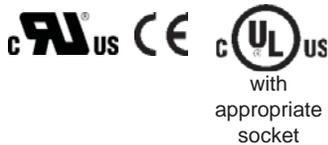


# PHASE REVERSAL

## PCP SERIES



- ◆ Protects against phase reversal only
- ◆ Universal voltage range of 190-500V—greater range that covers more global applications
- ◆ 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



PCP 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 reversal. These products have an isolated relay output that is only energized if the three phases are in the proper A-B-C sequence. The relay output will remain open if any two phases are reversed.

One version will work on any three-phase system from 190-500V—no adjustment or special set up is required. These devices are designed to be compatible with most Wye or Delta systems with no connection to Neutral required.

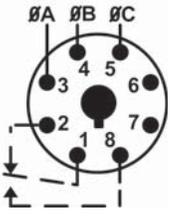
Phase Reversal Relays should be used in applications where motor direction is critical or sequence detection is required by code.

**NOTE:** These products provide protection against phase reversal only—they do not offer phase loss or other fault protection. If a product with more than phase reversal protection is required, see the Reference Guide on Page 5 to select the correct product.

### Operation:

When the proper three-phase line voltage is applied to the unit and the phase sequence (rotation) is correct, the relay is energized. An out-of-sequence condition will prevent the relay from energizing on start-up or trip the relay if it occurs when it is energized. Re-energization is automatic upon correction of the fault condition. A bi-color status LED indicates both a normal condition with the proper phase sequence or a fault condition with the phases out of sequence.

### PCP SERIES

PROTECTS AGAINST	LINE-LINE VOLTAGE▲ (50/60 Hz)	CATALOG NUMBER	WIRING/SOCKET
Phase Reversal	190-500V	PCPU ●	8 Pin Octal 70169-D ØA ØB ØC 

▲ Phase-to-Phase (Line-to-Line).

● Requires a 600V-rated socket when used on system voltages above 300V.

Sockets & Accessories available

# PHASE REVERSAL

## PCP SERIES

### APPLICATION DATA

**Three-Phase Line-Line Voltage Range:**

190-500V, 50/60Hz  $\pm$ 5%

**Minimum Voltage:** 156V**Maximum Voltage:** 550V**Power Consumption:** Less than 40VA**Phase Reversal (Sequence):**

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

**Response Times:**

Power Up & Restart After Fault: 50ms fixed

Drop-out Due to Phase Reversal: 200ms 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:** Green solid when sequence is correct and relay is ON;  
Red solid when sequence is incorrect and relay is OFF.**Reset:**

As standard, reset is automatic upon correction of fault.

**Approvals:**

File #E109466

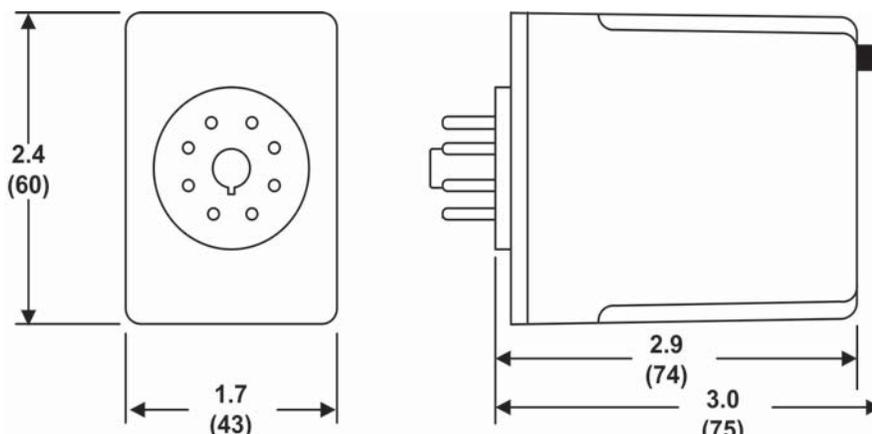


with appropriate socket  
File #E109466



EN60947-1, EN60947-5-1,  
EN60255-1

### DIMENSIONS



All Dimensions in  
Inches (Millimeters)