

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 $>10kHz$.

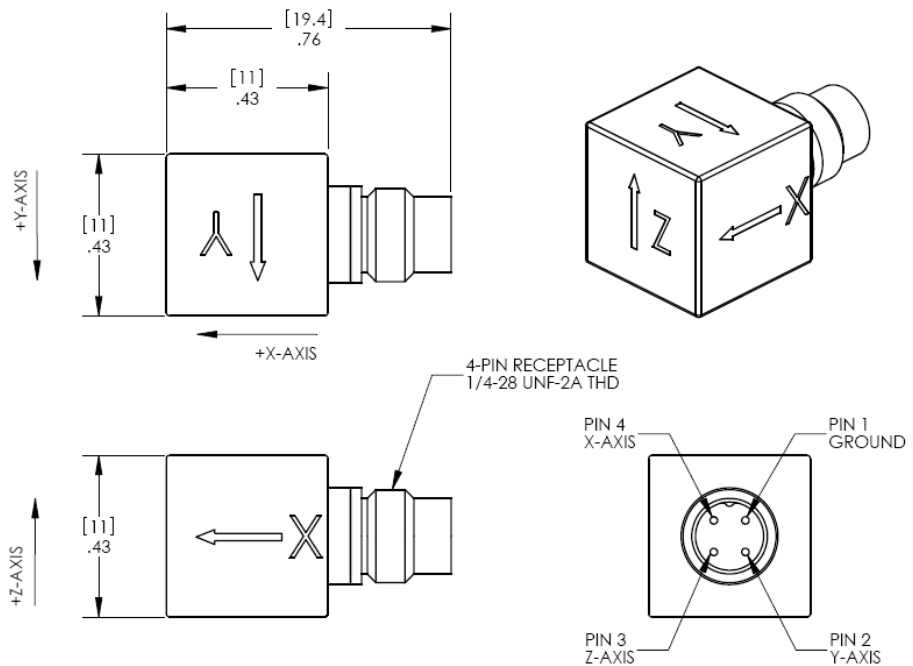
FEATURES

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

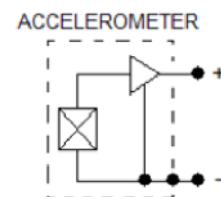
APPLICATIONS

- 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

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 | |

Notes

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 Cable Assembly, 4-pin ¼-28 to 3x BNC (XXX designates length in inches, 10ft standard)
161A 4-Channel PE & IEPE Signal Conditioner

ordering info

PART NUMBERING Model Number+Range

7131A-GGGG-XX

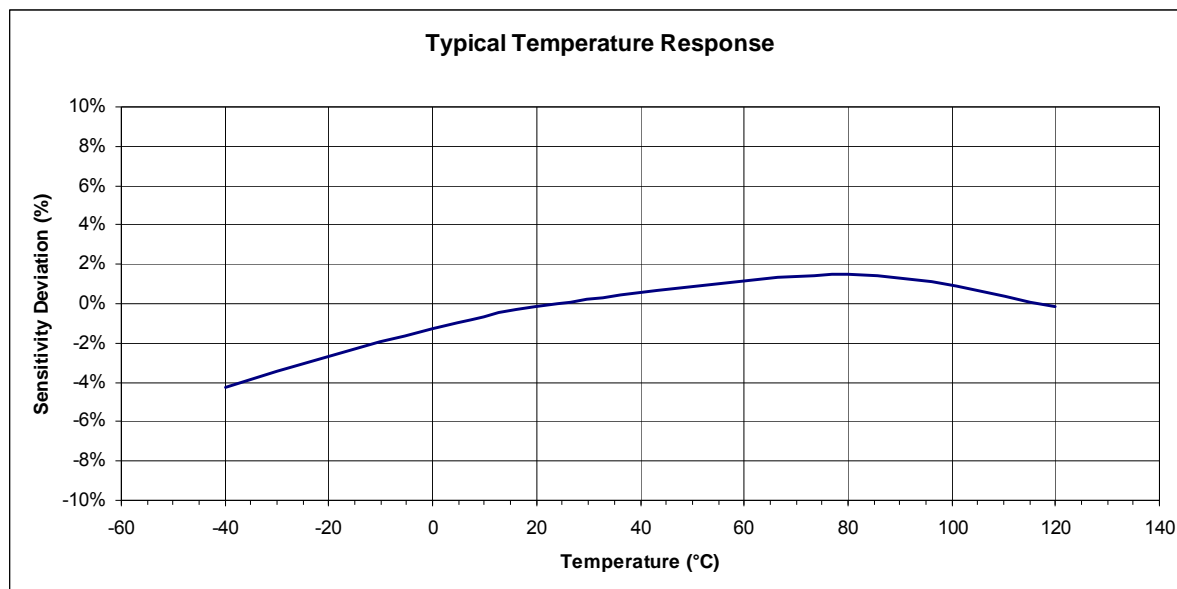
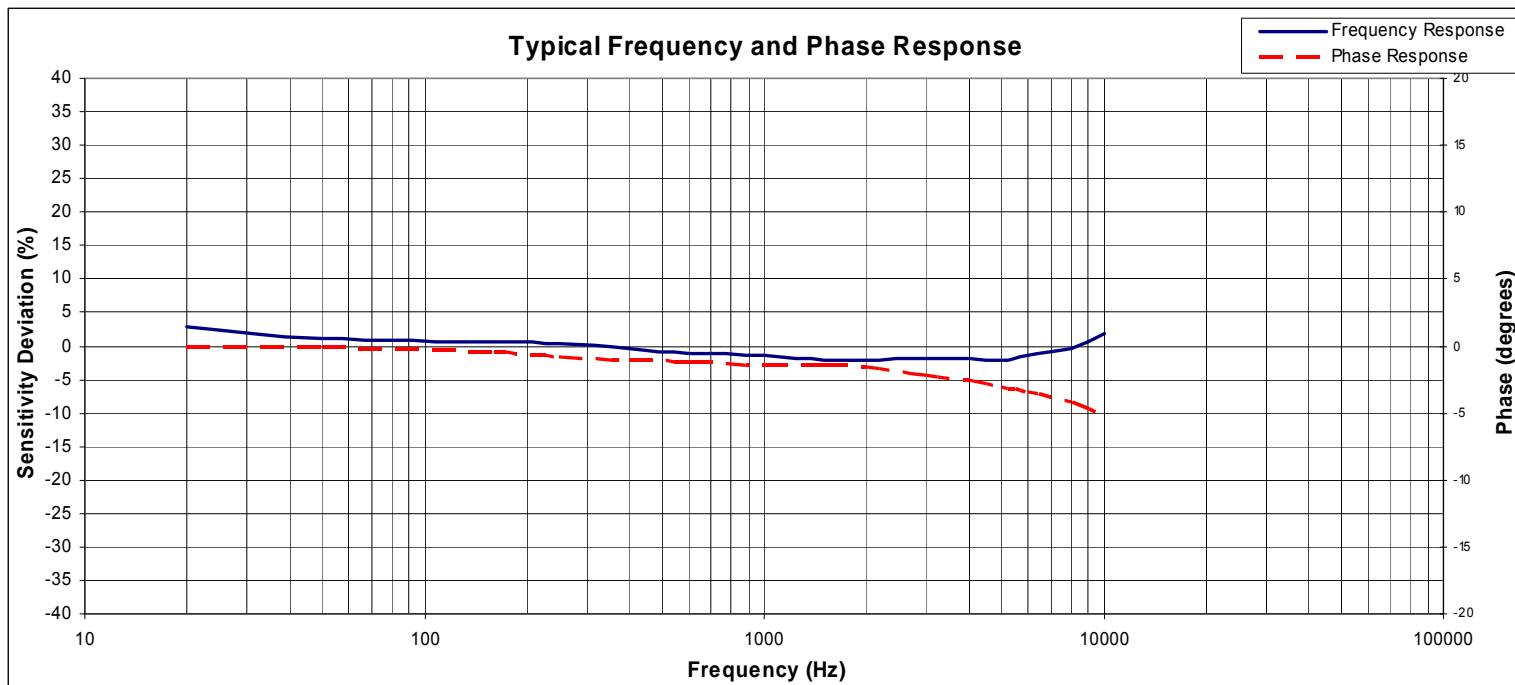
I I_____ Optional Thread Dash Number
I_____ Range (0050 is 50g)

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

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

Model 7131A Accelerometer

performance specifications



联系方式



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