

## OPERATION

The **CMI Series AC OVER CURRENT** Monitor Relay operates in the **FAIL-SAFE MODEL** as the relay is energized (pick-up) when the monitored AC current is normal. The relay de-energizes (Drop-out) when the monitored current rises above the preset trip point or the control voltage is removed. When current is initially applied, a time delay begins. This inhibits the over current sensors while high inrush currents are present. The delay is field adjustable and is set so the delay period is slightly longer than the inrush time of the motor. If the monitored current is above the preset trip point when the delay elapses, the relay de-energizes. (Figure 1) If the current drops to the normal run current of the motor prior to the completion of the delay period, the relay remains energized until the current rises above the trip point, which indicates an abnormal condition. At that time the relay deenergizes and remains locked-out until the reset button is pressed or the control voltage is interrupted, and re-applied. (Figure 2) A typical application is for conveyor jam up detection.

An External CT may be used to extend the range of the Current Monitor.



FAIL SAFE DETECTION  
OF MOTOR JAM UPS

## AC Over Current Monitor

## SPECIFICATIONS

|                           |   |   |
|---------------------------|---|---|
| <b>CONTROL VOLTAGE</b>    | 24 or 120 VAC, 50/60 Hz                           |   |
| <b>TRIP POINTS</b>        | Pick-up   | See Order Information                         |
|                           | Drop-out  | Press Reset Button or Restore Control Voltage |
| <b>OUTPUT</b>             | DPDT, 10 Amps @ 120 VAC, Resistive                |   |
| <b>TIME DELAY</b>         | 0.2 to 10 SEC, Adjustable On Motor Starting       |   |
| <b>OPERATING TIME</b>     | 50 mSEC (After Initial Delay has Timed Out)       |   |
| <b>CURRENT WITHSTAND</b>  | 20 Times Nominal for 1 Second                     |   |
| <b>ISOLATION</b>          | 2500 Volts Between Input and All Other Terminals  |   |
| <b>INDICATOR</b>          | Glow on Normal Current                            |   |
| <b>RESET</b>              | Manual, Press Button or Interrupt Control Voltage |   |
| <b>RESET TIME</b>         | 100 mSEC After Lock-Out                           |   |
| <b>TEMPERATURE RATING</b> | Operate   | 32° to 131°F (0° to +55°C)                    |
|                           | Storage   | -49° to 185°F (-45° to +85°C)                 |
| <b>ENCLOSURE</b>          | Lexan Surface Mounted; #8-32 Screw Terminals      |   |
| <b>WEIGHT</b>             | 11 oz.  |   |

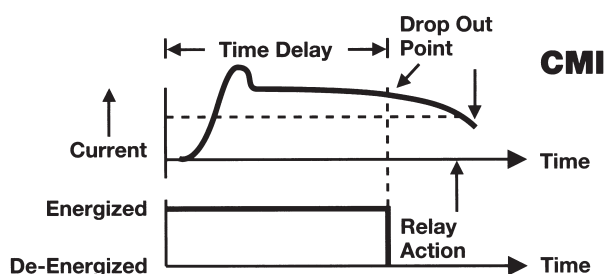


FIGURE 1

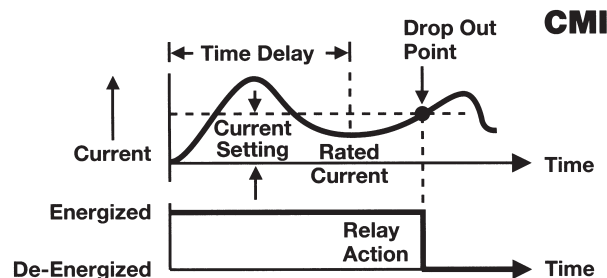
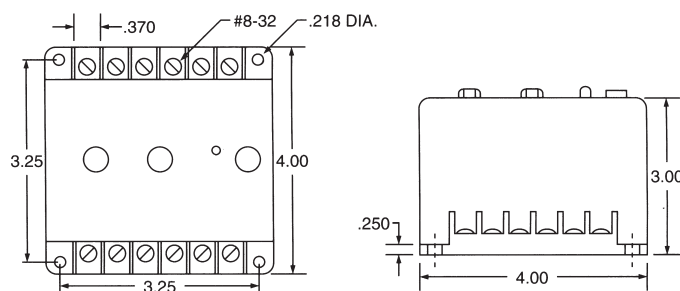
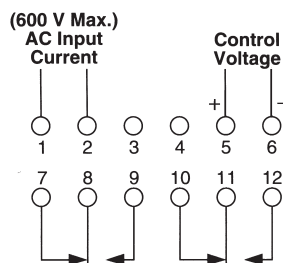


FIGURE 2

## DIMENSIONS (INCHES)



## WIRING



## MODEL NUMBER

|                            |                       |     |   |   |   |     |
|----------------------------|-----------------------|-----|---|---|---|-----|
| <b>MODEL NUMBER</b>        | CMI                   |     | A | S | E |     |
| <b>CONTROL VOLTAGE</b>     | 24 Volts              | 24  |   |   |   |     |
|                            | 120 Volts             | 120 |   |   |   |     |
| <b>CURRENT TRIP POINTS</b> | 0.05 to 0.25 amp adj. |     |   |   |   | .25 |
|                            | 0.2 to 1 amp adj.     |     |   |   |   | 1   |
|                            | 1.0 to 5.0 amps adj.  |     |   |   |   | 5   |
|                            | 2.0 to 10 amps adj.   |     |   |   |   | 10  |
|                            | 4.0 to 20 amps adj.   |     |   |   |   | 20  |