

Model 7101A Accelerometer



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 $\pm 500g$ 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 $+125^{\circ}C$.

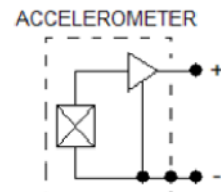
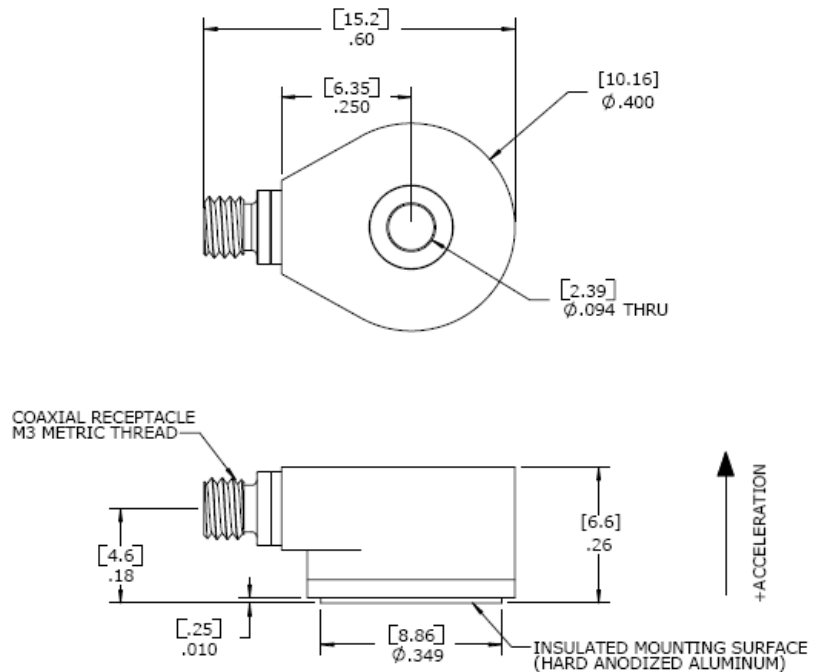
FEATURES

- $\pm 50g$ to $\pm 500g$ 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

dimensions



Model 7101A Accelerometer

performance specifications

All values are typical at +24°C, 100Hz 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

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

Notes

±10%
±5%
±1dB

ELECTRICAL

Compliance Voltage (Vdc)	18 to 30	18 to 30
Excitation Current (mA)	2 to 10	2 to 10
Bias Voltage (Vdc)	8 to 12	8 to 12
Bias Voltage (Vdc)	6 to 14	6 to 14
Output Impedance (Ω)	<100	<100
Full Scale Output Voltage (V)	±5	±5
Residual Noise (g RMS)	0.0004	0.0008
Discharge Time Constant (sec)	0.8 to 1.2	
Ground Isolation	Isolated from Mounting Surface	

Room Temperature
-55 to +125°C

Broadband 1Hz to 10kHz

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

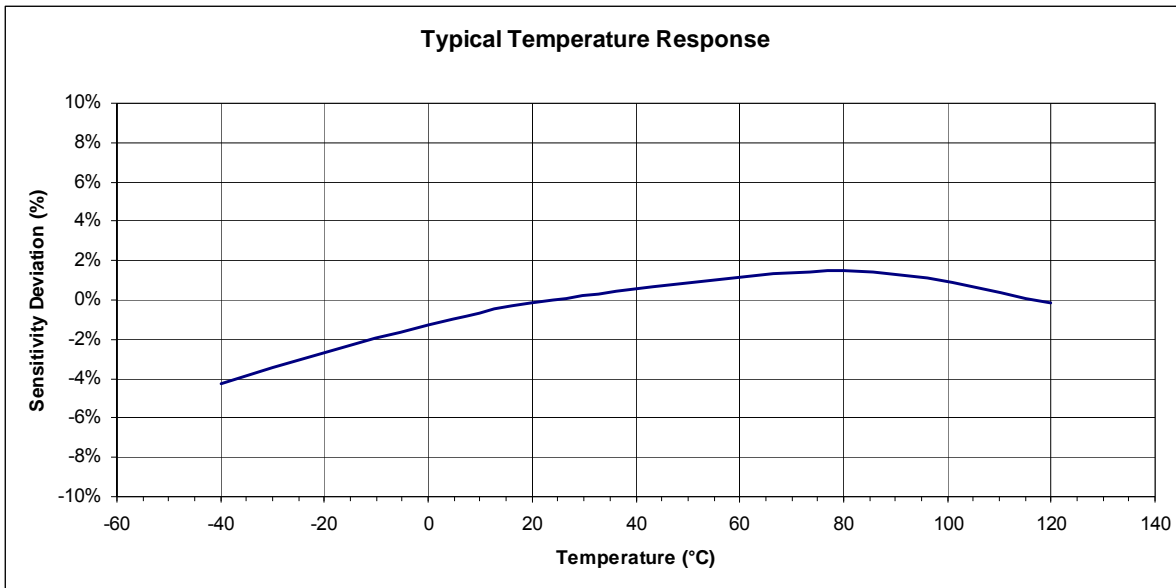
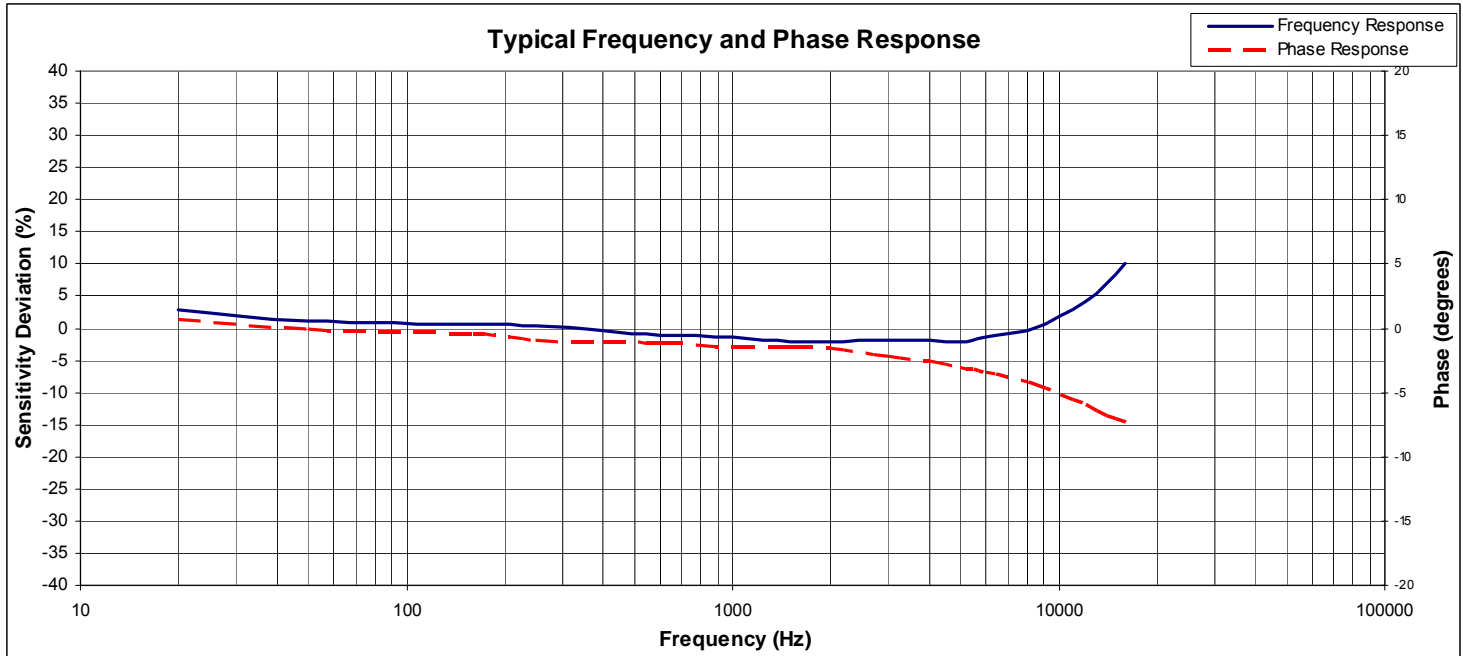
Supplied accessories: AC-A03230 1x #2-56 Insulated Mounting Screw Assembly (7/16 inch length)

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

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performance specifications



ordering info

PART NUMBERING Model Number+Range

7101A-GGGG

I_____ Range (0050 is 50g)

Example: 7101A-0050

Model 7101A, 50g