

**MODE OF OPERATION**

The **ICM431** continuously monitors the three phase voltage against Phase Loss, Phase Reversal and Unbalanced Voltage faults. When the voltage conditions are correct the green Led is lit and the connection between terminal 1 and terminal 2 is made. When a fault condition is observed the red Led is lit and the connection between terminal 1 and terminal 2 is open.

**INSTALLATION**

1. Disconnect power by turning off a circuit breaker or removing a fuse. Verify three phase and 24 VAC are OFF.
2. Field install wires from the system 3 phase to terminals 3, 4 and 5 of the **ICM431**.
3. Connect the Y wire from the thermostat to terminal 1 (Y) of the **ICM431**.
4. Field install a wire from the system 24 VAC common to 6 terminal (C) of the **ICM431**.
5. Field install a wire from terminal 2 (Y OUT) of the **ICM431** to the 24 VAC hot side of the contactor coil.
6. Reapply power to the system.
7. If the RED led is on there is a fault. If voltage is good then swap the wires connected to terminals 3 and 4 of the **ICM431**. This should correct a phase sequence (reversal) fault. Do not change the three phase wiring of the system.

**SPECIFICATIONS**

- **3-Phase Voltage:** 190-600 VAC
- **Control Voltage:** 18-30 VAC
- **Operating Frequency:** 50-60 Hz
- **Phase Loss Detection:** Within 100 mS
- **Phase Unbal:** (12%) 208 VAC, (8%) 480 VAC  
(4%) 600 VAC
- **Phase Reversal Detection:**  
Detects phase reversal condition on power-up
- **Heavy Duty SPST Relay Output:**  
10A output to operate control circuitry.
- **Relay Contact Rating:** N.O. contacts: 10A  
resistive @ 24VAC
- **Storage Temp. Range:** -40°C to +85°C
- **Max. Operating/Storage Relative Humidity:**  
95% non-condensing

**WIRING DIAGRAM**