

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 $>10kHz$.

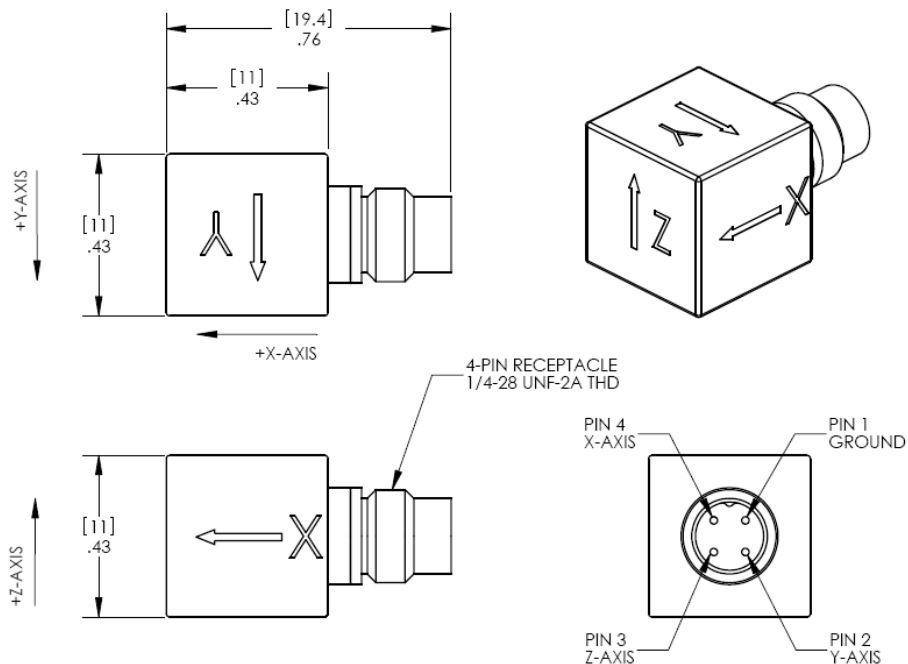
FEATURES

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

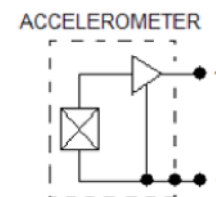
APPLICATIONS

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

dimensions



SCHEMATIC (EACH CHANNEL)



Model 7131A 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.

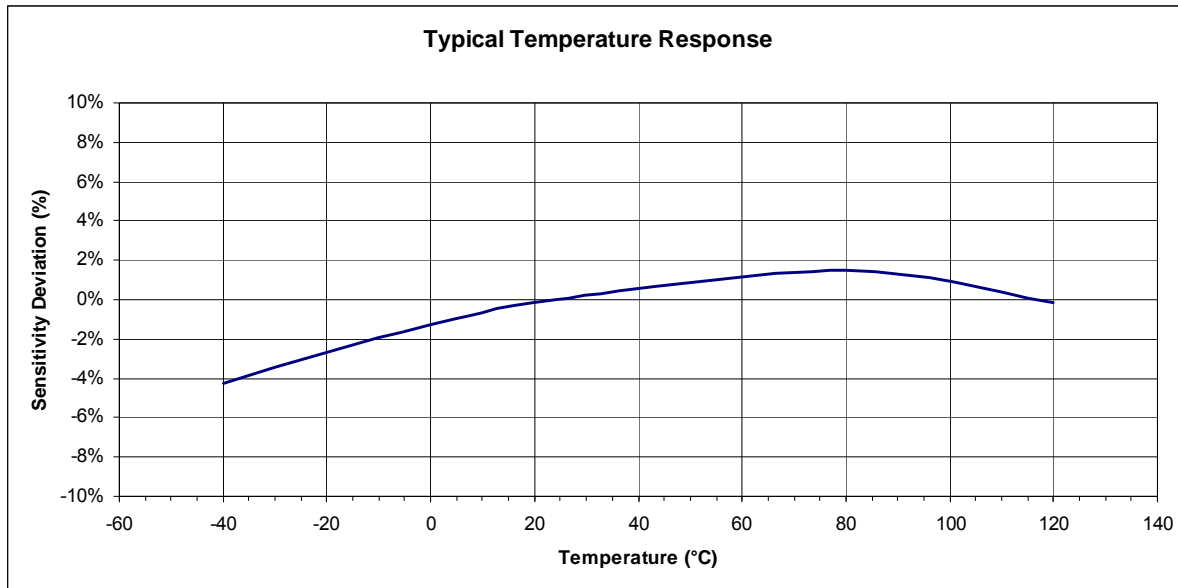
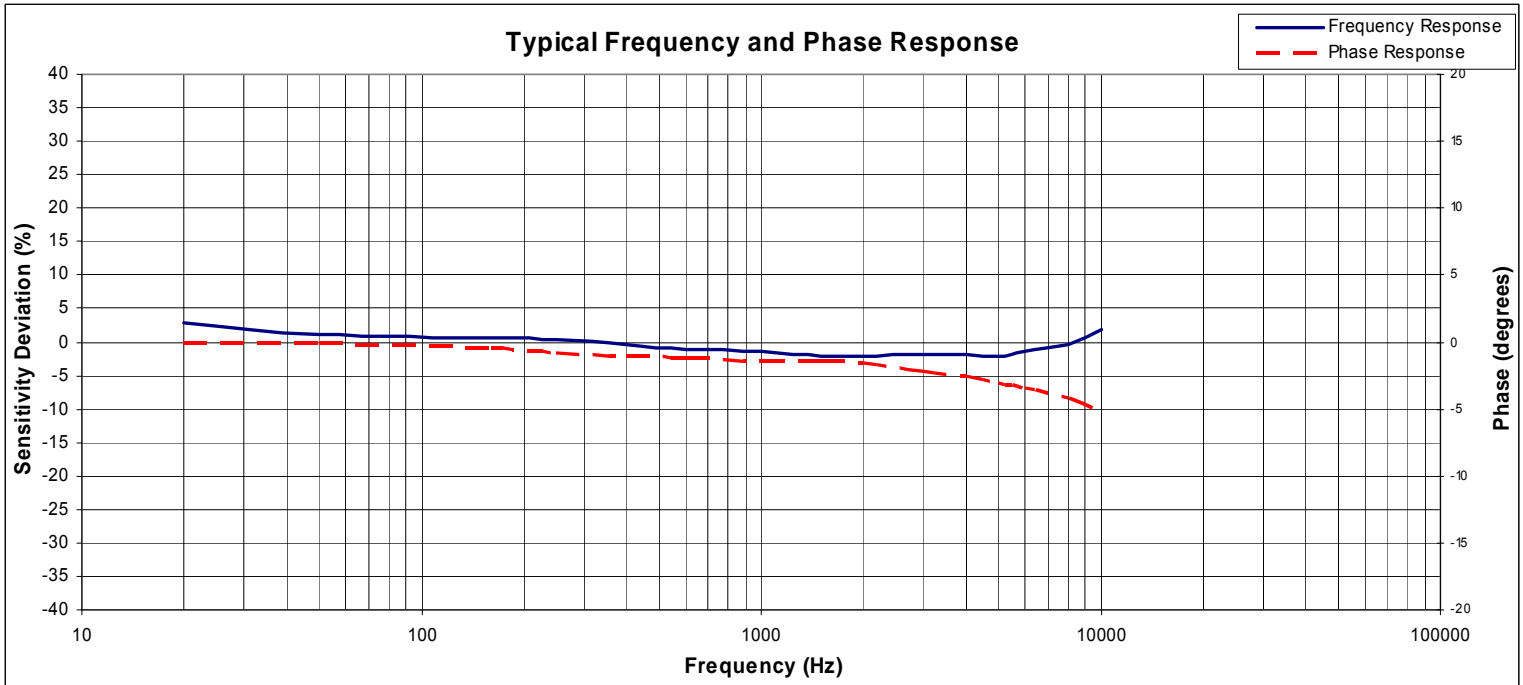
Parameters

					Notes
DYNAMIC					
Range (g)	±50	±100	±500	±2000	
Sensitivity (mV/g)	100	50	10	2.5	±15%
Frequency Response (Hz)	2.5-8000	1.5-8000	1-8000	1-9000	±10%
Frequency Response (Hz)	1-10000	0.8-10000	0.5-10000	0.5-11000	±2dB
Natural Frequency (Hz)	43000	43000	43000	43000	
Non-Linearity (%FSO)	±1	±1	±1	±1	
Transverse Sensitivity (%)	<5	<5	<5	<5	
Shock Limit (g)	5000	5000	5000	5000	
ELECTRICAL					
Compliance Voltage (Vdc)	18 to 30	18 to 30	18 to 30	18 to 30	
Excitation Current (mA)	2 to 10	2 to 10	2 to 10	2 to 10	
Bias Voltage (Vdc)	8 to 12	8 to 12	8 to 12	8 to 12	Room Temperature
Bias Voltage (Vdc)	6 to 13	6 to 13	6 to 13	6 to 13	-55 to +125°C
Output Impedance (Ω)	<100	<100	<100	<100	
Full Scale Output Voltage (V)	±5	±5	±5	±5	
Residual Noise (g RMS)	0.0004	0.0005	0.0012	0.0032	Broadband 1Hz to 10kHz
Discharge Time Constant (sec)	0.8 to 1.2				
Ground Isolation	Case Grounded				
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				
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 161A	Cable Assembly, 4-pin ¼-28 to 3x BNC (XXX designates length in inches, 10ft standard) 4-Channel PE & IEPE Signal Conditioner			

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performance specifications



ordering info

PART NUMBERING Model Number+Range

7131A-GGGG-XX

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

Dash Number
-01
-02

Thread Options
M2.5 x 0.45 6g
#5-40 UNF-2B

Example: 7131A-0050
Model 7131A, 50g, No Option