



# 4-126

## Vibration Transducer



### Applications

- Aircraft Engines
- Industrial Turbines
- Test Cells

### Features

- Self-generated, high level, low impedance output
- Operates to +700°F (+371°C)

Velocity Sensors

### Description

CEC designed the 4-126 Vibration Transducer for turbine applications. You can use them in turbine hot sections, such as the turbine case, where high temperatures can cause problems with other transducers. The low impedance, high level output requires no special amplifiers, simplifying your measurement system. They have low sensitivity to transverse accelerations, and you can mount them in any plane.

CEC's 4-126 Vibration Transducers use a seismic magnet that moves on gold bearings. A coil is attached to the case, and movement

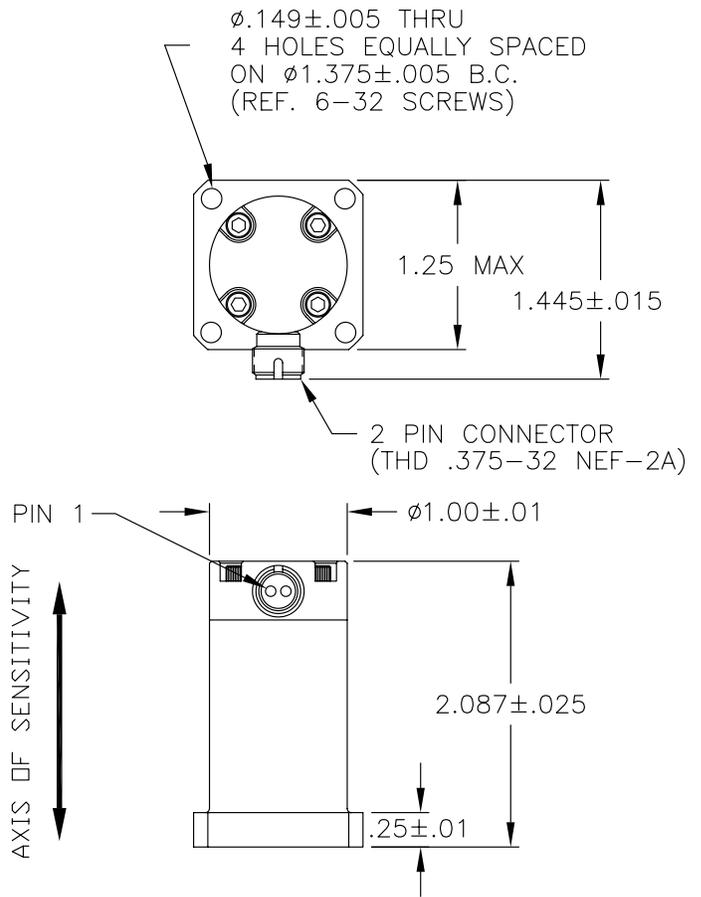
between the magnet and coil produces the output signal when the case vibrates. This air-damped system operates above its natural frequency so the output is proportional to velocity. The sealed case insures complete protection from contamination. Rugged construction and design simplicity insure high reliability and long service life.



# 4-126 Vibration Transducer

## Performance Specifications

<b>Sensitivity:</b>	145 ±4 mV/in/sec at 100 Hz, +75°F(+24°C) into a 10,000 Ω resistive load impedance
<b>Dynamic Range</b>	
<b>Frequency:</b>	45 Hz to 2000 Hz
<b>Amplitude:</b>	0.15 inch peak-to-peak max
<b>Acceleration:</b>	1 g to 50 g
<b>Frequency Response:</b>	±7% of the mean sensitivity
<b>Transverse Response:</b>	2% of maximum
<b>Linearity:</b>	±1% of output at 20 g's within dynamic range (vertical at 100 Hz)
<b>Temperature Range:</b>	-65°F to +700°F (-54°C to +371°C)
<b>Thermal Coefficient of Sensitivity:</b>	±0.02%/°F from reference +77°F
<b>Sensitivity Shift with Position:</b>	10% maximum
<b>Damped Resonant Frequency:</b>	Less than 15 Hz nominal
<b>Excitation:</b>	Self-generating
<b>Insulation Resistance:</b>	100K Ω, minimum
<b>Polarity:</b>	Pin 1 is positive when the case is moved upward
<b>Shock:</b>	50 g's maximum in any direction
<b>Weight:</b>	6 oz. nominal
<b>Calibration:</b>	Calibration record furnished
<b>Environmental Test:</b>	Meets requirements of applicable procedures of MIL-E 5272C for temperature, humidity, altitude, salt spray, vibration, fungus, sand, dust, immersion, shock and acceleration.



## Ordering Information

When ordering, specify 4-126-0001. Mating connectors and cable assemblies are not furnished and must be ordered separately. In keeping with CEC's policy of continuing product improvement, specifications may be changed without notice.

## Optional Accessories

1. Cable and connector assembly P/N 169500-XXXX (length is identified in inches; e.g.: 60-inch cable is P/N 169500-0060)
2. Connector P/N 173960

