

# 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

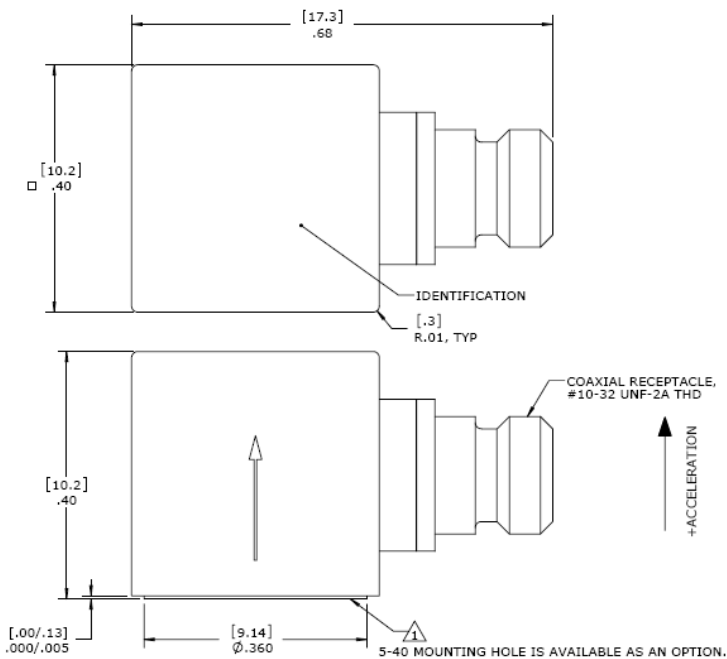
- ◆  $\pm 50g$  to  $\pm 1000g$  Dynamic Range
- ◆ Modal Testing
- ◆ Welded Construction, Titanium
- ◆ Hermetically Sealed
- ◆ Annular Shear Mode
- ◆ Stable Temperature Response
- ◆ TEDS Option

## APPLICATIONS

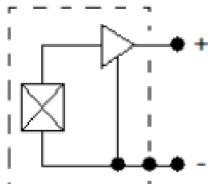
- ◆ Modal Testing
- ◆ Vibration & Shock Monitoring
- ◆ Laboratory Testing
- ◆ General Purpose Usage



## 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**

				<b>Notes</b>
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

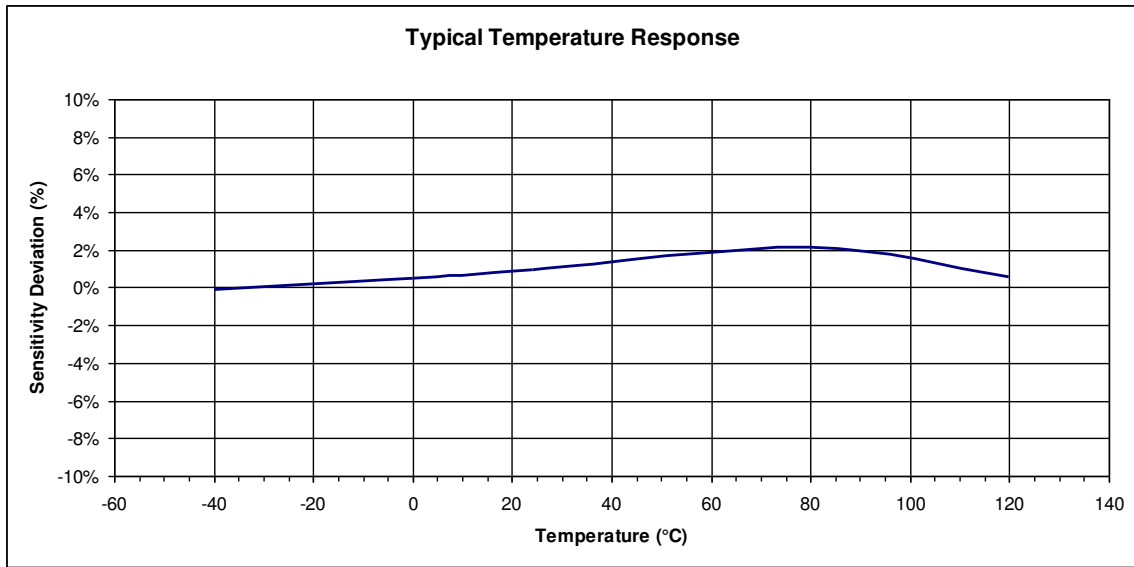
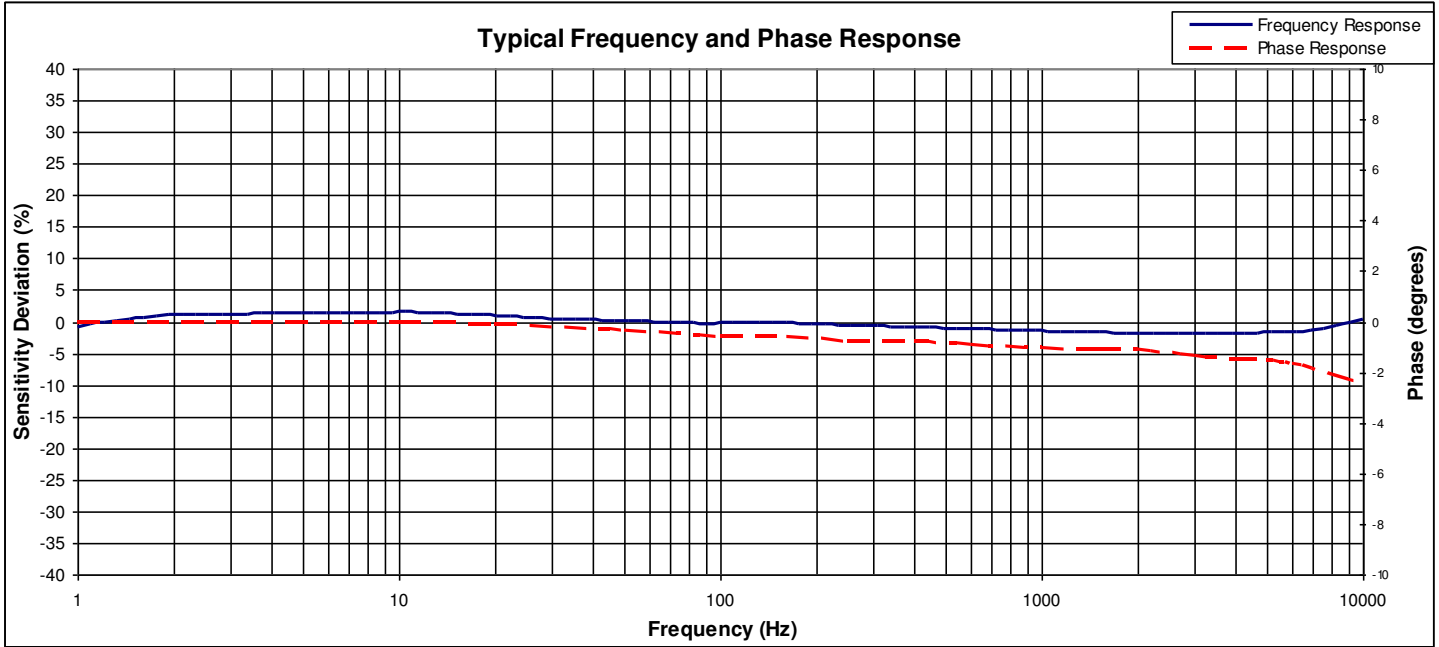
**PHYSICAL**

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

The information in this sheet has been carefully reviewed and is believed to be accurate; however, no responsibility is assumed for inaccuracies. Furthermore, this information does not convey to the purchaser of such devices any license under the patent rights to the manufacturer. Measurement Specialties, Inc. reserves the right to make changes without further notice to any product herein. Measurement Specialties, Inc. makes no warranty, representation or guarantee regarding the suitability of its product for any particular purpose, nor does Measurement Specialties, Inc. assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Typical parameters can and do vary in different applications. All operating parameters must be validated for each customer application by customer's technical experts. Measurement Specialties, Inc. does not convey any license under its patent rights nor the rights of others.



# MODEL 7120A ACCELEROMETER

## 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

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.