

## 4-128 Vibration Transducer

### Applications

- Vibration Analysis and Monitoring
- Gas Turbine Test Cells
- Power Generation

### Features

- Self Generated, High Level, Low Impedance Output simplifies your system.
- Weighs only 2 ounces
- Operates to 700°F (900°F versions are available)



### Description

CEC designed the 4-128 Vibration Transducer for turbine applications. You can use them in turbine hot sections where high temperatures can cause problems with other transducers. The system is simplified due to the low impedance, high level output that can drive AC meters, recorders, and control electronics without using special amplifiers. They have low sensitivity to transverse accelerations, and you can mount them in any plane.

These instruments are especially valuable where space is limited, and where heavier transducers would invalidate test results. They adapt easily to your installation because models are available in a variety of mounting configurations, connector orientations and sensitivities.

Rugged construction and design simplicity insure high reliability and long service life. The 4-128 is factory repairable.

CEC's 4-128 Vibration Transducers use a seismic mass 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.

### 4-128 Specifications

Sensitivity:	60 mV/in/sec through 105 mV/in/ sec at +77°F into a 10,000 ohm load
Dynamic Range:	
Frequency:	45 Hz to 1500 Hz
Amplitude:	0.10 inch peak-to-peak, maximum
Acceleration:	0.5 g to 50 g (vertical position)
Frequency Response:	±6% of mean sensitivity, 45 to 1500 Hz throughout the operating temperature range
Linearity:	±6% within the dynamic range
Transverse Response:	Less than 2%
Temperature Range:	-65°F to +700°F (-53°C to +371°C)
Thermal Coefficient of Sensitivity:	-0.02%/°F
Damped Resonant Frequency:	15 Hz nominal
Excitation:	Self-generating
Insulation Resistance:	0.1 Mega Ohm, minimum
Polarity:	Pin 2 is positive when the case is moved upward
Shock:	50 g's without damage
Maximum Static Acceleration:	3 g's in the sensitive axis produces
Weight:	2 oz nominal

**Optional Accessories**

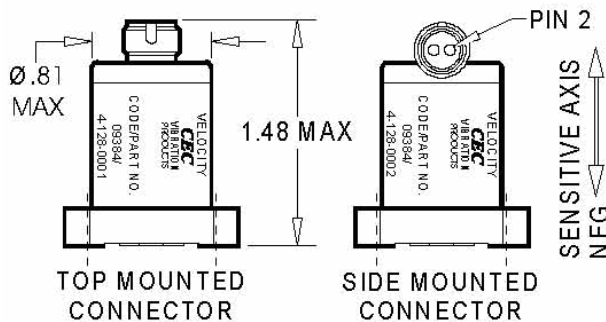
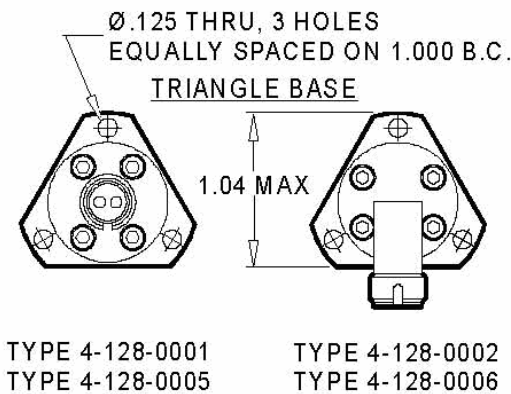
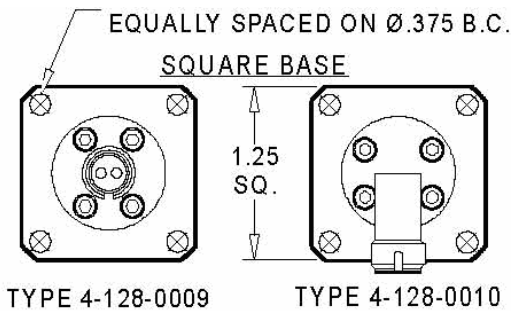
1. Cable and connector assembly; P/N 169500-XXXX (length is identified in inches; e.g. a 36-inch cable is P/N 169500-0036)
2. Connector; P/N 173960

**TABLE 1**

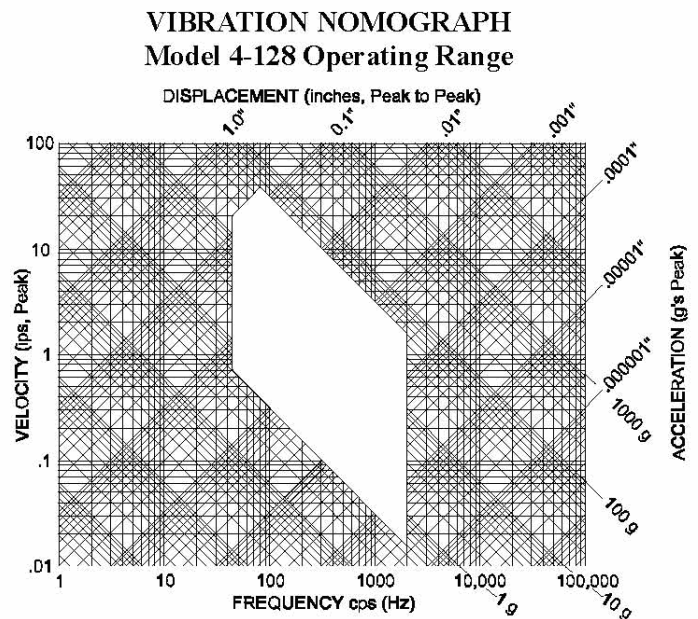
Type Number	Sensitivity
4-128-0001	60 ± 2 mV/in/sec
4-128-0002	60 ± 2 mV/in/sec
4-128-0005	105 ± 3 mV/in/sec
4-128-0006	105 ± 3 mV/in/sec
4-128-0009	105 ± 3 mV/in/sec
4-128-0010	105 ± 3 mV/in/sec

**Note:**

1. Units available on special order with higher sensitivity and/or lower frequency units.
2. The four capped screws must be safety wired together and to the connector to prevent inadvertent disassembly. Safety wire holes are provided in the screw caps.



Dimensions are in inches.



**Ordering Information:**

When ordering, specify 4-128-0001. 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.