PHASE LOSS & REVERSAL
PLP Series

THREE-PHASE MONITOR RELAYS | PLUG-IN

- 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
- Compact plug-in case utilizing industry-standard 8 pin octal socket
- 10A SPDT output contacts
- Pilot Duty Rating

with appropriate socket

MACROMATIC

Better. By Design.

PLP Series Three-Phase Monitor Relays continuously monitor all voltages of a three-phase system. They are used to protect motors and equipment from expensive damage due to phase loss and phase reversal. The two versions available will work on any three-phase system from 190-500V or 460-600V–no adjustment or special set up is required. These products detect single phasing regardless of regenerative voltages.

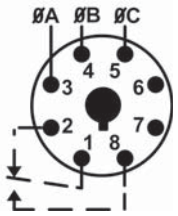
The PLP Series incorporates a microprocessor-based design capable of advanced signal processing including True RMS voltage measurement. Innovative analog-to-digital sensing circuitry allows for true full-wave monitoring of all three phases, delivering the highest level of protection possible.

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, these products 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.

Operation:
When the proper three-phase line voltage is applied to the unit and the phase sequence (rotation) is correct, the relay is energized. 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)	PRODUCT NUMBER	WIRING/ SOCKET
Phase Reversal & Phase Loss	190-500V	PLPU ●	8 Pin Octal **70169-D**
	460-600V	PLP575 ●	 **DIAGRAM 23**

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

Sockets & Accessories available

PHASE LOSS & REVERSAL
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Application Data

Voltage Requirements:

RANGE (50/60HZ ±5%)	MIN VOLTAGE	MAX VOLTAGE	PRODUCT 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: 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.

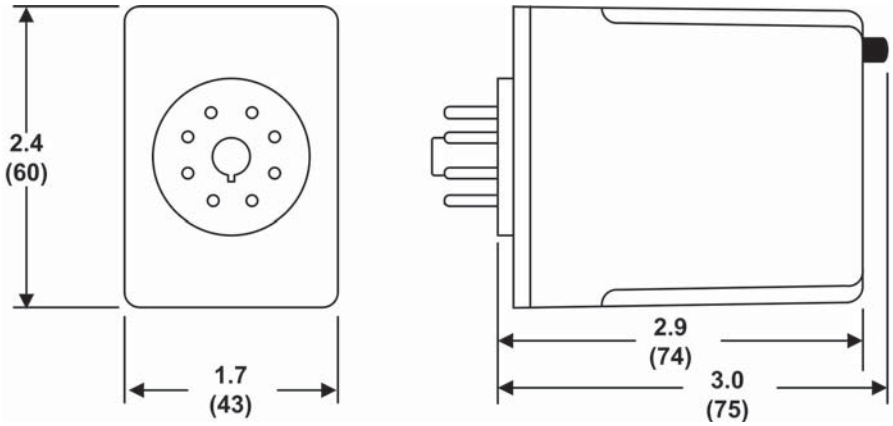
Status LED:

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

Reset:
As standard, reset is automatic upon correction of fault.

Approvals:
c US File #E109466
CE EN60947-1, EN60947-5-1, EN60255-1
c UL us with appropriate socket File #E109466

Dimensions



All Dimensions in
Inches (Millimeters)