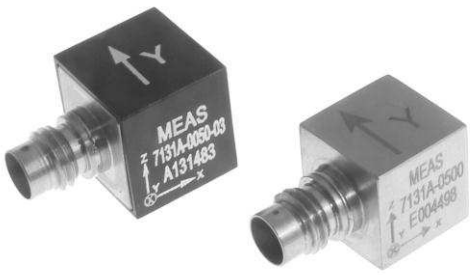
MODEL 7131A ACCELEROMETER



Isolated Case Option **7131A**

SPECIFICATIONS

- **Triaxial IEPE Accelerometer**
- **Miniature Cube**
- **Hermetically Sealed, Titanium**
- **±50g to ±2000g Dynamic Ranges**

The Model 7131A is a miniature triaxial IEPE accelerometer available in ±50g to ±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

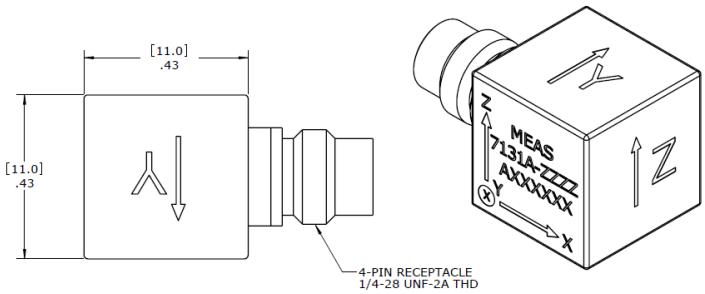
- 4-pin Connector Interface
- Wide bandwidth up to 10kHz
- Adhesive Mounting
- Miniature Triaxial
- Annular Shear Mode Crystals
- Stable Temperature Response
- Isolated Case Option

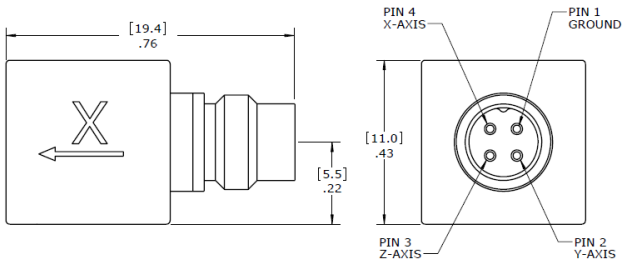
APPLICATIONS

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

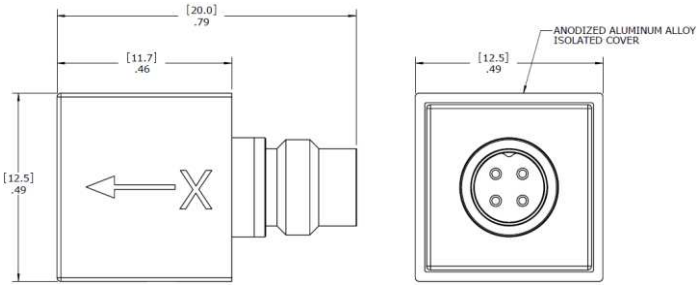
DIMENSIONS

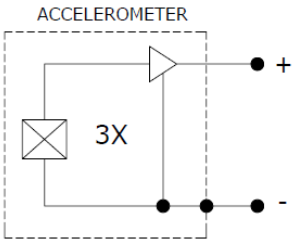
7131A Dimensions





Isolated Case Dimensions





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						**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

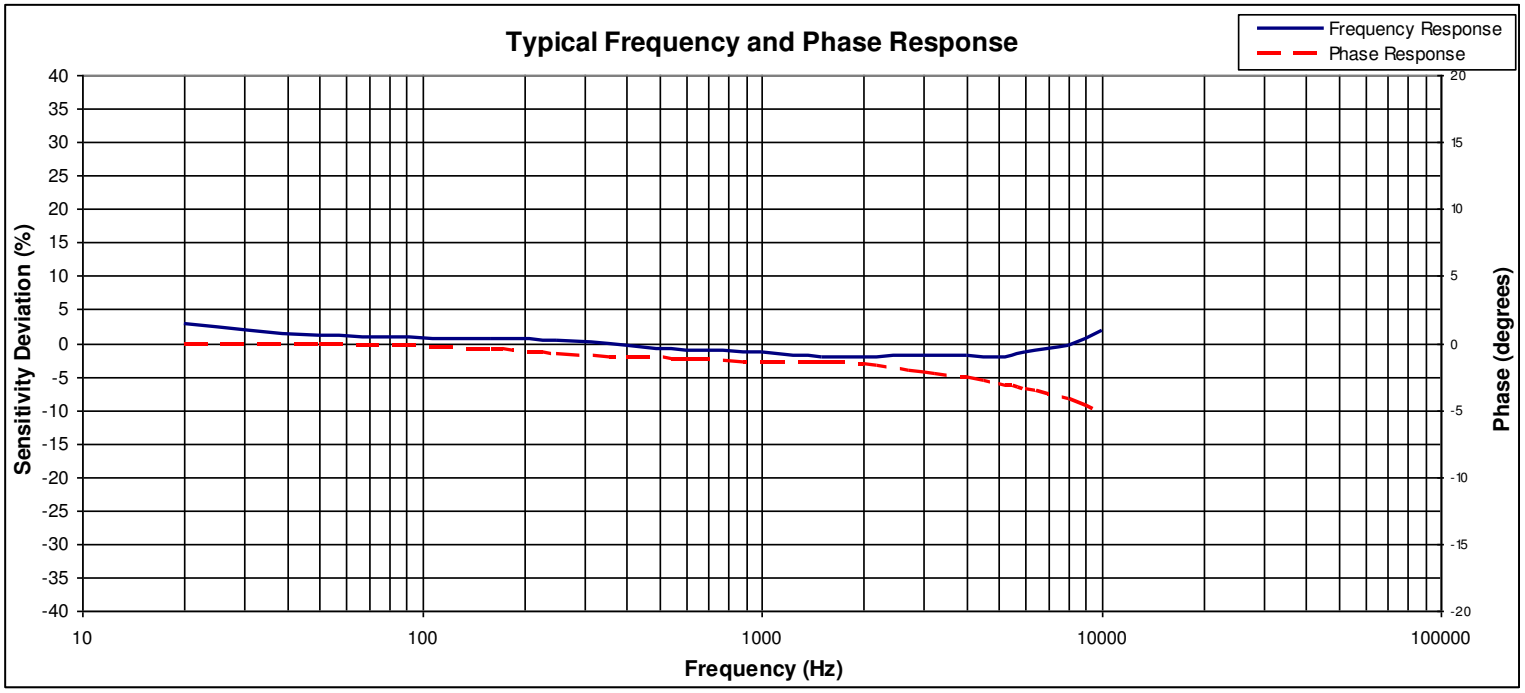
ELECTRICAL		
Compliance Voltage (Vdc)	18 to 30	
Excitation Current (mA)	2 to 10	
Bias Voltage (Vdc)	8 to 12	Room Temperature
Bias Voltage (Vdc)	6 to 13	-55 to +125°C
Output Impedance (Ω)	<100	
Full Scale Output Voltage (V)	±5	
Discharge Time Constant (sec)	0.8 to 1.2	
Ground Isolation	Case Grounded (Case Isolation option; see ordering info on page 3)	

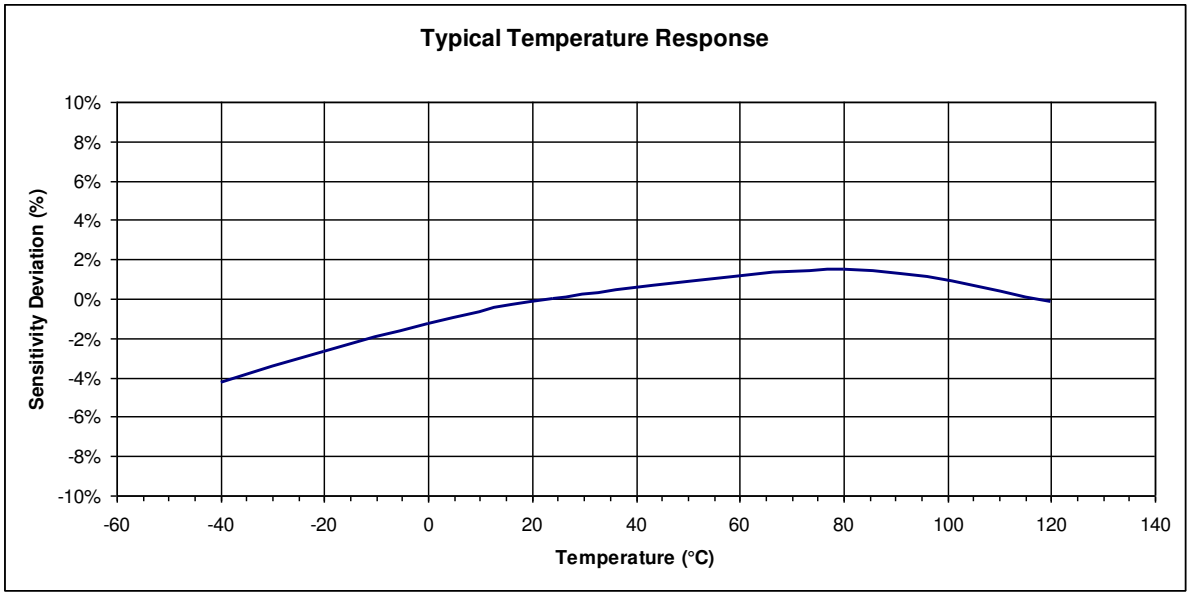
ENVIRONMENTAL	
Temperature Response (%)	See Typical Temperature Response Curve
Operating Temperature (°C)	-55 to +125
Storage Temperature (°C)	-55 to +125
Humidity	Hermetically Sealed

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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Typical Frequency and Phase Response
Frequency Response
Phase Response
Sensitivity Deviation (%)
Phase (degrees)
Frequency (Hz)
40
35
30
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
20
15
10
5
0
-5
-10
-15
-20
10
100
1000
10000
100000


Typical Temperature Response
Sensitivity Deviation (%)
Temperature (°C)
10%
8%
6%
4%
2%
0%
-2%
-4%
-6%
-8%
-10%
-60
-40
-20
0
20
40
60
80
100
120
140

ORDERING INFORMATION

PART NUMBERING Model Number+Range

7131A-GGGG-XX
I I_____ Optional Dash Number
I_____ Range (0050 is 50g)

Dash Number	Thread Options
-01	M2.5 x 0.45 6g
-02	#5-40 UNF-2B
-03	Case Isolated

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

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