SINOCERA®

PIEZOELECTRIC ACCELEROMETER MODEL: CA-YD-103

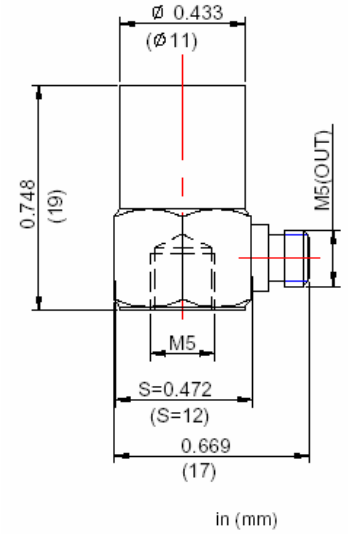
- **No External Power Required**
- **Frequency Response to 12 KHz**
- **Resonance Frequency at 40 KHz**
- **Side Connector**
- **Stud Mounted**

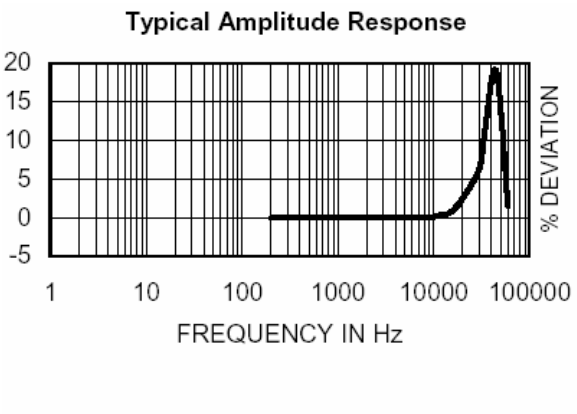
actual size

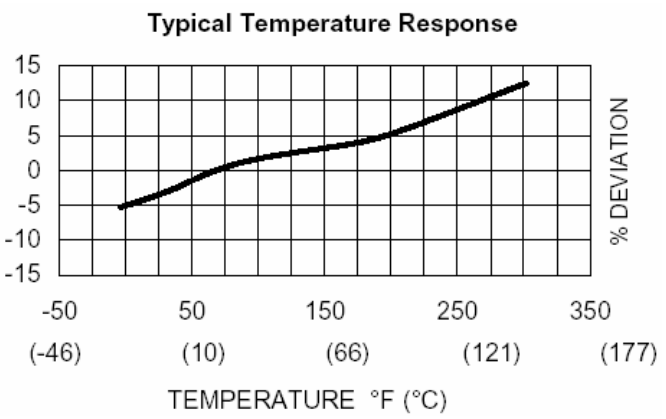
Description

The Sensors Model 103 is a stud mounted piezoelectric accelerometer designed for general vibration measurement on structures and objects. The sensor design is sealed against external contamination. The accelerometer is a self-generating device that requires no external power source for operation.

The Model 103 exhibits high resonance frequency. Signal ground is connected to the outer case of the unit. When used with an isolated mounting stud, the accelerometer is electrically isolated from ground. The accelerometer features a M5 side connector that is used with low-noise coaxial cable for error-free operation.







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SPECIFICATIONS

The following performance specifications conform to ISA-RP-37.2 (1964) and are typical values, referenced at +75°F (+24°C) and 100 Hz, unless otherwise noted. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied.

	UNITS	
DYNAMIC CHARACTERISTICS		
Axial Sensitivity	pC/g	20 (17 minimum)
Transverse Sensitivity	%	≤ 5
Frequency Response		See Typical Amplitude Response
Resonance Frequency	Hz	40,000
Amplitude Response [1]		
± 5 %	Hz	1 – 8,000
± 1 dB	Hz	0.5 – 12,000
Temperature Response		See Typical Temperature Response
Amplitude Linearity	%	< 1
ELECTRICAL CHARACTERISTICS		
Output Polarity		Acceleration directed from the base into the transducer is defined as positive
Resistance	GΩ	>1
Capacitance	pF	600
Grounding		Signal ground connected to case
ENVIRONMENTAL CHARACTERISTICS		
Temperature Range		-4°F to 248°F (-20°C to +120°C)
Humidity		Epoxy sealed
Shock Limit	g pk	2,000
Base Strain	equiv. g pk/μ strain	0.6
Magnetic Field Sensitivity	equiv. g rms/gauss (/T)	2E-5 (2)
Thermal Transient Sensitivity	equiv. g pk/°F (/°C)	0.18 (0.1)
PHYSICAL CHARACTERISTICS		
Weight	oz (grams)	0.5 (14)
Case Material		Stainless Steel
Mounting		M5, torque 2 N-m (18 lbf-in)
Piezoelectric Material		PZT-5
Structure		Center compression
Output Connector		M5 receptacle, side mounting

ACCESSORIES

Included:

9002-120 Low Noise, Coaxial M5/10-32, 10ft (3.3 m)
9504-1 M5/10-32 Mounting Stud
Calibration Certificate

Optional:

9001-120 Low Noise, Coaxial M5/M5, 10 ft (3.3 m)
9504-4 M5/M5 Mounting Stud
9505-1 M5/10-32 Isolated Mounting Stud

NOTES

1. Low end response of the transducer is a function of its electronics.