



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

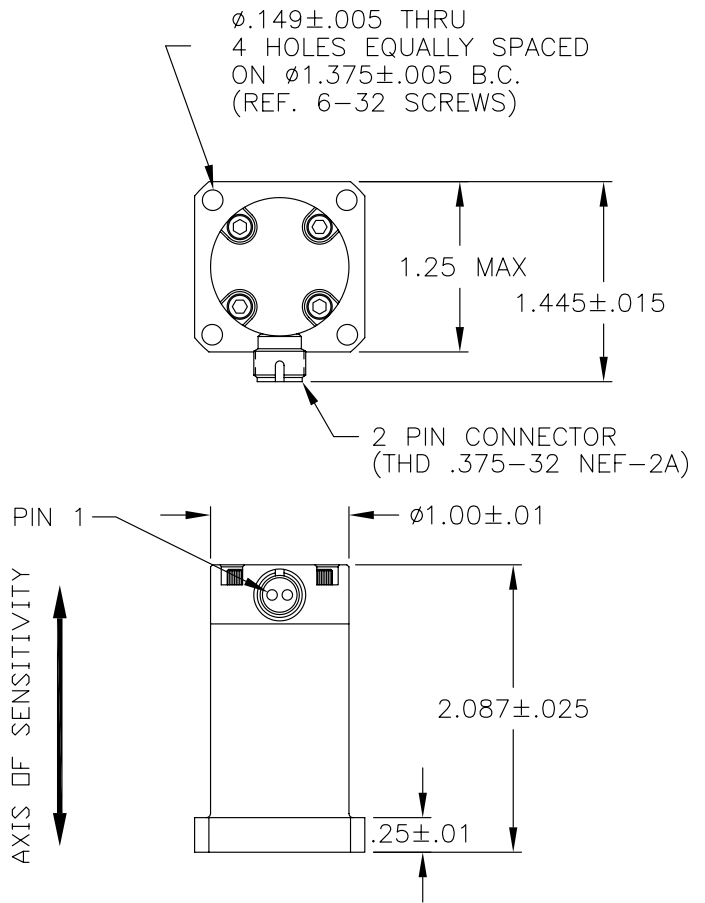
between the magnet and coil produces the output signal when the case vibrates. This air-damped system operates above its natural frequency so the output is proportional to velocity. The sealed case insures complete protection from contamination. Rugged construction and design simplicity insure high reliability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



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Performance Specifications

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

