

4-123 Vibration Transducer

Applications

- Vibration Analysis and Monitoring
- Dynamic Balancing Equipment
- Engineering Test and Research
- Production and Quality Testing
- Gas Turbine Test Cells
- Power Generation

Features

- Miniature for space limiting applications
- Self Generated, High Level, Low Impedance Output simplifies your system.
- Weighs on 2.2 ounces
- Operates to 500°F



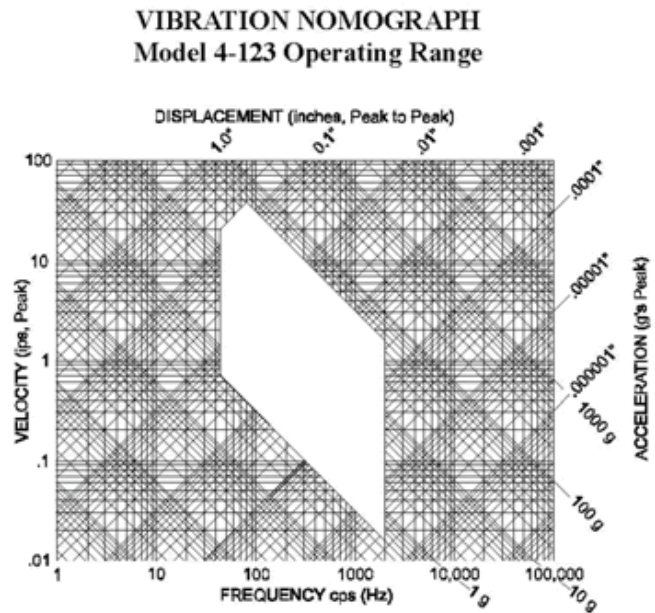
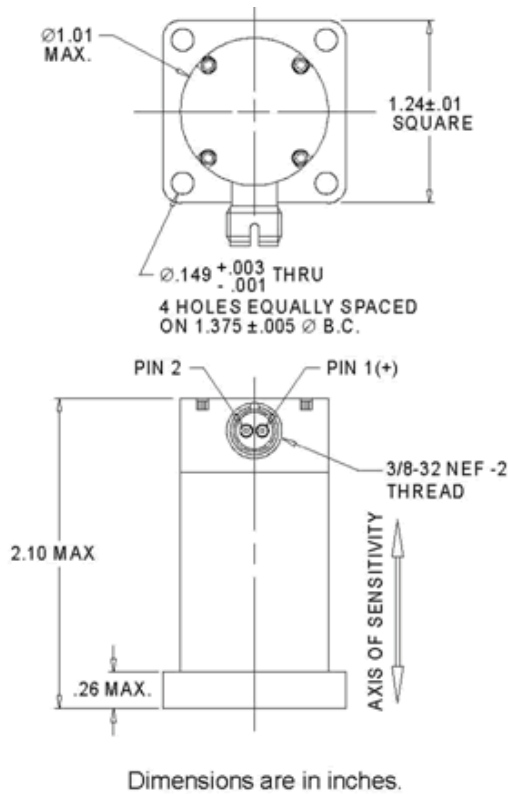
Description

CEC's 4-123 Vibration Transducers are particularly suited to turbine applications. They operate to 500°F, have low sensitivity to transverse accelerations, and can be mounted in any plane. The low impedance, high level output requires no special amplifiers, simplifying your measurement system. Precision jewel bearings provide nearly function-free movement for long life and reliability.

These vibration transducers use a seismic mass magnet, positioned by springs moving on ruby and sapphire bearings. A coil is attached to the base. The output signal results from relative motion between the magnet and coil when the case vibrates. The air damped system operates above its natural frequency, producing an output proportional to velocity. The sealed, lightweight aluminum case insures complete and permanent protection from contamination.

4-123 Specifications

Sensitivity:	135 mV \pm 2mV/in/sec at 100 Hz, 2 in/sec velocity into a 10,000 ohm load at +77oF (+25oC)
Dynamic Range:	
Frequency:	45 Hz to 2000 Hz
Amplitude:	0.15 inch peak-to-peak, max.
Acceleration:	0.5 g to 50 g
Frequency Response:	\pm 8% of mean sensitivity, 45 to 2000 Hz throughout the operating temperature range
Linearity:	\pm 3% within the dynamic range
Transverse Response:	Less than 2%
Temperature Range:	-40°F to +500°F
Thermal Coefficient of Sensitivity:	\pm 0.03%/oF
Sensitivity Shift with Position:	\pm 3% of the mean sensitivity between vertical and horizontal
Damped Resonant Frequency:	18 Hz nominal
Excitation:	Self-generating
Insulation Resistance:	1 mega Ohm, minimum
Polarity:	Pin 1 is positive when case moved upward
Maximum Static Acceleration:	6 g's in sensitive axis produces full travel of the moving mass
Shock:	100 g's at 11ms without damage
Weight:	4.5 oz. (121 grams)



Optional Accessories

- 1 Cable and connector assembly P/N 82406-XXXX (length is identified in inches; e.g.; 36-inch cable is P/N 82406-0036)
- 2 Connector P/N 173960

Ordering Information:

When ordering, specify Type 4-123-0001. Mating connector 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.