

## PC-075A LOSS OF PHASE DETECTOR

### Three Phase 6000 Series



**Surface Mounted Detector**



**Flush Mounted Detector**

- *Detects loss of phase in those circuits having a continuous current flow as little as transformer magnetizing amps. Minimum current sensing factory set to 6 milliamps.*
- *Withstands short circuit amps for short periods of time. Rated input current 5 Amp. on each phase.*
- *Not sensitive to system voltage. No voltage transformer needed.*
- *Detects:*
  - *Blown Fuses*
  - *Open Power Supply*
  - *Open Load Phase*
- *Time Delay Adjustable Feature adjustable up to 30 seconds. Factory set to 9 seconds.*
- *Indication Features – Device front alarm condition LED lamp. Provision for remote LED indication.*
- *Can Send Trip Signal on Open Phase to:*
  - *Trip Breaker*
  - *Open an Interrupter switch*
  - *Annunciate*
  - *Other Auxiliary Operations*
  - *Auxiliary contacts provided*
- *Can be used as Anti-Single Phase Device for Fused Disconnect Switches*
- *IEEE Standard 37.90 Relays*
- *ANSI 37.90. 1 SWC Test*

## OPERATION

It will detect loss of phase whether such loss is caused by blown fuses, open power supply phases or open load phases. It is a truly loss of phase circuit and does not depend upon voltage transformer performance.

The loss of phase device monitors the output of current transformers on each phase of the system. If one or two of the fuses in the monitored system have blown, or single phasing occurs, the primary current in the effected phases(s) drops to zero and the corresponding secondary current drops to a low value. The device indicates the loss of phase current by the green light turning off and begins timed delay of relay operation. At the end of the timing period, the red light is illuminated, a latching relay and a trip relay operates.

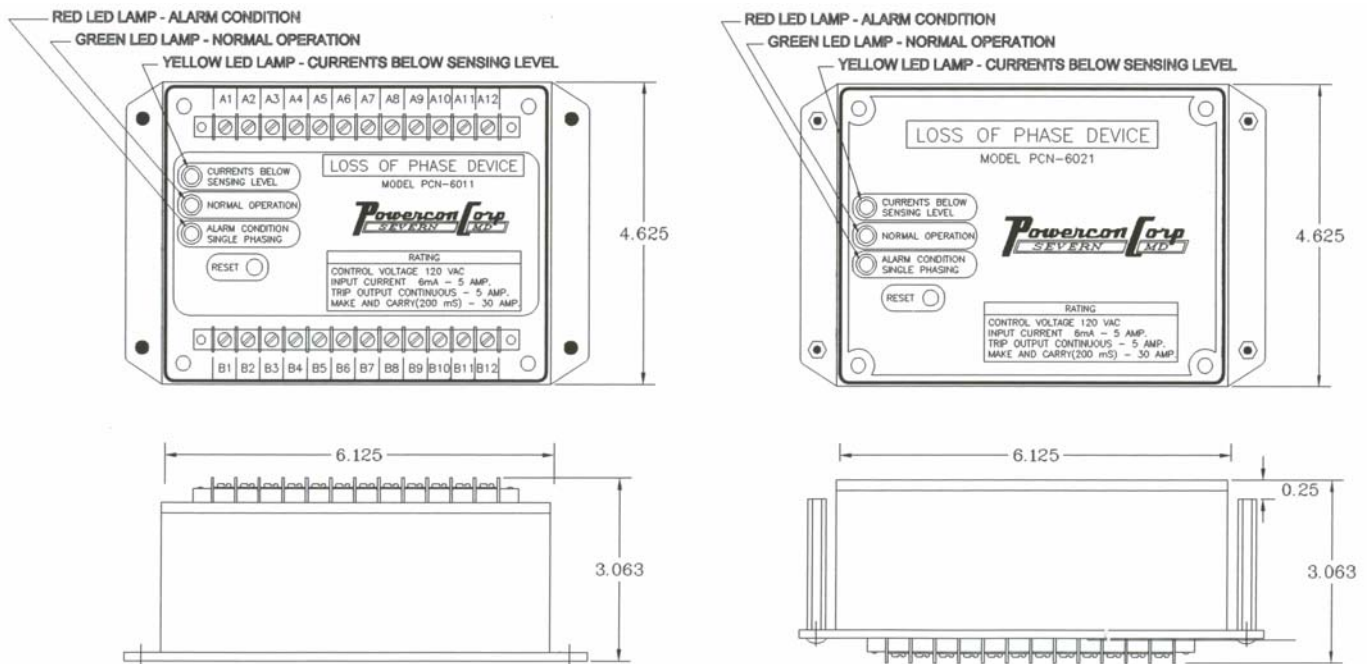
The series 6000 device monitors the output from each phase current transformer. During normal operation each phase will be carrying balanced or unbalanced phase current from transformer magnetizing current to the rated load currents of the system. Currents less than preset magnetizing current on the defective phase(s) causes the relay to operate.

When the control supply circuit is energized and if the output of the system current transformers is insufficient for proper operation of the loss of phase device, the yellow light is illuminated. As the load currents increase to the degree where outputs of the current transformers exceed the preset sensitivity level of the device, the yellow light turns off and the green light will illuminate to indicate normal circuit operation.

Loss of phase device does not operate on loss of all 3 phase currents although the yellow light will be illuminated with loss of all 3 phases (currents below sensing level). Sensitivity to loss of all 3 phase is available on certain other models.

If the loss of phase device has sensed a loss phase current, but the phase current is re-established before timing is complete then the timer is immediately reset and the device returns to normal operation.

To return the loss of phase device to normal operation after a blown fuse is replaced or a single phase condition is corrected, depress the reset push-button. The device must be reset prior to normal operation.



- AVAILABLE CONTROL VOLTAGES-120 VAC, 220 VAC 50 HZ., 240 VAC, 125 VDC, 48 VDC, 24 VDC
- TRIP OUTPUT-MAKE & CARRY(200mS)-30 AMP., CONTINUOUS-5 AMP.(VOLTAGE=INPUT VOLTAGE)
- LATCHING RELAY-FORM A CONTACTS-MAX. RATING 5 A.@ 380 VAC,5 A.@30VDC, 1 A. @ 125 VDC
- TRIP RELAY – FORM C CONTACTS-MAX. RATING 5 A. @380 VAC, 5 A.@ 30 VDC, 1 A. @ 125 VDC
- FOR FURTHER INFORMATION – REQUEST DRAWINGS W4209(AC), W4224(DC), AND B-3241