

Quality

Innovations

Customer Satisfaction

PIEZOELECTRIC ACCELEROMETER

- **Miniature Design**
- Ideal for High g Shock Measurements
- Frequency Response to 12 kHz
- Thru-Hole Bolt or Adhesive Mounting
- 360° Cable Orientation
- **Replaceable Cable**

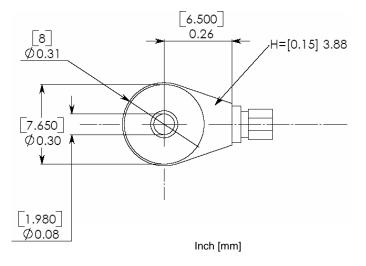
Description

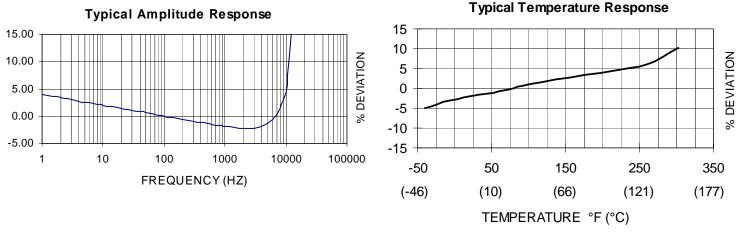
The VIP Sensors Model 1021A is a miniature piezoelectric accelerometer designed for shock and vibration measurements on small structures and objects. Its light weight minimizes or eliminates any mass loading effects on the object being tested. The accelerometer is a high-impedance, self-generating device that requires no external power source for operation.

The Model 1021A incorporates a thru-hole mounting design that allows for cable orientation in any direction. The unit is sealed against external contamination. Signal ground is connected to the outer case of the unit. The accelerometer features a M3 connector that is used with low-noise coaxial cable for connecting to signal conditioning electronics.

VIP Sensors Signal Conditioner Models 5002 and 5005 are recommended for use with this high impedance accelerometer.







VIP Sensors California. USA Ph (949) 429 3558 Fx (949) 528 0126 info@vipsensors.com www.vipsensors.com

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MODEL 1021A



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MODEL

1021A

PIEZOELECTRIC ACCELEROMETER

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		2 (1.7 minimum)
Transverse Sensitivity	%		≤ 5
Frequency Response			See Typical Amplitude Response
Resonance Frequency	Hz		40,000
Amplitude Response [1]			
<u>+5%</u>	Hz		2 - 10,000
<u>+</u> 1 dB	Hz		1 – 12,000
Temperature Response	%		See Typical Temperature Response
Amplitude Linearity	%		< 1
ELECTRICAL CHARACTERISTICS			
Output Polarity			Acceleration directed from the base into
Capacitolandy			the transducer is defined as positive
Resistance	GΩ		>1
Capacitance	pF		1,000
Grounding			Signal ground connected to case
ENVIRONMENTAL CHARACTERIS			
Temperature Range	°F (°C)		-40 to +302 (-40 to +150)
Humidity	م بول		Epoxy sealed
Shock Limit Base Strain	g pk		5,000 0.005
Magnetic Field Sensitivity	equiv. g pk/µ strain equiv. g rms/gauss		5E-6 (0.5)
Magnetic Field Sensitivity	(/T)		3E-0 (0.3)
Thermal Transient Sensitivity	equiv. g pk/°F (/°C)		0.05 (0.09)
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PHYSICAL CHARACTERISTICS			
Weight	oz (grams)		0.05 (1.4)
Case Material			Aluminum Alloy
Mounting			Thru-hole screw, torque 2 N-m (18 lbf-in)
Piezoelectric Material			PZT-5
Structure			Annular Shear
Output Connector			M3 receptacle
ACCESSORIES Included: Optional:			
9009L10 Cable, Low Noise M3/10-32, 10ft (3.3 m)		9604	Cable Adapter 10-32/10-32
			(extend cable length)
Mounting Screw			Cable, Low Noise 10-32/10-32, 10 ft (3.3 m)

Calibration Certificate

NOTES

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

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