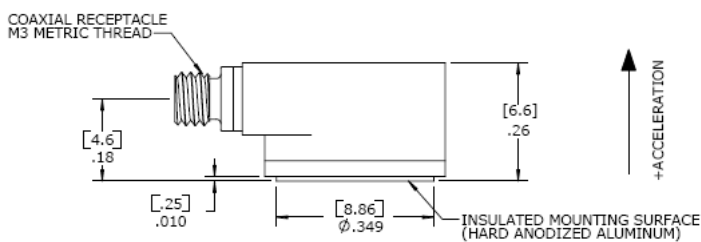
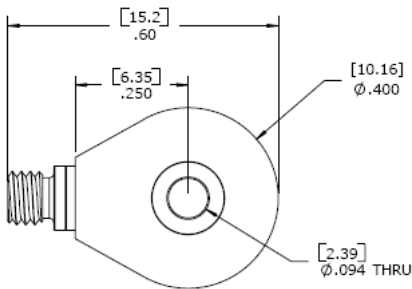


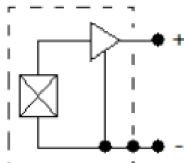
# MODEL 7101A ACCELEROMETER



## DIMENSIONS



ACCELEROMETER



## SPECIFICATIONS

- ◆ IEPE Accelerometer
- ◆ Wide Bandwidth to 10kHz
- ◆ M3 Side Connector
- ◆ Miniature, Lightweight (2.4gm)

The Model 7101A is a miniature, high performance IEPE accelerometer available in  $\pm 50g$  to  $\pm 1000g$  dynamic ranges. The accelerometer is designed for high frequency vibration and shock measurements and offers a wide bandwidth to  $>10kHz$  utilizing stable piezo-ceramic crystals in annular shear mode. The model 7101A features a hermetically sealed titanium housing and the popular through hole mount configuration. The standard operating temperature range extends from  $-55^{\circ}C$  to  $+125^{\circ}C$ .

## FEATURES

- ◆  $\pm 50g$  to  $\pm 1000g$  Dynamic Range
- ◆ Wide bandwidth up to 10kHz
- ◆ Welded Construction, Titanium
- ◆ Hermetically Sealed
- ◆ Annular Shear Mode
- ◆ Stable Temperature Response
- ◆ Miniature, Through-Hole Mount

## APPLICATIONS

- ◆ Vibration & Shock Monitoring
- ◆ Laboratory Testing
- ◆ Modal Applications
- ◆ High Frequency Applications
- ◆ General Purpose Usage

**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**

	±50	±500	±1000	<b>Notes</b>
Range (g)	±50	±500	±1000	
Sensitivity (mV/g)	100	10	5	±10%
Frequency Response (Hz)	1-8000	1-8000	1-8000	±5%
Frequency Response (Hz)	0.5-10000	0.5-10000	0.5-10000	±1dB
Natural Frequency (Hz)	>50000	>50000	>50000	
Non-Linearity (%FSO)	±1	±1	±1	
Transverse Sensitivity (%)	<5	<5	<5	
Shock Limit (g)	5000	5000	5000	

**ELECTRICAL**

Compliance Voltage (Vdc)	18 to 30	18 to 30	18 to 30	
Excitation Current (mA)	2 to 10	2 to 10	2 to 10	
Bias Voltage (Vdc)	8 to 12	8 to 12	8 to 12	Room Temperature
Bias Voltage (Vdc)	6 to 14	6 to 14	6 to 14	-55 to +125°C
Output Impedance (Ω)	<100	<100	<100	
Full Scale Output Voltage (V)	±5	±5	±5	
Residual Noise (g RMS)	0.0004	0.0008	0.001	Broadband 1Hz to 10kHz
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

**PHYSICAL**

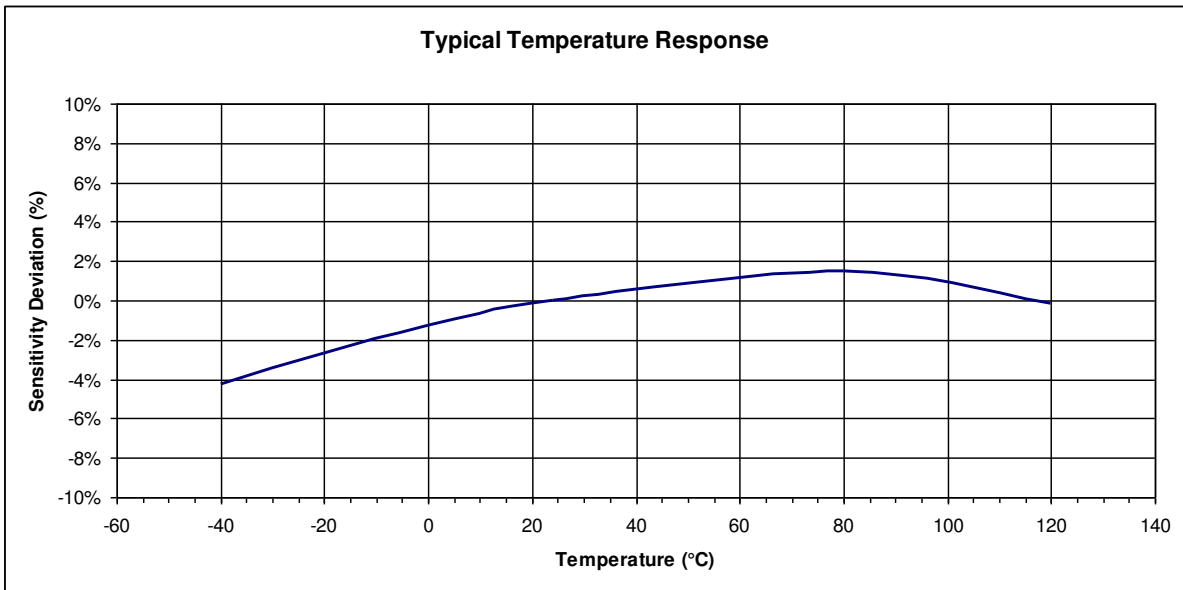
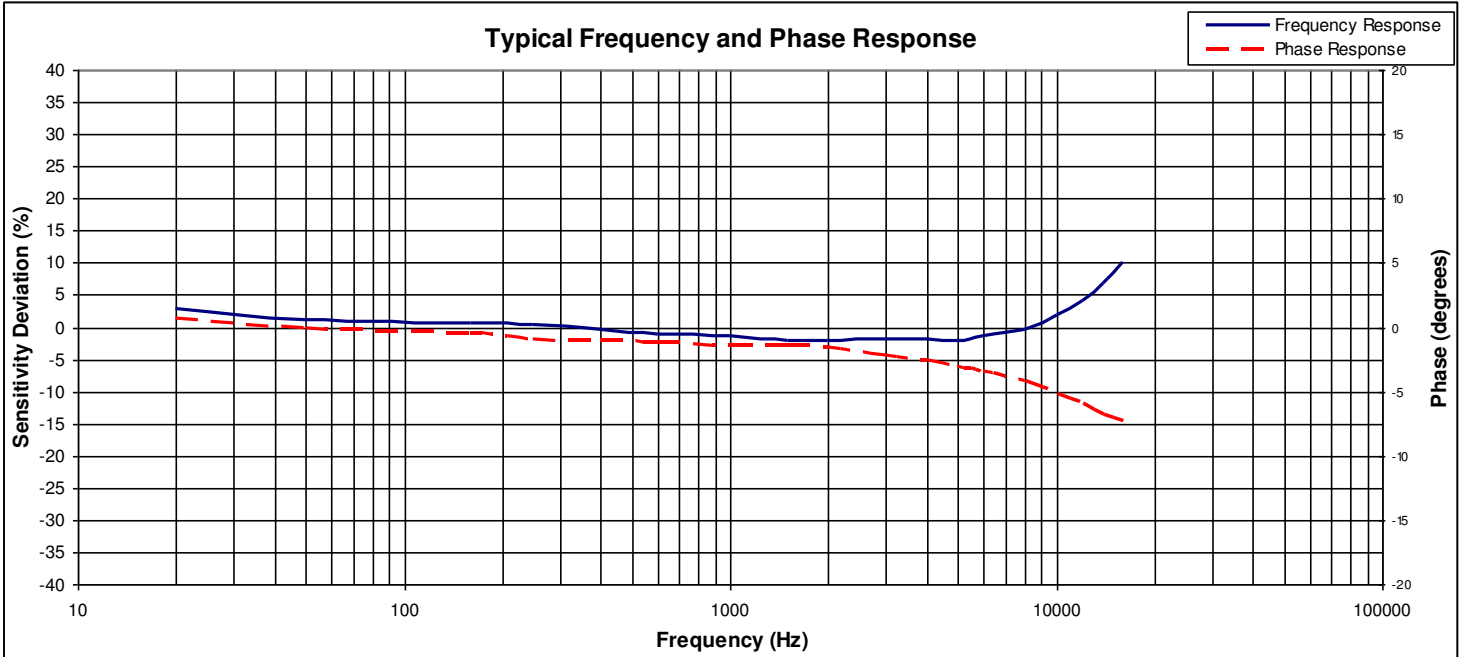
Sensing Element	Ceramic (shear mode)
Case Material	Titanium
Electrical Connector	M3 Coaxial Receptacle
Weight (grams)	2.4
Mounting	#2-56 Insulated Mounting Screw (included)
Mounting Torque	5 lb-in (0.6 N-m)

**Calibration supplied:** CS-FREQ-0100 NIST Traceable Amplitude Calibration from 20Hz to ±1dB Frequency Response Limit

**Supplied accessories:** AC-A03230 1x #2-56 Insulated Mounting Screw Assembly (7/16 inch length)

**Optional accessories:** 311-XXX Cable Assembly, M3 to BNC (XXX designates length in inches, 10ft standard)  
 AC-A04018 Triaxial Mounting Block  
 161A 4-Channel PE & IEPE Signal Conditioner, Bench Top

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## ORDERING INFORMATION

PART NUMBERING Model Number+Range

7101A-GGGG  
| \_\_\_\_\_ Range (0050 is 50g)

Example: 7101A-0050  
Model 7101A, 50g



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