

# ICM409 THREE-PHASE LINE MONITOR



The ICM409 is a low cost three-phase voltage monitor with fault indicator.

## Protects Against...

- Low Voltage
- High Voltage
- Unbalanced Voltage
- Power Interruptions
- Phase Loss
- Phase Reversal



DIN rail or surface mount

UL File # 53944

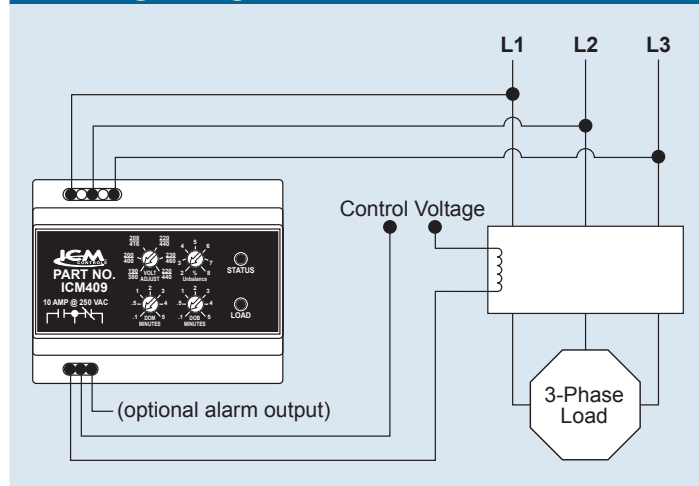
## Features

- Adjustable delay-on-make timer for staggered starting
- Adjustable delay-on-break for anti-short cycle protection
- Adjustable universal voltage from 190 VAC to 480 VAC
- Adjustable voltage unbalance from 2-8% of the line voltage

## Mode of Operation

Designed in a small, easy-to-mount, surface mount or DIN rail style case, the ICM409 continuously monitors the incoming line voltage for errors. When the line voltage is appropriate, the ICM409 closes a set of N.O. contacts and lights a green LED. When the incoming voltage is outside of the user's set parameters, the N.O. contacts open and the red light will flash a code for the particular fault present. The control will also interrogate the line voltage during the fault condition to avoid short cycling and nuisance trips.

## Wiring Diagram



## Status LED Indicators

- GREEN LED = Load ON
- RED LED
  - Solid = Phase reversal
  - 1 flash = DOM time
  - 2 flashes = Low voltage
  - 3 flashes = High voltage
  - 4 flashes = Unbalanced voltage

## Specifications

### User Selectable Universal Voltage

- 190-480 VAC

### User Selectable Unbalanced Voltage

- 2-8%
- Trips after 6 seconds of unbalance condition

### User Selectable Delay-on-Make (staggered start) Timer

- .1 to 5 minutes

### User Selectable Anti-Short Cycle/ Delay-on-Break Timer

- .1 to 5 minutes

### High/Low Voltage Cut-out

- High voltage cut-out setpoint + 12%
- Low voltage cut-out setpoint - 12%
- Detects condition within 100mS

### Power/Phase Loss Detection

- Within 100mS

### Phase Reversal Detection

- Detects phase reversal condition on power up

### Relay Contact Ratings

- N.C. Contacts: 10A resistive @ 250 VAC
- N.O. Contacts: 10A resistive @ 250 VAC

### Operating Frequency

- 50/60 Hz

### Maximum Operating/Storage Relative Humidity

- 95% Non-condensing

### Storage Temperature Range

- -40°C to +85°C

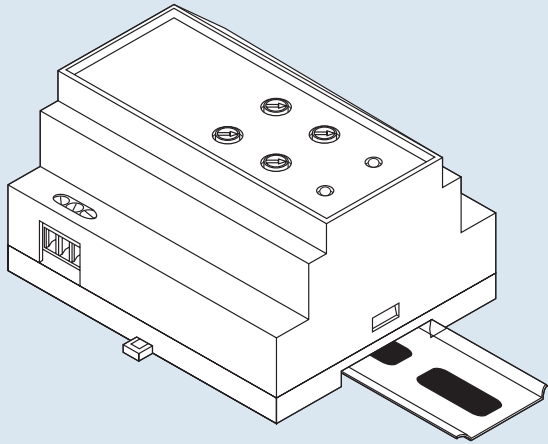
### Connection Terminals

- Screw down terminals provide easy hookup for both line voltage and control circuit wires

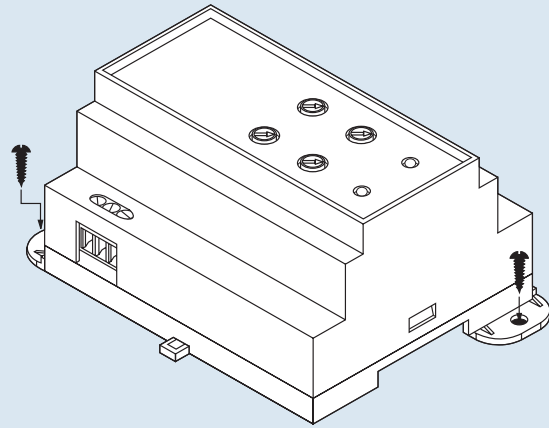
### Conformal Coated Circuit

- Conformal coated circuit provides protection in extreme environment conditions

### DIN Rail Mount



### Surface Mount



### Dimensions

