used on system voltages greater than 300V such as Macromatic Catalog Number 70169-D.

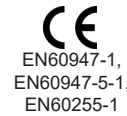
#### Status LED:

	LED STATUS	STATUS
GREEN		NORMAL (RELAY ON)
		RESTART (DELAY)
RED		REVERSAL
		LOSS

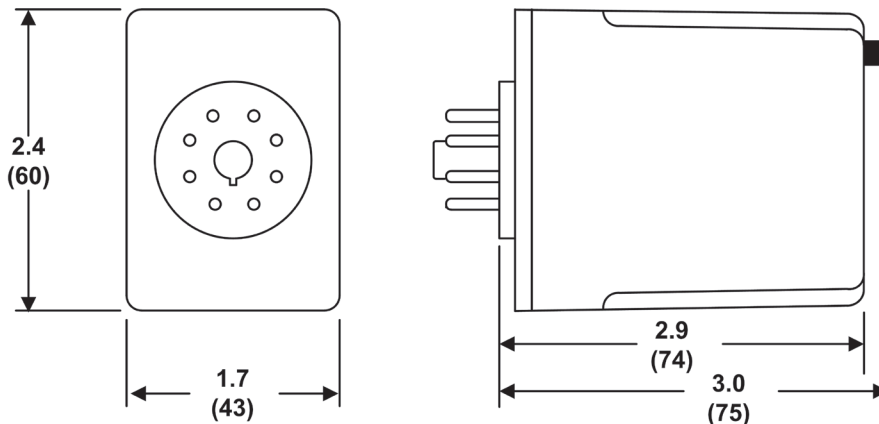
#### Reset:

Automatic upon correction of fault.

#### Approvals:



### DIMENSIONS



All Dimensions in Inches (Millimeters)