

Model 7131A Accelerometer



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

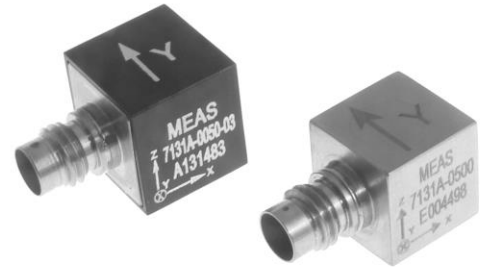
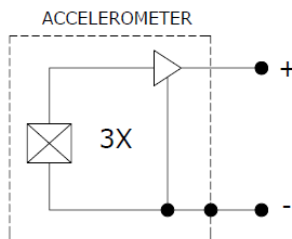
The Model 7131A is a miniature triaxial IEPE accelerometer available in $\pm 50g$ to $\pm 2000g$ dynamic ranges. The accelerometer features a hermetically sealed Titanium construction with a 4-pin Microtech connector interface. The model 7131A incorporates stable piezo-ceramic crystals in annular shear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

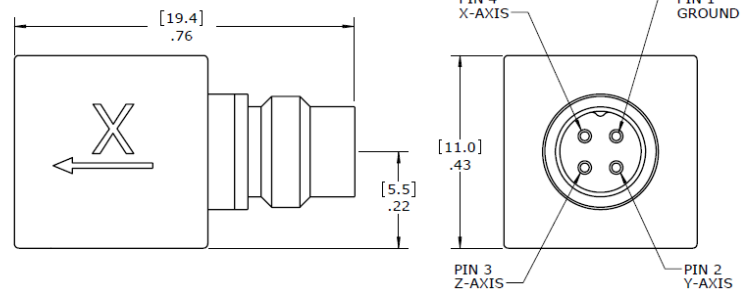
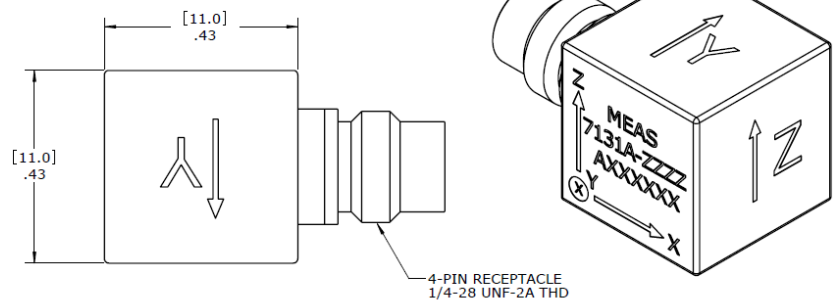


Isolated Case Option

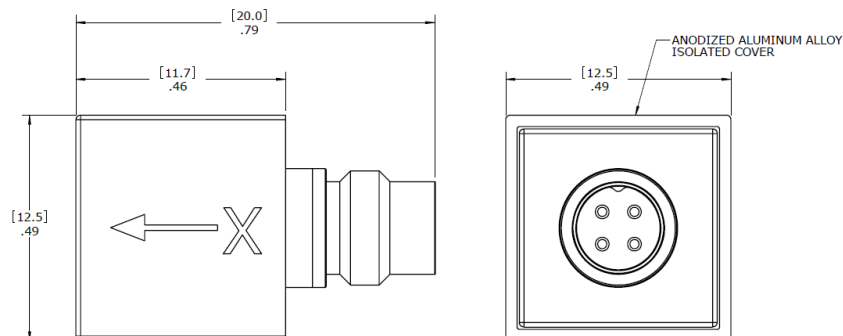
7131A

dimensions

7131A Dimensions



Isolated Case Dimensions



Model 7131A Accelerometer

performance specifications

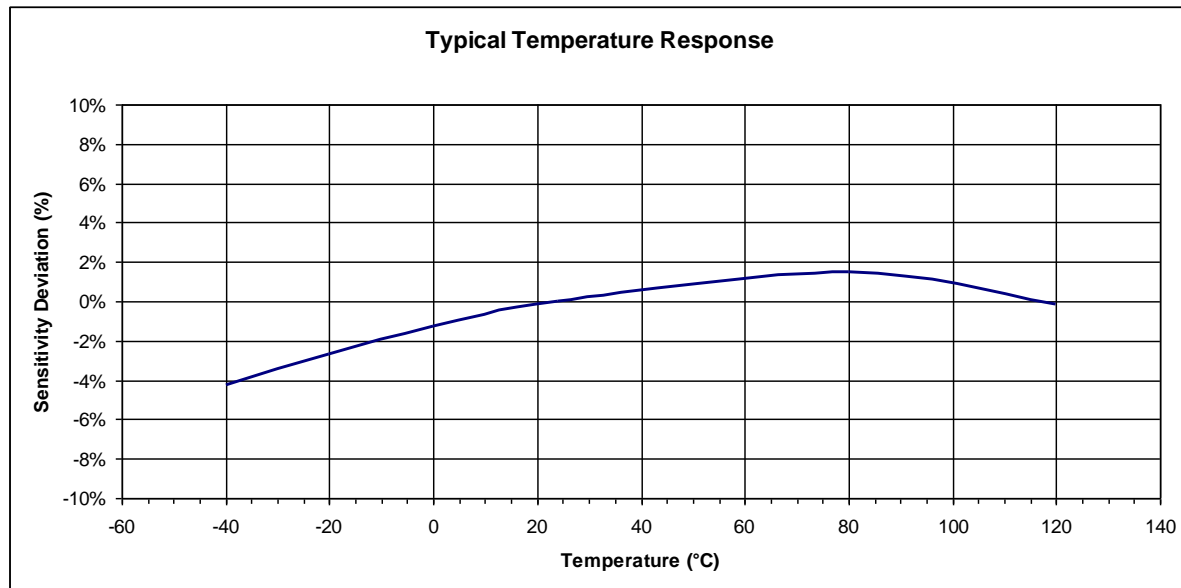
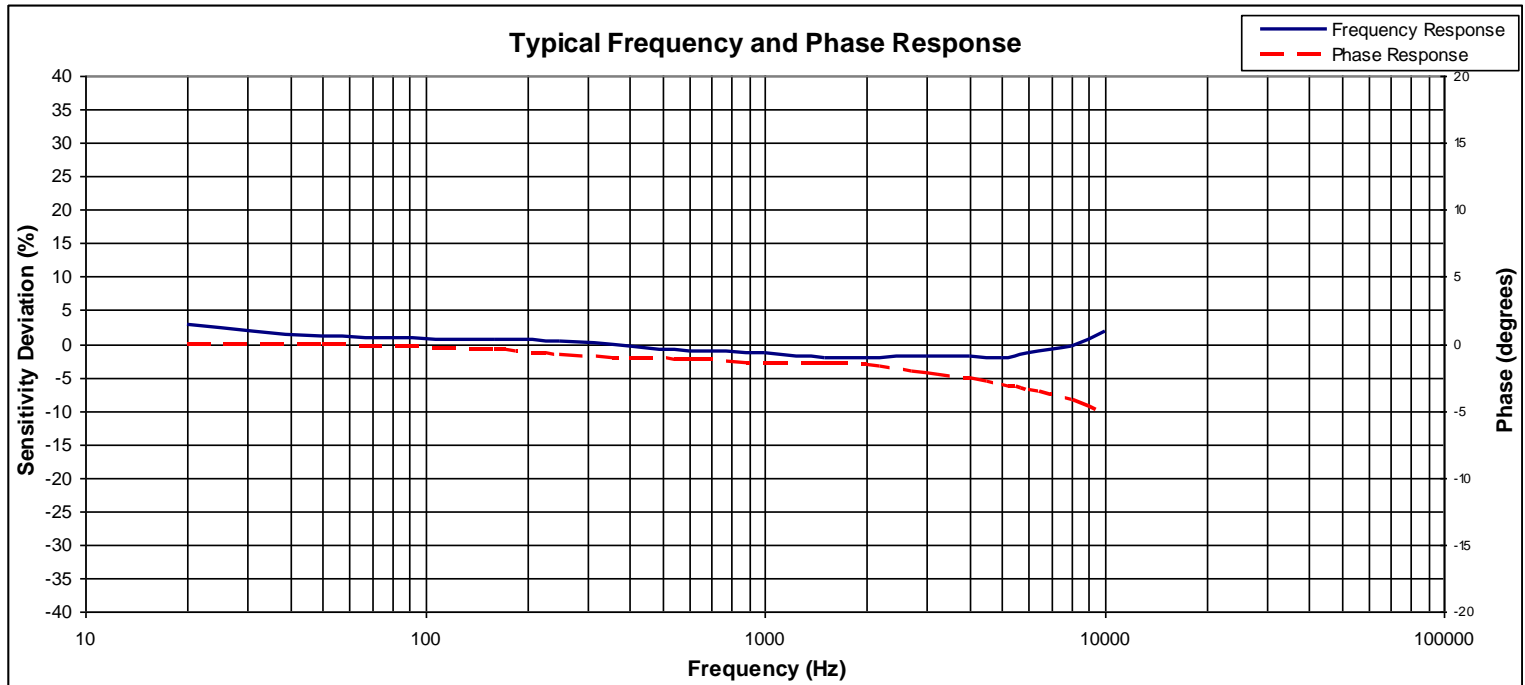
All values are typical at +24°C, 80Hz and 4mA excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice. Standard product parameters are described in PSC-1003 for Plug & Play AC Accelerometers.

Parameters						Notes
DYNAMIC						
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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Model 7131A Accelerometer

performance specifications



ordering info

PART NUMBERING Model Number+Range

7131A-GGGG-XX

I I Optional Dash Number
I 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