



# MCS-PHASE

## Description & Specifications



Part # MCS-PHASE



### Specifications

Dimensions..... 4.25" w, 6.5" h, 1.4" d  
Mounting Holes..... Mounts on a backplane using two #8 sheet metal screws

#### Operating Temperature

Control ..... -40°F to +167°F (-40°C to +75°C)  
LCD ..... -4°F to +167°F (-20°C to +75°C)  
Storage..... -40°F to +185°F (-40°C to +85°C)

#### Input

Universal..... 190-630vac @ 50/60Hz

#### Output

Type..... SPDT Relay  
Maximum Voltage..... 240vac @ 50/60Hz  
Maximum Current..... 10amps

#### Phase Unbalance Protection

Voltage Unbalance ..... 2-25% adjustable

#### Over/Under Protection

Under Voltage..... 2-25% adjustable  
Over Voltage..... 2-25% adjustable

#### Phase Loss Protection

Phase Loss condition..... <25% of nominal for any given phase

#### Delay on Break Timer

Control Voltage ..... 18-240vac  
Time Delay ..... 0-10 minutes adjustable

#### Fault Interrogation Delay

Time Delay ..... 0-15 seconds adjustable

When a critical fault condition (phase loss or phase reversal) is present, the relay will immediately de-energize, the load-energized LED will turn off, the fault LED will flash, and the fault is written to memory. Continuity will be across terminals 4 and 5.

If a non-critical fault condition (unbalance, high or low voltage) is present, the MCS-PHASE will ignore it during the interrogation delay time. If it is still present following the interrogation delay time, the relay will de-energize, the load-energized LED turn off, the fault LED will flash, and the fault is written to memory. Continuity will be across terminals 4 and 5.

The MCS-PHASE will store the last 25 faults in memory. The relay will not energize if any fault conditions exist. The integral adjustment delay on break timer will prevent short cycling.

### Description

The **MCS-PHASE** is a programmable 3-phase line voltage monitor with 25-fault memory, high temperature LCD display, easy setup and clear diagnostic readout of system faults. The MCS-PHASE was specifically designed to protect motors and other 3-phase loads from premature failure and damage due to common voltage faults such as unbalance, over/under voltage, phase loss, reversal, incorrect sequencing and rapid short cycling.

At power up, the MCS-PHASE evaluates the incoming power for proper phase sequence, amplitude and voltage unbalance. If the three phase input at the line side connections is within user-set parameters, the load energize LED is turned on and the internal relay is energized. Continuity will be across terminals 4 and 6. If connections are made to the load side terminals, the MCS-PHASE will transfer monitoring over to the load side only.