

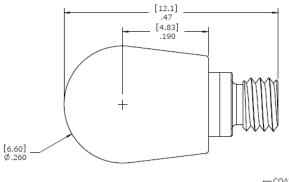
MODEL 7102A ACCELEROMETER

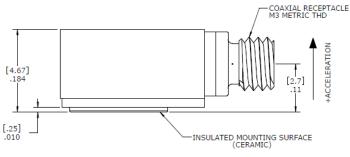


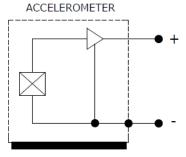




DIMENSIONS







SPECIFICATIONS

- **IEPE Accelerometer**
- Wide Bandwidth to >11kHz
- M3 Side Connector
- Miniature, Lightweight (<1gm)

The Model 7102A is a miniature adhesive mount IEPE accelerometer available in ±50g to ±2000g dynamic ranges. The accelerometer features a welded hermetic Titanium construction with an M3 connector. The model 7102A accelerometer has an operating range of -55°C to +125°C and a flat frequency response to greater than 11kHz. The miniature and light weight Titanium package renders the accelerometer ideal for applications requiring minimal mass loading.

FEATURES

- ±50g to ±2000g Dynamic Range
- Wide bandwidth up to 11kHz
- Welded Titanium
- Hermetically Sealed
- -55°C to +125°C Operating Range
- Annular Shear Mode
- Isolated from Mounting Surface

APPLICATIONS

- Vibration & Shock Monitoring
- Laboratory Testing
- **Modal Applications**
- **High Frequency Applications**
- Small Structures Monitoring

PERFORMANCE SPECIFICATIONS

All values are typical at +24°C, 80Hz and 4mA excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

Parameters DYNAMIC					Notes
Range (g)	±50	±100	±500	±2000	Notes
Sensitivity (mV/g)	100	50	10	2.5	±15%
Frequency Response (Hz)	2.5-8000	1.5-8000	1-8000	1-9000	±10%
Frequency Response (Hz) Natural Frequency (Hz)	1-10000 48000	0.8-10000 48000	0.5-10000 48000	0.5-11000 48000	±2dB
Non-Linearity (%FSO)	±1	±1	±1	±1	
Transverse Sensitivity (%)	 <5	_· <5	_· <5	<5	
Shock Limit (g)	5000	5000	5000	5000	
Residual Noise (g RMS)	0.0004	0.0005	0.0012	0.0032	Broadband 1Hz to 10kHz
ELECTRICAL					
Compliance Voltage (Vdc)	18 to 30				
Excitation Current (mA)	2 to 10				
Bias Voltage (Vdc)	8 to 12				Room Temperature
Bias Voltage (Vdc)	6 to 13				-55 to +125°C
Output Impedance (Ω)	<100				
Full Scale Output Voltage (V)	±5				
Discharge Time Constant (sec)	0.8 to 1.2				

ENVIRONMENTAL

Ground Isolation

Temperature Response (%) See Typical Temperature Response Curve

Operating Temperature (°C) -55 to +125 Storage Temperature (°C) -55 to +125

Humidity Hermetically Sealed, IP67

PHYSICAL

Sensing Element Ceramic (shear mode)

Case Material Titanium

Electrical Connector M3 Coaxial Receptacle

Weight (grams) 0.9
Mounting Adhesive

Calibration supplied: CS-FREQ-0100 NIST Traceable Amplitude Calibration from 20Hz to ±2dB Frequency Response Limit

Optional accessories: 311-XXX Cable Assembly, M3 to BNC (XXX designates length in inches, 10ft standard)

311M2-XXX Cable Assembly, M3 to 10-32 (XXX designates length in inches, 10ft standard)

161A 4-Channel PE & IEPE Signal Conditioner, Bench Top

AC-A04839 Triaxial Mounting Block

Isolated from Mounting Surface

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