1400 Series Phase Sensor 115 or 208Vac, 60 or 400 Hz., Relay Output

Product Facts

- **Phase sensor for 115 or 208Vac, 60 or 400 Hz**
- **Up to 2A loads**
- **Static and motor load types**
- **Hermetic package**
- **Built to MIL-R-83726 environmentals**
- **Various applications**
  - **Motor protection**
  - **Brown-out protection**
  - **Power supply sequencing**
  - **Air conditioner protection**
  - **Ground support equipment protection**
- **Many customizing options**
  - **50 Hz. input types**
  - **Contact ratings to 10A**
  - **Higher voltages**
  - **Different packages, headers and mounting**

Kilovac 1400 series phase sensors combine solid state sensing circuits with electromechanical output relays in robust hermetically sealed enclosures.

P-Type models are for static loads. With the line voltage and frequency are 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 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 Q-Type 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 regenerated voltage is produced.

Neither P-Type nor Q-Type units require connection to the neutral leg.

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

Electrical Specifications

Input Data —
Voltage — 115 or 208Vac
Frequency — 60 or 400 Hz

Operate Time (Max.) — 75 ms

Release Time (Max.) — 100 ms

Contact Arrangement — 1 Form C (SPDT)

Contact Ratings —
2A resistive @ 30Vdc
0.5A inductive @ 30Vdc
0.25A resistive or inductive @ 115 Vrms, 60 or 400 Hz

Environmental Specifications

Temperature Range —
-55°C to +85°C

Vibration — 20 G's, 10 - 2,000 Hz

Shock — 50 G's, 11 ± 1ms duration

Insulation Resistance — 1,000 megohms, min., at 500Vdc

Dielectric Strength — 1,000Vrms, 60 Hz., at sea level, all terminals to case

Sealing — Hermetic, 1.3 in. (33.0mm) of mercury

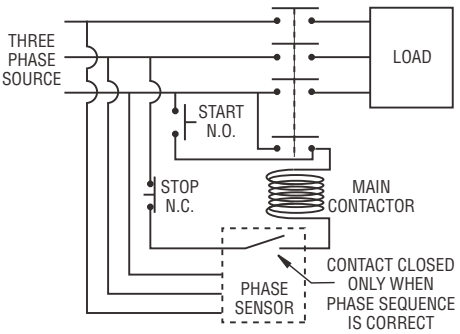
Life — 100,000 operations, min.

Weight — 12 oz (340g) max.

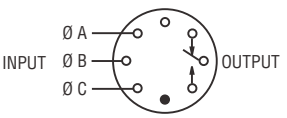
Specifications by Model Number

Fixed Timer Model Number	Load Type	Line to Line Voltage ±10%	Frequency ±10%	Max. Power Required	Mounting Style Figure
1407	P	115V	60 Hz.	4 Watts	3
1408	P	115V	400 Hz.	4 Watts	1 or 3
1409	P	208V	60 Hz.	6 Watts	3
1410	P	208V	400 Hz.	6 Watts	3
1437	Q	115V	60 Hz.	6 Watts	2
1438	Q	115V	400 Hz.	6 Watts	3
1439	Q	208V	60 Hz.	9 Watts	4
1440	Q	208V	400 Hz.	9 Watts	4

Typical Applications Connections



Wiring Diagram



Part Numbering System

Typical Part Number	1408	–1	A

Model Number:
Four digit code from table above.

Output:
1 = 1 Form C (SPDT)

Mounting (see outline dimension drawings):
A = Studs on bottom B = Studs on top, except bracket on bottom for 1439 and 1440 C = Studs on side

A typical part number would be 1408–1A. This is a 115Vac, 400 Hz., "P" type phase sensor with a 1 form C (SPDT) contact arrangement in a style "A" mounting.

Catalog 5-1773450-5
Revised 2-12

www.te.com

Dimensions are shown for reference purposes only. Specifications subject to change.

Dimensions are in millimeters unless otherwise specified.

USA: +1 (800) 522-6752

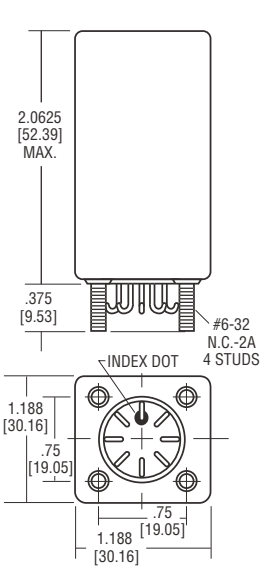
Canada: +1 (905) 475-6222
Mexico/C. Am.: +52 (0) 55-1106-0800
Latin/S. Am.: +54 (0) 11-4733-2200
Germany: +49 (0) 6251-133-1999

UK: +44 (0) 800-267666
France: +33 (0) 1-3420-8686
Netherlands: +31 (0) 73-6246-999
China: +86 (0) 400-820-6015

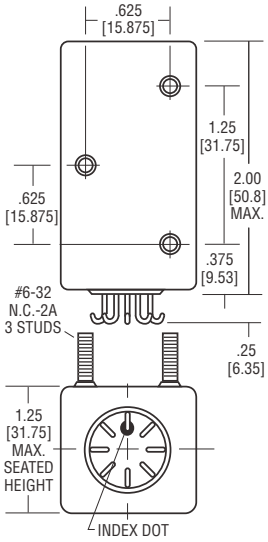
1400 Series Phase Sensor 115 or 208Vac, 60 or 400 Hz., Relay Output (Continued)

Outline Dimensions

Figure 1
Applicable to 1408

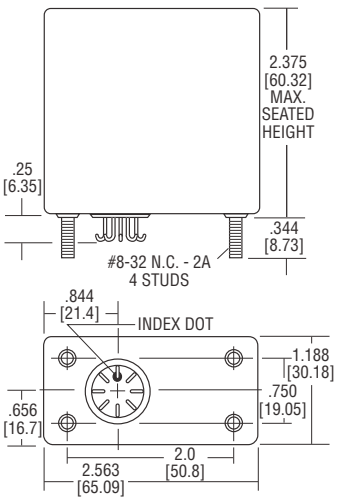


Mounting Option A

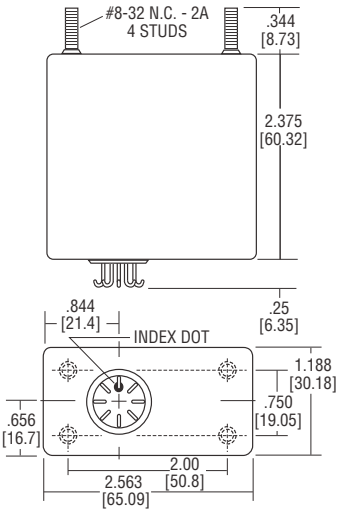


Mounting Option C

Figure 2
Applicable to 1437

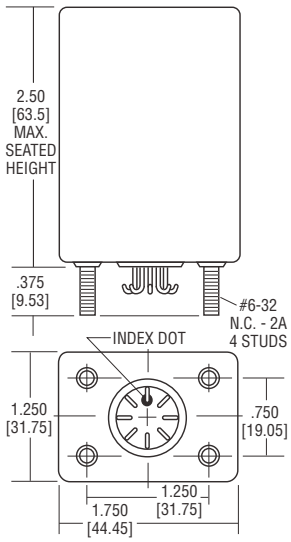


Mounting Option A

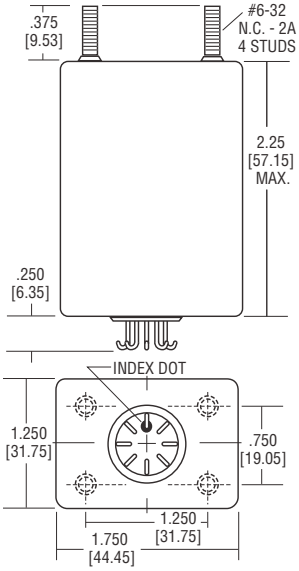


Mounting Option B

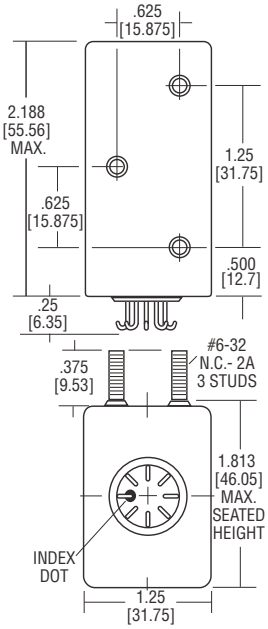
Figure 3
Applicable to 1407, 1409, 1410, 1438 and 1408 "B" revision only



Mounting Option A

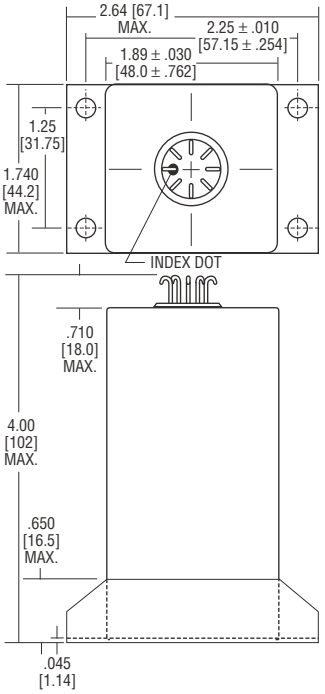


Mounting Option B



Mounting Option C

Figure 4
Applicable to 1439 and 1440



Mounting Option B

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