

# 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

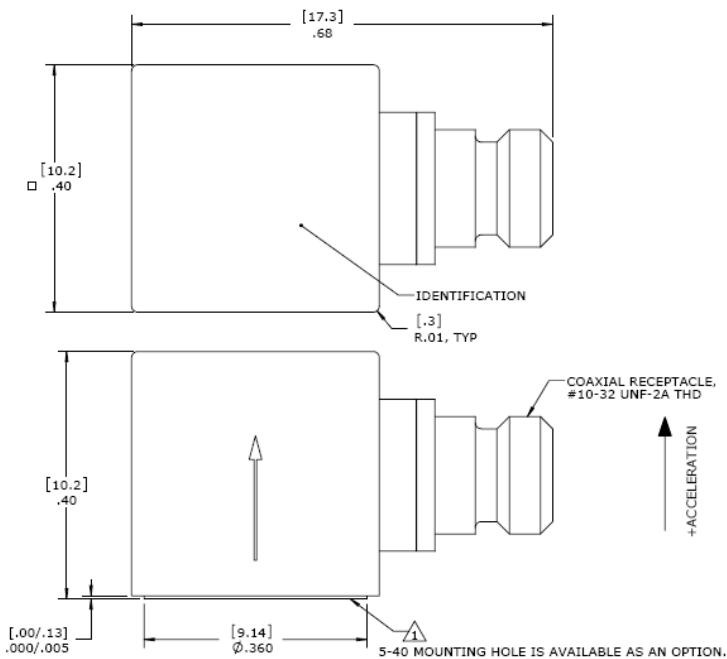
- ◆  $\pm 50g$  to  $\pm 1000g$  Dynamic Range
- ◆ Modal Testing
- ◆ Welded Construction, Titanium
- ◆ Hermetically Sealed
- ◆ Annular Shear Mode
- ◆ Stable Temperature Response
- ◆ TEDS Option

## APPLICATIONS

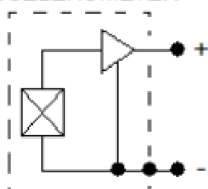
- ◆ Modal Testing
- ◆ Vibration & Shock Monitoring
- ◆ Laboratory Testing
- ◆ General Purpose Usage



## DIMENSIONS



## ACCELEROMETER



## MODEL 7120A 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)	±50	±500	±1000	
Sensitivity (mV/g)	100	10	5	
Frequency Response (Hz)	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

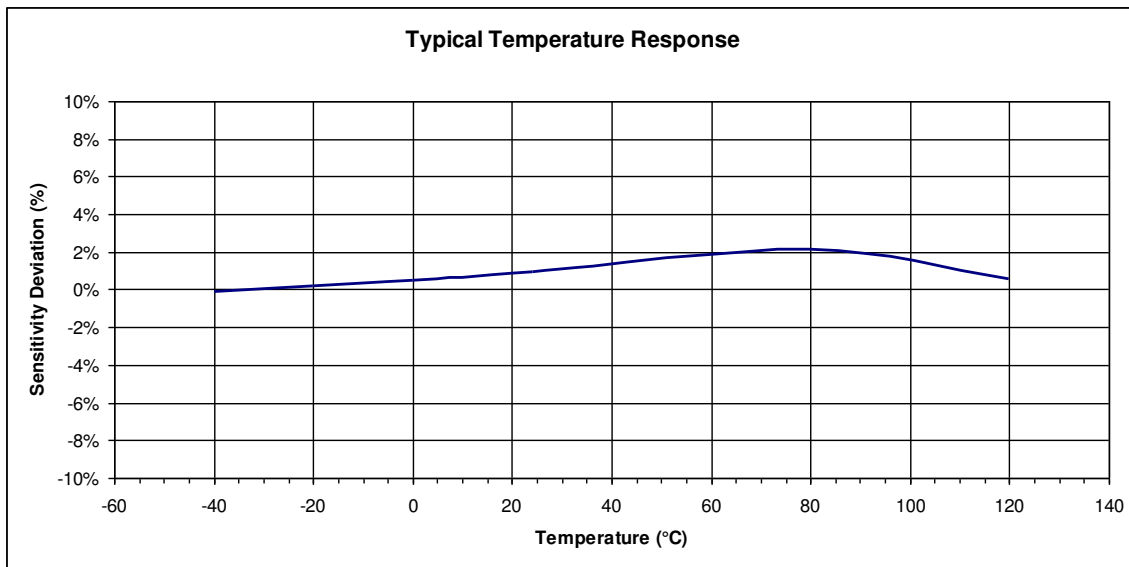
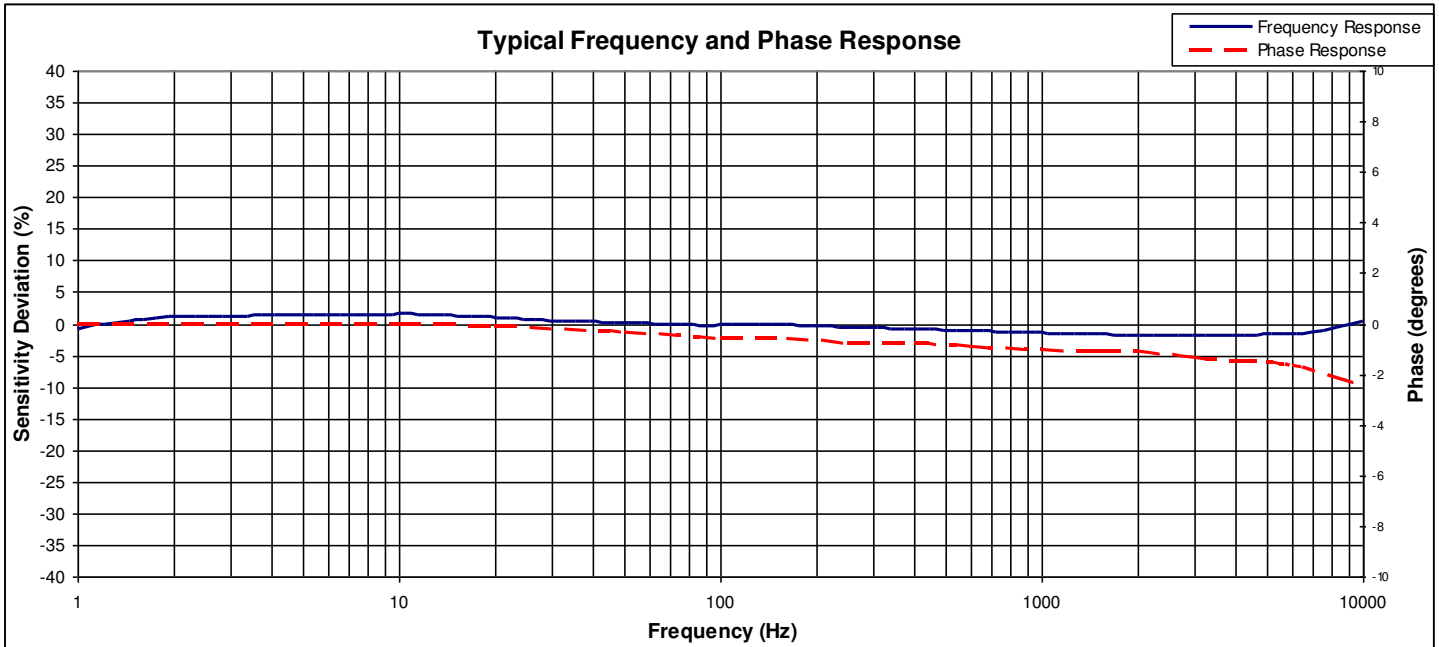
##### PHYSICAL

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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本 社：〒124-0023 東京都葛飾区東新小岩3丁目9番6号 TEL: (03) 3695-5431 / FAX: (03) 3695-5698  
大阪支店：〒530-0054 大阪市北区南森町2-2-9(南森町八千代ビル7F) TEL: (06) 6361-4831 / FAX: (06) 6361-9360  
e-mail: sales-tokyo@krone.co.jp URL: https://www.krone.co.jp

TE.com/sensorsolutions

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