

MODEL 7131A ACCELEROMETER



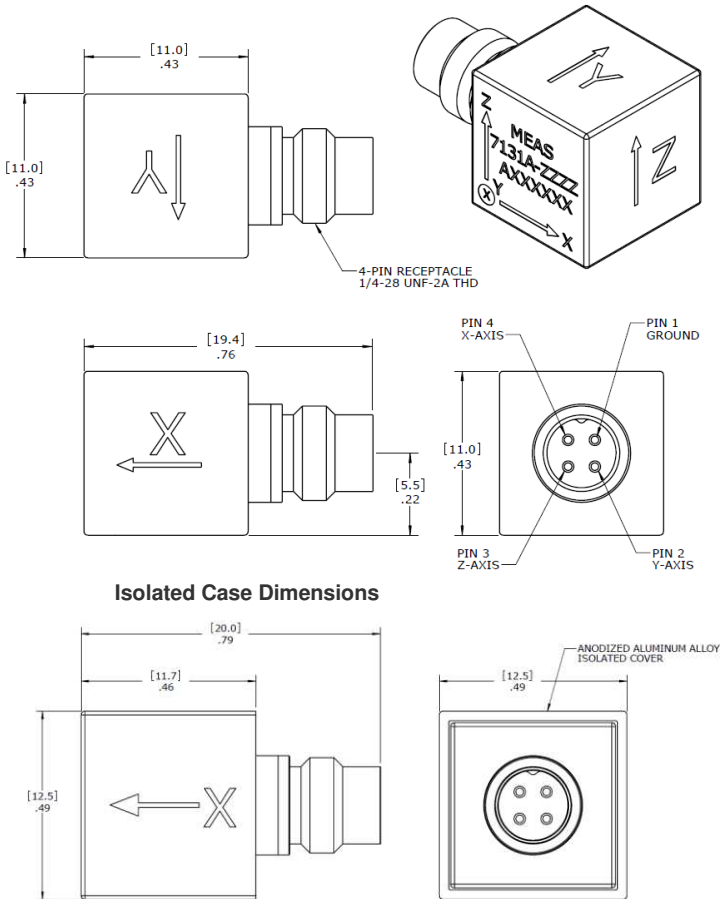
Isolated Case Option

7131A



DIMENSIONS

7131A Dimensions



SPECIFICATIONS

- ◆ Triaxial IEPE Accelerometer
- ◆ Miniature Cube
- ◆ Hermetically Sealed, Titanium
- ◆ $\pm 50g$ to $\pm 2000g$ Dynamic Ranges

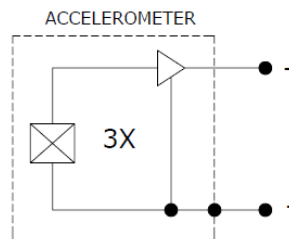
The Model 7131A is a miniature triaxial IEPE accelerometer available in $\pm 50g$ to $\pm 2000g$ dynamic ranges. The accelerometer features a hermetically sealed Titanium construction with a 4-pin Microtech connector interface. The model 7131A incorporates stable piezo-ceramic crystals in annular shear mode which provide a flat frequency response up to $>10kHz$.

FEATURES

- ◆ 4-pin Connector Interface
- ◆ Wide bandwidth up to $10kHz$
- ◆ Adhesive Mounting
- ◆ Miniature Triaxial
- ◆ Annular Shear Mode Crystals
- ◆ Stable Temperature Response
- ◆ Isolated Case Option

APPLICATIONS

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



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	±100	±200	±500	±2000	Notes
Range (g)	±50	±100	±200	±500	±2000	
Sensitivity (mV/g)	100	50	25	10	2.5	±15%
Frequency Response (Hz)	2.5-8000	1.5-8000	1.5-8000	1-8000	1-9000	±10%
Frequency Response (Hz)	1-10000	0.8-10000	0.8-10000	0.5-10000	0.5-11000	±2dB
Natural Frequency (Hz)	43000	43000	43000	43000	43000	
Non-Linearity (%FSO)	±1	±1	±1	±1	±1	
Transverse Sensitivity (%)	<5	<5	<5	<5	<5	
Shock Limit (g)	5000	5000	5000	5000	5000	
Residual Noise (g RMS)	0.0004	0.0005	0.0008	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	Case Grounded (Case Isolation option; see ordering info on page 3)	

ENVIRONMENTAL

Temperature Response (%)	See Typical Temperature Response Curve
Operating Temperature (°C)	-55 to +125
Storage Temperature (°C)	-55 to +125
Humidity	Hermetically Sealed

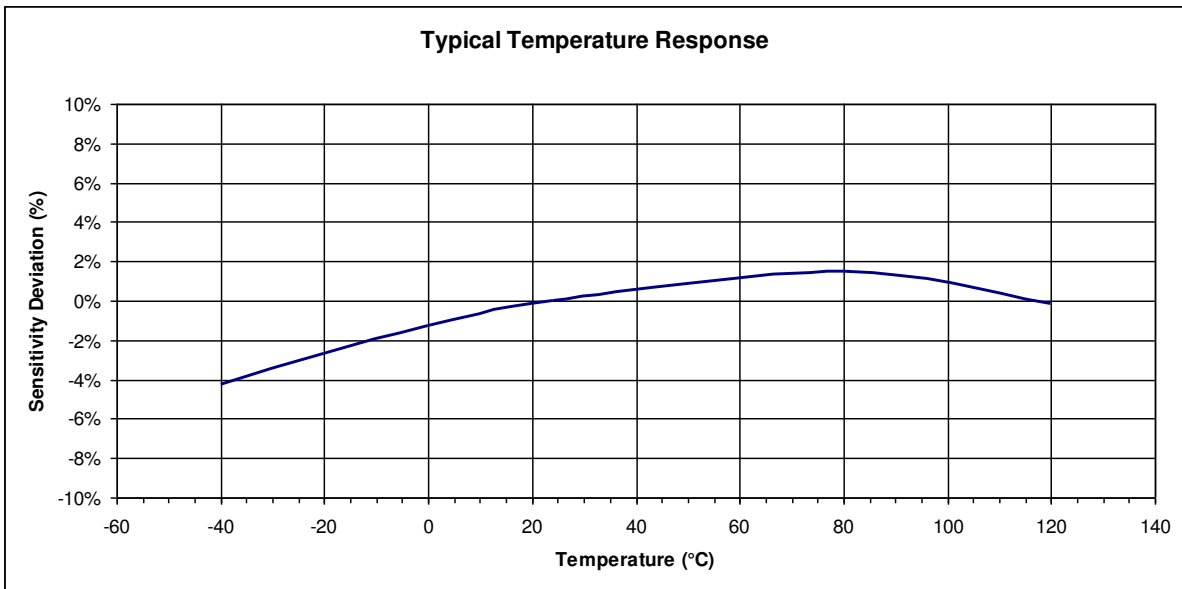
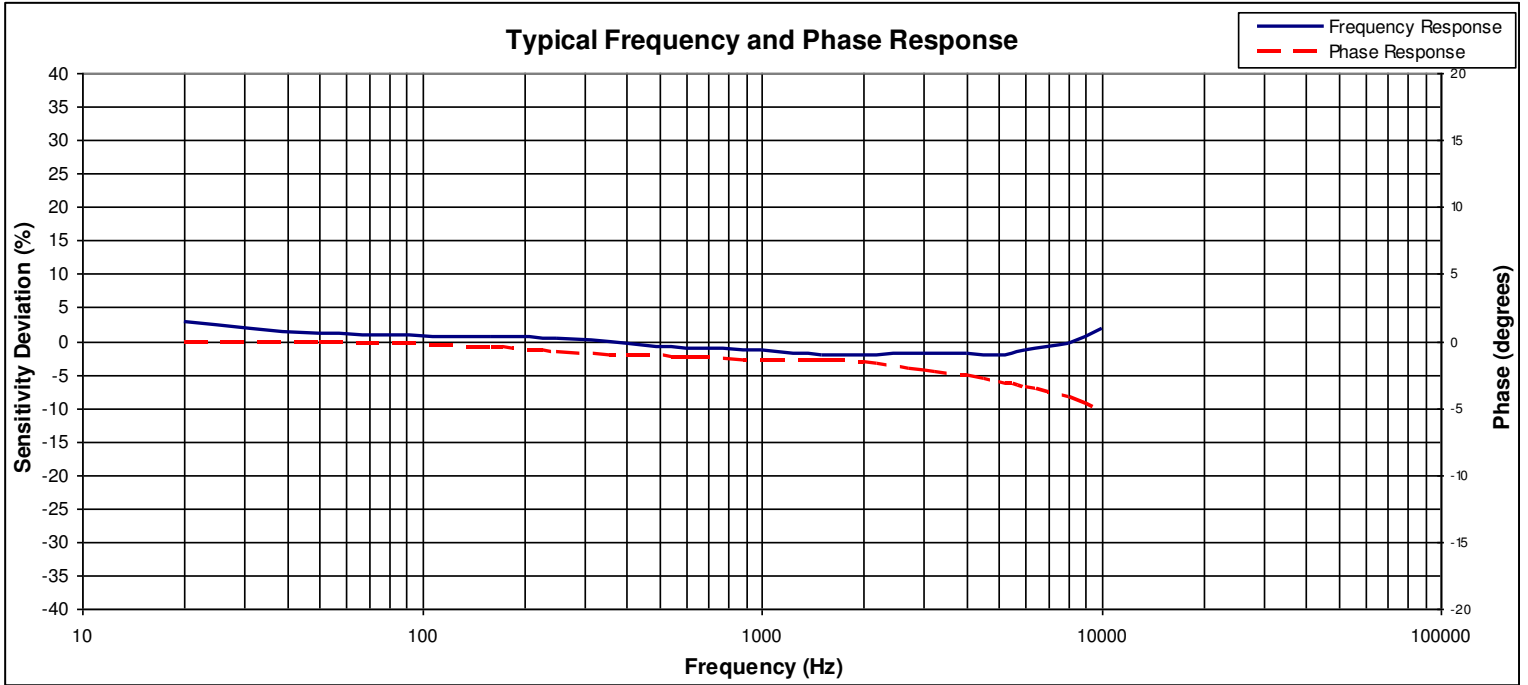
PHYSICAL

Sensing Element	Ceramic (shear mode)
Case Material	Titanium
Electrical Connector	4-Pin Receptacle
Weight (grams)	6.0 (7.3 for Isolated Case Option)
Mounting	Adhesive (stud mount option)

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

Optional accessories: 315-XXX Cable Assembly, 4-pin ¼-28 to 3x BNC (XXX designates length in inches, 10ft standard)
 161A 4-Channel PE & IEPE Signal Conditioner
 AC-A04025 Adhesive Mounting Adaptor (for -02 thread option)

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ORDERING INFORMATION

PART NUMBERING Model Number+Range

7131A-GGGG-XX

| | Optional Dash Number
| Range (0050 is 50g)

Dash Number

-01

-02

-03

Thread Options

M2.5 x 0.45 6g

#5-40 UNF-2B

Case Isolated

Example: 7131A-0050

Model 7131A, 50g, No Option