

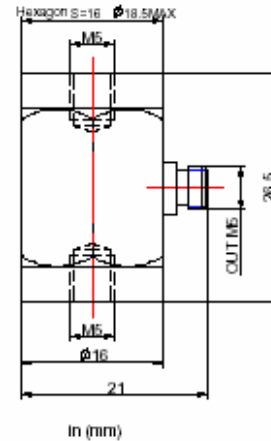
- ✚ **Back-to-Back Calibration Accelerometer**
- ✚ **Flat Amplitude Response**
- ✚ **Resonance Frequency at 40 KHz**
- ✚ **Stable Thermal Characteristics**



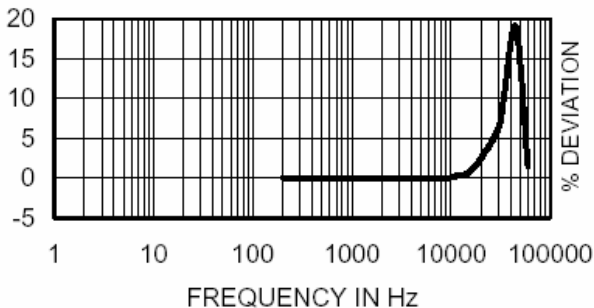
Description

The Sensors Model 122 is a back-to-back comparison calibration accelerometer used for performing comparison calibrations of other accelerometers. The frequency response range (to 8 KHz) makes it very useful for calibrating a broad range of test accelerometers. The accelerometer is a self-generating device that requires no external power source for operation.

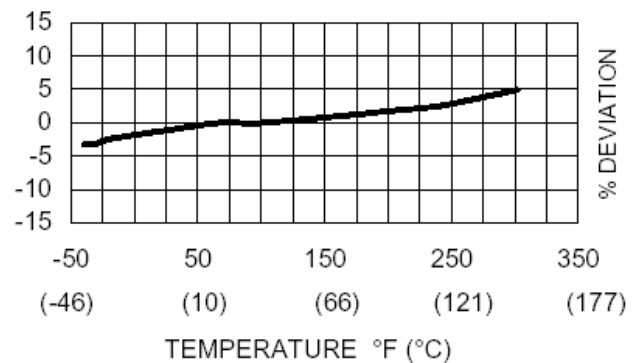
The Model 122 design is a welded, stainless steel construction that is hermetically sealed against external contamination. Signal ground is connected to the outer case of the unit. When used with an isolated mounting stud, the accelerometer is electrically isolated from ground. The accelerometer features a M5 side connector that is used with low-noise coaxial cable for error-free operation.



Typical Amplitude Response



Typical Temperature Response



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(20±5°C)	pC/g	1.3 (1.0 minimum)	
Transverse Sensitivity	%	≤ 3	
Frequency Response		See Typical Amplitude Response	
Resonance Frequency	Hz	40,000	
Amplitude Response			
+ 5 %	Hz	1 – 6,000	
+ 1 dB	Hz	0.5 – 8,000	
Temperature Response		See Typical Temperature Response	
Amplitude Linearity	%	≤ 1	
ELECTRICAL CHARACTERISTICS			
Output Polarity		Acceleration directed from base into the transducer defined as positive	
Resistance	GΩ	>1	
Capacitance	pF	360	
Grounding		Signal ground connected to case	
ENVIRONMENTAL CHARACTERISTICS			
Temperature Range		-40°F to 302°F (-40°C to +150°C)	
Humidity		Hermetically sealed, welded construction	
Shock Limit	g pk	1,000	
Base Strain	equiv. g pk/μ strain	0.0005	
Magnetic Field Sensitivity	equiv. g rms/gauss (/T)	1.5E-5 (1.5)	
Thermal Transient Sensitivity	equiv. g pk/°C (/°F)	0.05 (0.09)	
PHYSICAL CHARACTERISTICS			
Weight	oz (grams)	0.9 (25)	
Case Material		Stainless Steel	
Mounting		M5, torque 2 N-m (18 lbf-in)	
Piezoelectric Material		Quartz	
Structure		Center Compression	
Output Connector		M5 receptacle, side mounting	
ACCESSORIES			
Included:		Optional:	
9002-120	Coaxial Cable M5/10-32, 10ft (3.3 m)	9001-120	Low Noise, Coaxial M5/M5, 10 ft (3.3 m)
9504-1 (x2)	M5/10-32 Mounting Studs	9504-4	M5/M5 Mounting Stud
	Calibration Sheet	9505-1	M5/10-32 Isolated Mounting Stud

NOTES

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