

# Model 7131A Accelerometer



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

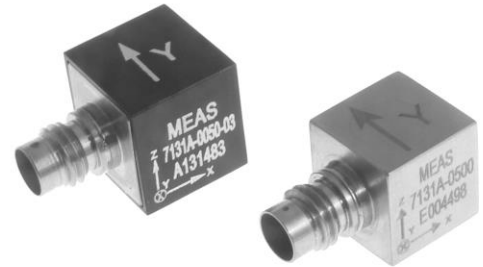
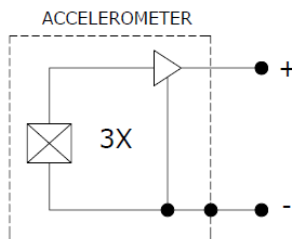
The **Model 7131A** is a miniature triaxial IEPE accelerometer available in  $\pm 50g$  to  $\pm 2000g$  dynamic ranges. The accelerometer features a hermetically sealed Titanium construction with a 4-pin Microtech connector interface. The model 7131A incorporates stable piezo-ceramic crystals in annular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

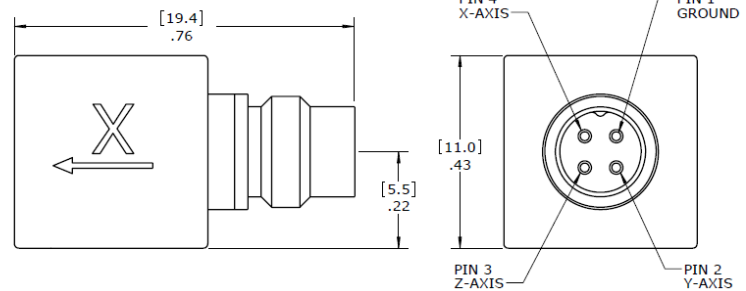
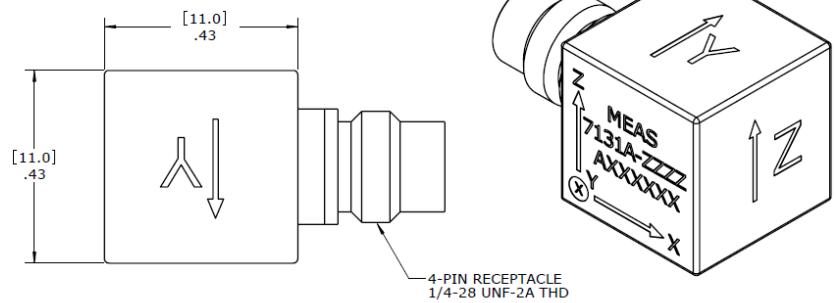


Isolated Case Option

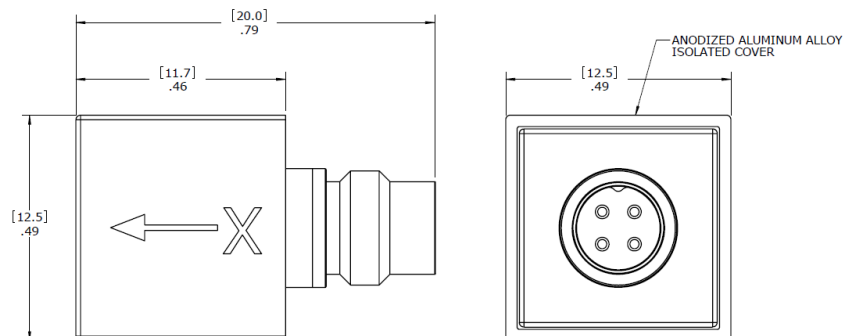
7131A

## 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.

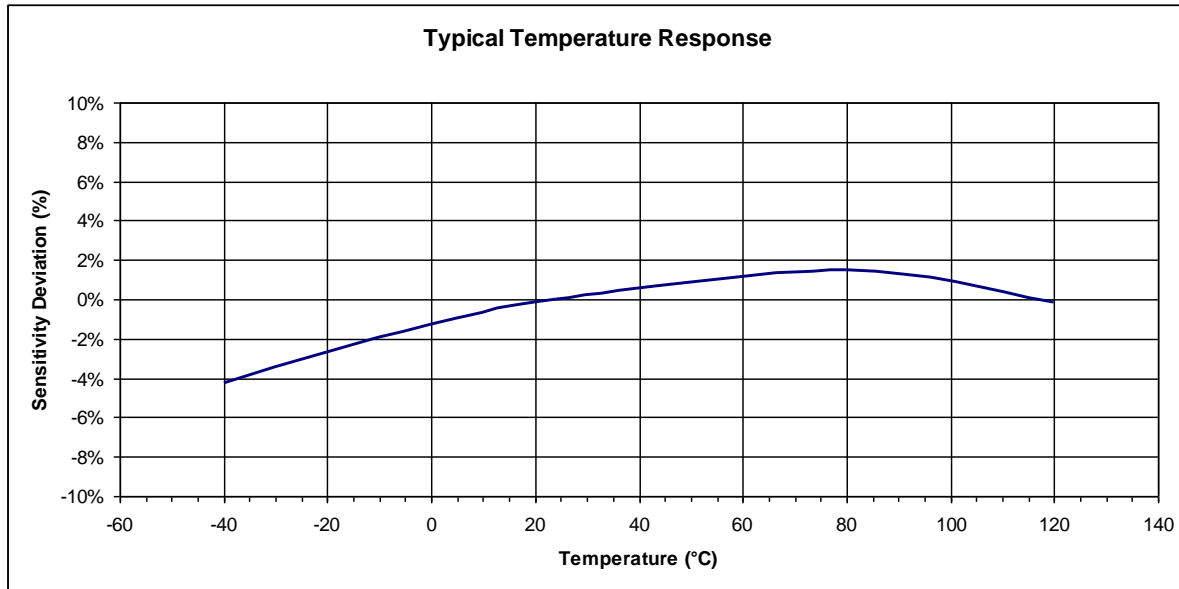
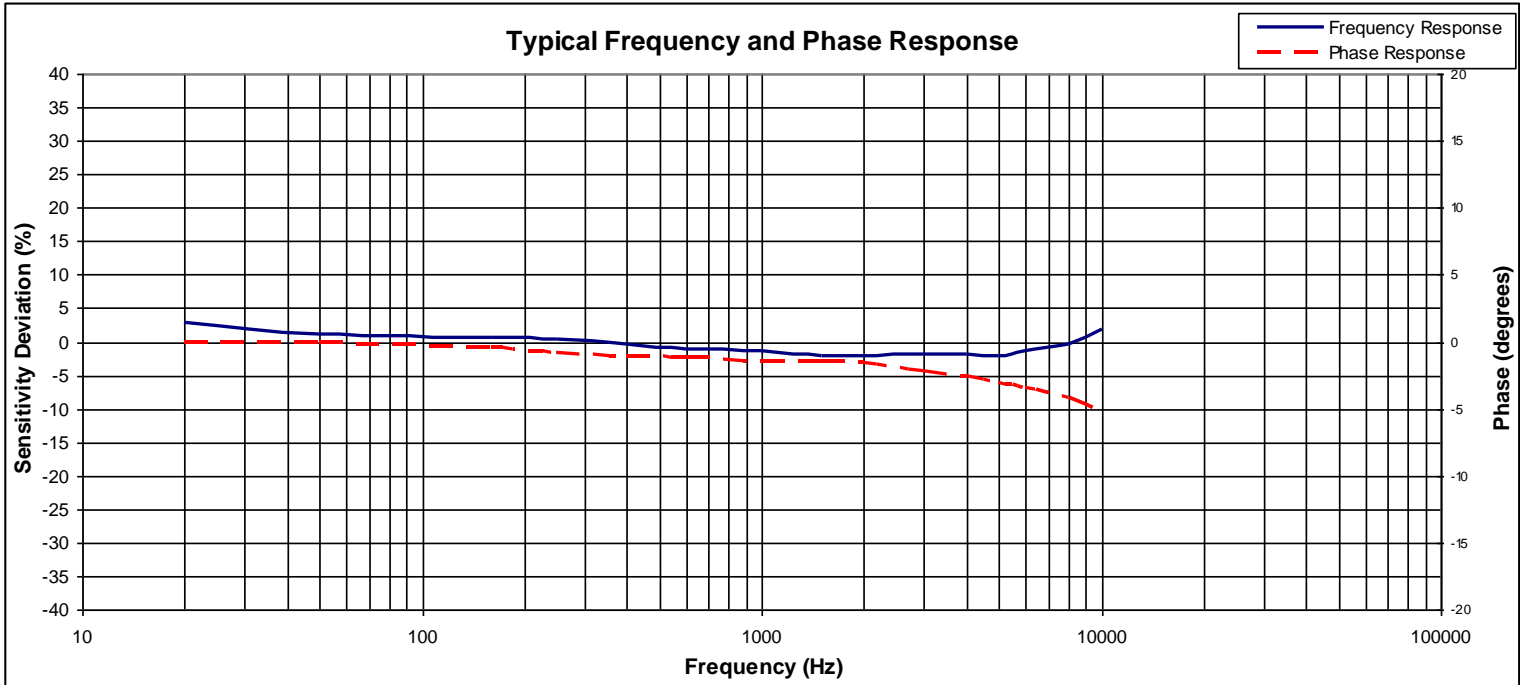
Parameters						Notes
<b>DYNAMIC</b>						
Range (g)	±50	±100	±200	±500	±2000	
Sensitivity (mV/g)	100	50	25	10	2.5	±15%
Frequency Response (Hz)	2.5-8000	1.5-8000	1.5-8000	1-8000	1-9000	±10%
Frequency Response (Hz)	1-10000	0.8-10000	0.8-10000	0.5-10000	0.5-11000	±2dB
Natural Frequency (Hz)	43000	43000	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
<b>ELECTRICAL</b>						
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)					
<b>ENVIRONMENTAL</b>						
Temperature Response (%)	See Typical Temperature Response Curve					
Operating Temperature (°C)	-55 to +125					
Storage Temperature (°C)	-55 to +125					
Humidity	Hermetically Sealed					
<b>PHYSICAL</b>						
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)					
<b>Calibration supplied:</b>	CS-FREQ-0100	NIST Traceable Amplitude Calibration from 20Hz to ±2dB Frequency Response Limit				
<b>Optional accessories:</b>	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

| | 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

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