

MODEL 7120A ACCELEROMETER



SPECIFICATIONS

- IEPE Modal Accelerometer
- Wide Bandwidth to 10kHz
- 10-32 Side Connector
- Miniature Cube

The **Model 7120A** is a high performance IEPE accelerometer designed for modal applications. The accelerometer is available in $\pm 50g$ to $\pm 1000g$ dynamic ranges and offers a flat frequency response to $>6kHz$. The model 7120A is designed for adhesive mounting and features a hermetic welded Titanium construction with a side mount connector. The standard operating temperature range extends from $-55^{\circ}C$ to $+100^{\circ}C$.

FEATURES

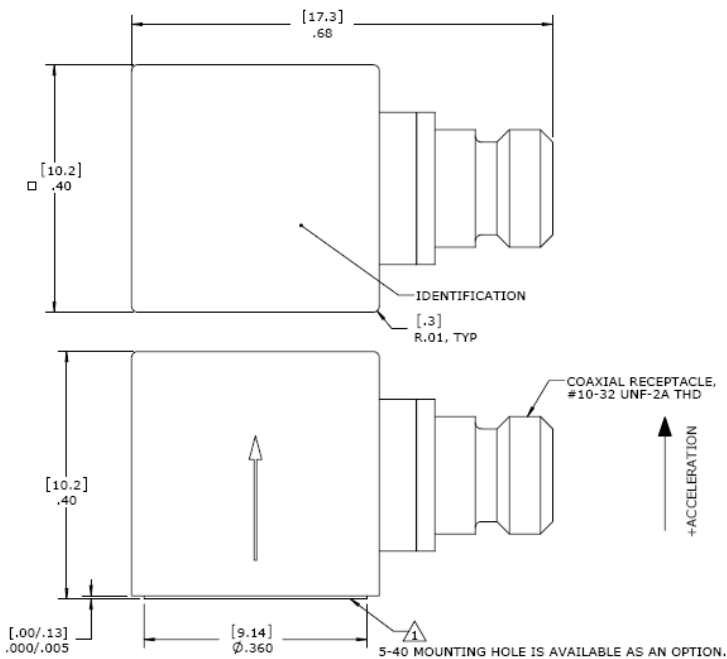
- $\pm 50g$ to $\pm 1000g$ Dynamic Range
- Modal Testing
- Welded Construction, Titanium
- Hermetically Sealed
- Annular Shear Mode
- Stable Temperature Response
- TEDS Option

APPLICATIONS

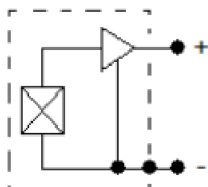
- Modal Testing
- Vibration & Shock Monitoring
- Laboratory Testing
- General Purpose Usage



DIMENSIONS



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.

Parameters

DYNAMIC

| | ±50 | ±500 | ±1000 | Notes |
|----------------------------|----------|----------|----------|--------------|
| Range (g) | 100 | 10 | 5 | |
| Sensitivity (mV/g) | 0.5-4000 | 0.5-5000 | 0.5-6000 | ±5% |
| Frequency Response (Hz) | 0.3-6000 | 0.3-7000 | 0.3-8000 | ±1dB |
| Natural Frequency (Hz) | 37000 | 37000 | 42000 | |
| Phase Response (Hz) | 1-3000 | 1-3000 | 1-3000 | ±5% |
| Non-Linearity (%FSO) | ±1 | ±1 | ±1 | |
| Transverse Sensitivity (%) | <5 | <5 | <5 | |
| Shock Limit (g) | 10000 | 10000 | 10000 | |

ELECTRICAL

| | | | | |
|-------------------------------|---------------|----------|----------|------------------------|
| Compliance Voltage (Vdc) | 18 to 30 | 18 to 30 | 18 to 30 | |
| Excitation Current (mA) | 2 to 10 | 2 to 10 | 2 to 10 | |
| Bias Voltage (Vdc) | 8 to 12 | 8 to 12 | 8 to 12 | Room Temperature |
| Bias Voltage (Vdc) | 6 to 13 | 6 to 13 | 6 to 13 | -55 to +125°C |
| Output Impedance (Ω) | <100 | <100 | <100 | |
| Full Scale Output Voltage (V) | ±5 | ±5 | ±5 | |
| Residual Noise (g RMS) | 0.0004 | 0.0008 | 0.0012 | Broadband 1Hz to 10kHz |
| Discharge Time Constant (sec) | 0.8 to 1.2 | | | |
| Grounding | Case Grounded | | | |

ENVIRONMENTAL

| | |
|----------------------------|--|
| Temperature Response (%) | See Typical Temperature Response Curve |
| Operating Temperature (°C) | -55 to +100 |
| Storage Temperature (°C) | -55 to +100 |
| Humidity | Hermetically Sealed |

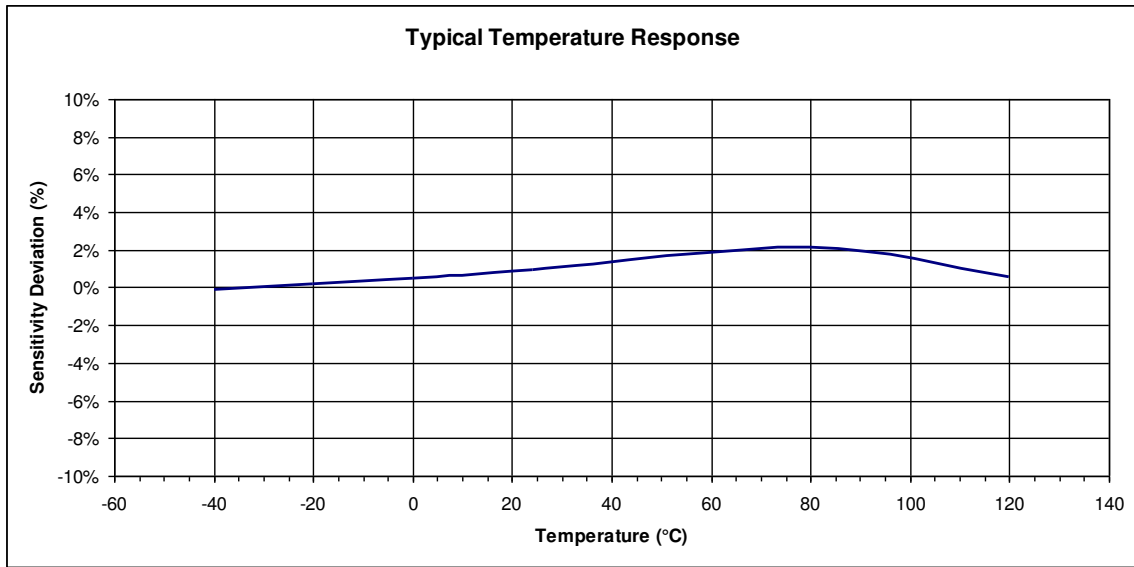
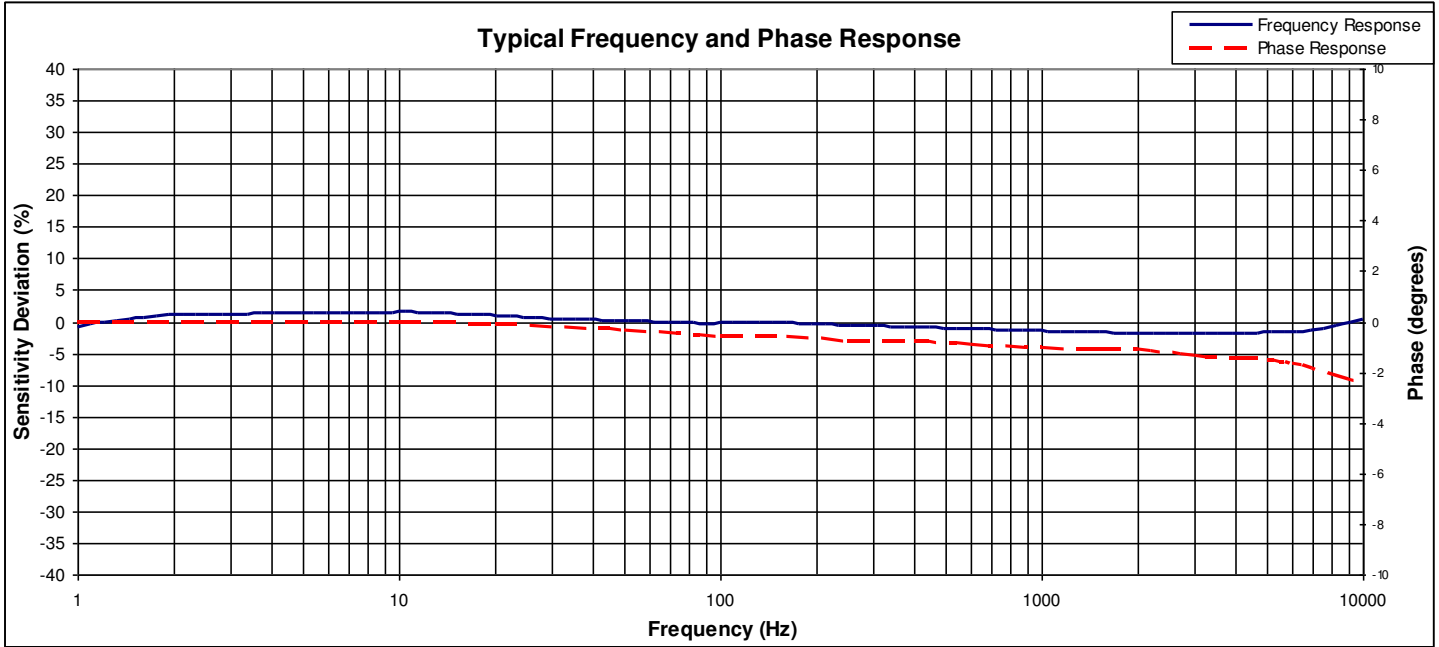
PHYSICAL

| | |
|----------------------|--------------------------|
| Sensing Element | Ceramic (shear mode) |
| Case Material | Titanium |
| Electrical Connector | 10-32 Coaxial Receptacle |
| Weight (grams) | 4.0 |
| Mounting | Adhesive |

Calibration supplied: CS-FREQ-0100 NIST Traceable Amplitude Calibration from 20Hz to ±1dB Frequency Response Limit

Optional accessories: 310-XXX Cable Assembly, 10-32 to 10-32 (XXX designates length in inches, 10ft standard)
 314-XXX Cable Assembly, 10-32 to BNC (XXX designates length in inches, 10ft standard)
 116 16 Channel IEPE Signal Conditioner, Rack Mount
 161A 4-Channel PE & IEPE Signal Conditioner, Bench Top

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ORDERING INFORMATION

PART NUMBERING Model Number+Range

7120AT-GGGG-XX

| | | Optional Thread Dash Number

| | Range (0050 is 50g)

| TEDS compliant to IEEE 1451.4 when 'T' option is included

Dash Number

-01

Thread Options

#5-40 UNC-2B

Example: 7120A-0050

Model 7120A, 50g

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