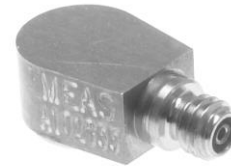


Model 7102A Accelerometer



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



The Model 7102A is a miniature adhesive mount IEPE accelerometer available in $\pm 50g$ to $\pm 2000g$ 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 $+125^{\circ}\text{C}$ 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.

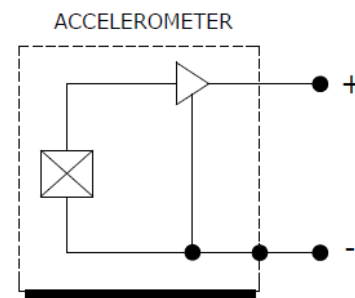
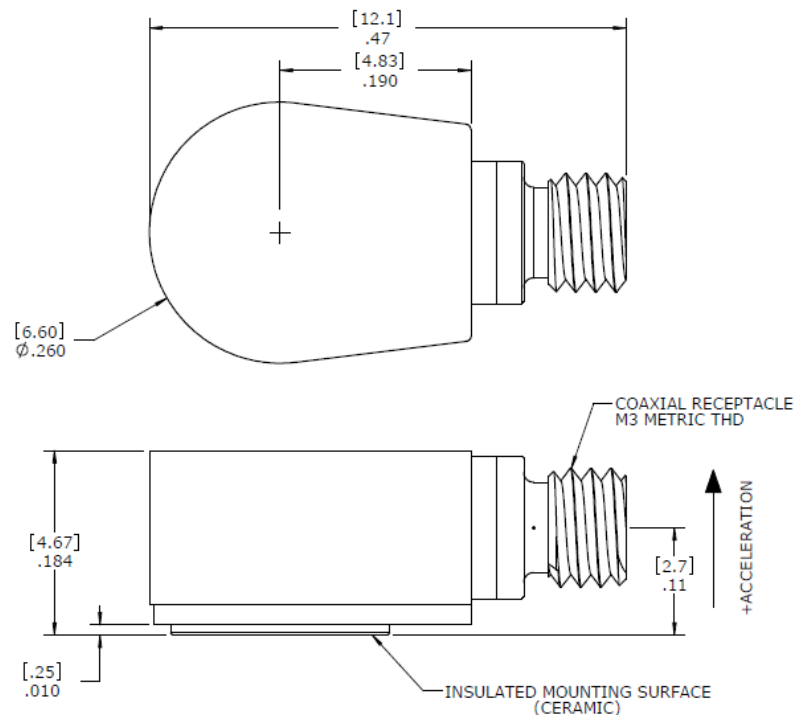
FEATURES

- $\pm 50g$ to $\pm 2000g$ Dynamic Range
- Wide bandwidth up to 11kHz
- Welded Titanium
- Hermetically Sealed
- -55°C to $+125^{\circ}\text{C}$ Operating Range
- Annular Shear Mode
- Isolated from Mounting Surface

APPLICATIONS

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

dimensions



Model 7102A Accelerometer

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. Standard product parameters are described in PSC-1003 for Plug & Play AC Accelerometers.

Parameters

DYNAMIC

	±50	±100	±500	±2000	Notes
Range (g)	±50	±100	±500	±2000	
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)	1-10000	0.8-10000	0.5-10000	0.5-11000	±2dB
Natural Frequency (Hz)	48000	48000	48000	48000	
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				
Ground Isolation	Isolated from Mounting Surface				

ENVIRONMENTAL

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

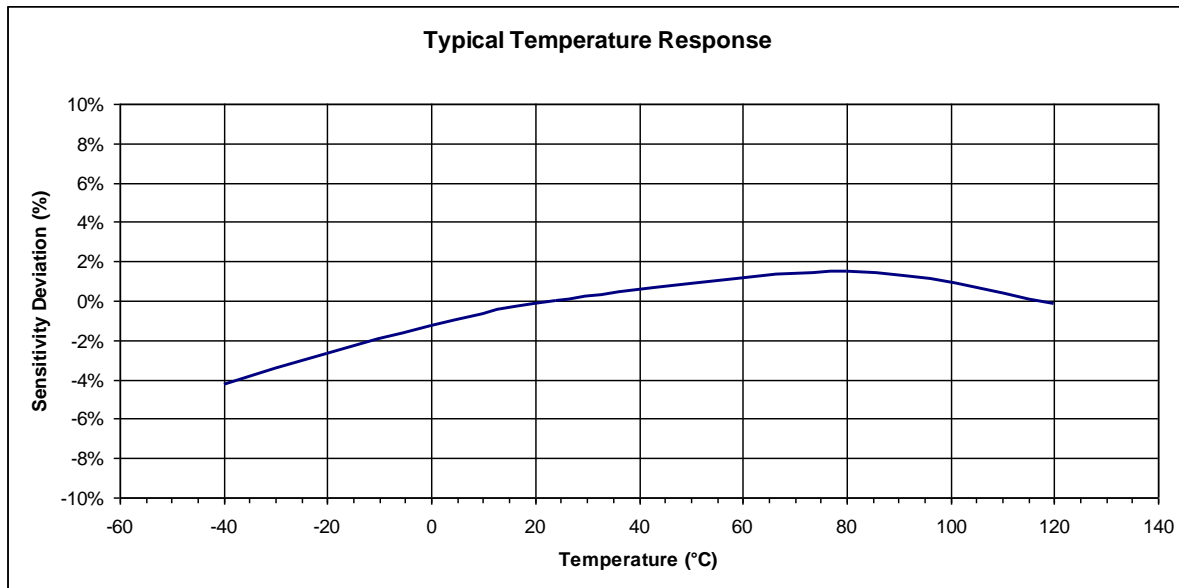
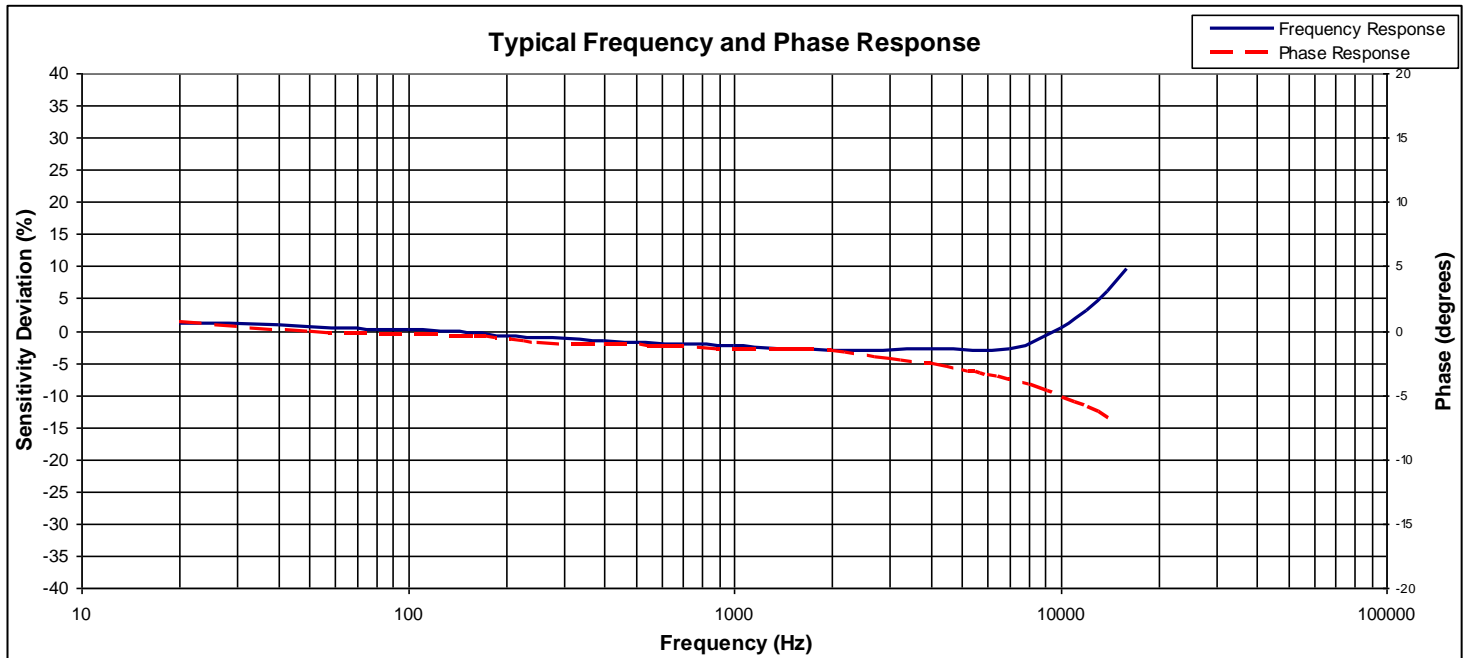
Optional accessories:

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

The information in this sheet has been carefully reviewed and is believed to be accurate; however, no responsibility is assumed for inaccuracies. Furthermore, this information does not convey to the purchaser of such devices any license under the patent rights to the manufacturer. Measurement Specialties, Inc. reserves the right to make changes without further notice to any product herein. Measurement Specialties, Inc. makes no warranty, representation or guarantee regarding the suitability of its product for any particular purpose, nor does Measurement Specialties, Inc. assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Typical parameters can and do vary in different applications. All operating parameters must be validated for each customer application by customer's technical experts. Measurement Specialties, Inc. does not convey any license under its patent rights nor the rights of others.

Model 7102A Accelerometer

performance specifications



ordering info

PART NUMBERING Model Number+Range

7102A-GGGG

|
| _____ Range (0050 is 50g)

Example: 7102A-0050
Model 7102A, 50g