



# PHASE SENSOR

# 1400

## DESCRIPTION:

### P-Type For Static Load

With the line voltages and frequency within operating limits, P-Type units will energize only when input phases are in sequence A - B - C. They will de-energize only when power is removed. The P-Type unit is best suited to applications where static loads are used and where regenerated voltage will not be present if a phase opens.

### Q-Type For Motor Loads

Q-Type units perform the same function as the P-Type since they will energize only when input phases are in sequence A - B - C. In addition, the unit will de-energize when any phase is disconnected or grounded provided the voltage input to the unit is below 50% of the nominal phase-to-phase voltage input. Q-Type units are suitable for motor loads where a regenerated voltage is produced.

### No Neutral Connection

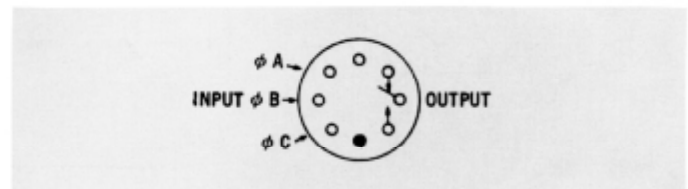
Neither P- or Q-Type units require connection to neutral leg.

For high-current applications, phase sensors are used with slave relays having heavy duty contact ratings.

All units are hermetically sealed and designed to meet the environmental requirements of airborne and MIL-R-83726.



WIRING DIAGRAM



## ELECTRICAL SPECIFICATIONS

### Input Data:

**Voltage:** 115 or 208 VAC

**Frequency:** 60 or 400 Hz

**Operate Time:** 75 milliseconds maximum

**Release Time:** 100 milliseconds maximum

**Contacts:** 1PDT

**Contact Rating:** 2 amperes resistive at 30 volts DC. 0.5 ampere inductive at 30 volts DC. 0.25 ampere resistive or inductive at 115 volts, 60 or 400 Hz.

## ENVIRONMENTAL SPECIFICATIONS:

**Temperature Range:** -55°C to +85°C

**Vibration:** 20 G's, 10 to 2000 Hz.

**Shock:** 50 G's, 11 ±1 millisecond duration.

**Insulation Resistance:** 1000 megohms, minimum at 500 volts DC, all terminals to case.

**Dielectric Strength:** 1000 volts RMS, 60Hz, at sea level, all terminals to case.

**Life:** 100,000 operations min.

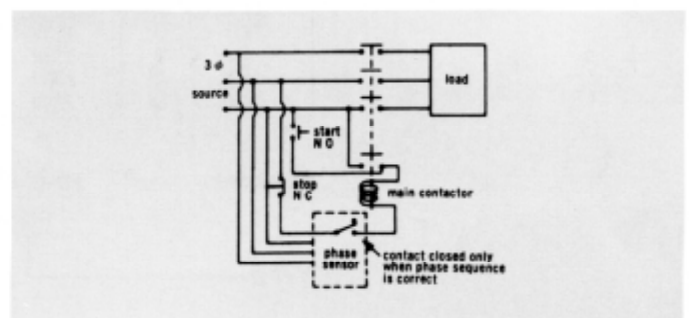
## OPTIONS:

- Frequency 50 Hz
- Contact Rating to 10 A
- Higher Voltages
- Different Packages, Header & Mounting

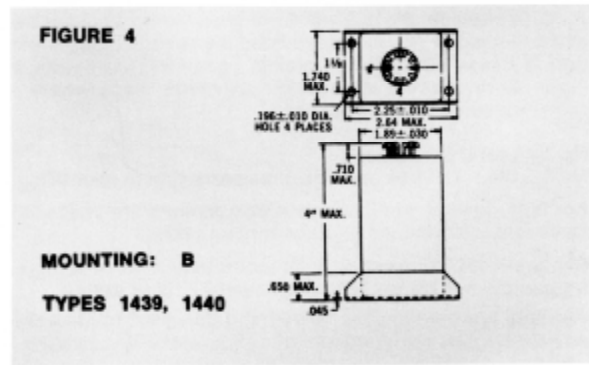
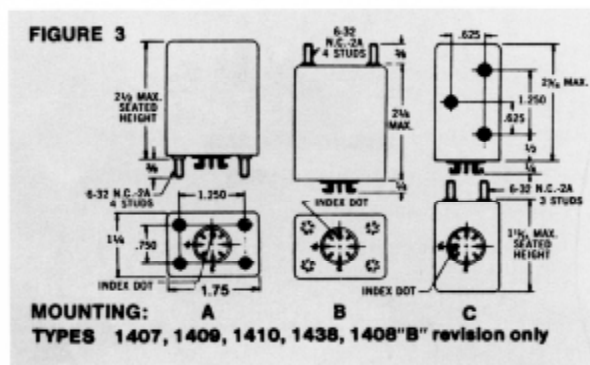
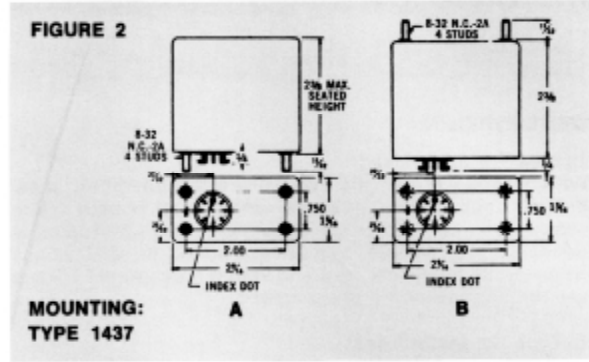
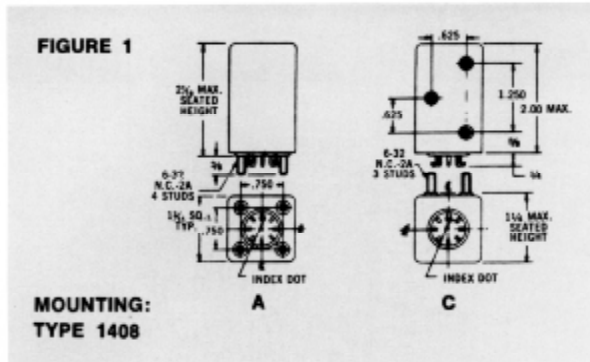
## APPLICATIONS:

- Motor Protection
- Brown-out Protection
- Power Supply Sequencing
- Air Conditioner Protection
- Ground Support Equip. Protection

## TYPICAL APPLICATIONS CONNECTIONS



## MECHANICAL SPECIFICATIONS



## HOW TO ORDER:

Basic Model No.	Load Type	Line to Line Voltage $\pm 10\%$	Frequency $\pm 10\%$	Max. Power Required	Mounting Style Fig.
1407	P	115V	60 Hz	4 W	3
1408	P	115V	400 Hz	4 W	1 or 3
1409	P	208V	60 Hz	6 W	3
1410	P	208V	400 Hz	6 W	3
1437	Q	115V	60 Hz	6 W	2
1438	Q	115V	400 Hz	6 W	3
1439	Q	208V	60 Hz	9 W	4
1440	Q	208V	400 Hz	9 W	4

