

Model 7130A Accelerometer



Triaxial IEPE Accelerometer
Wide Bandwidth to 9kHz
Hermetically Sealed
Annular Shear Mode



The Model 7130A is a triaxial IEPE accelerometer available in $\pm 50g$ to $\pm 500g$ dynamic ranges. The accelerometer features three independent welded stainless steel assemblies incorporated into a hard anodized aluminum housing. The model 7130A incorporates a stable piezo-ceramic crystal in annular shear mode, installed with a compression ring that eliminates the usage of epoxies that can affect long term stability. The accelerometer has an operating range of -55°C to $+125^{\circ}\text{C}$ and a flat frequency response to 9kHz.

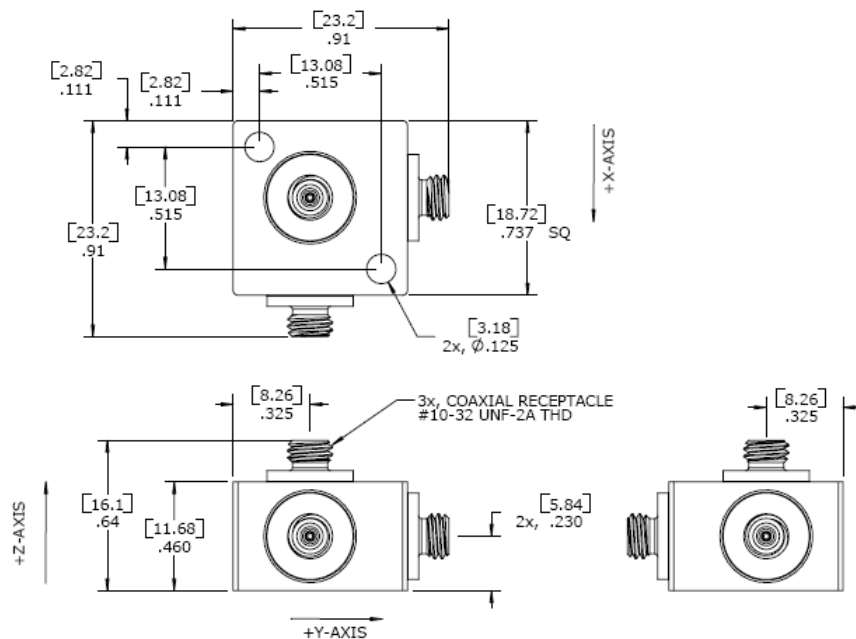
FEATURES

- $\pm 50g$ to $\pm 500g$ Dynamic Range
- Wide bandwidth up to 9kHz
- Isolated Aluminum Housing
- Independent Channels
- Annular Shear Mode Crystals
- Stable Temperature Response

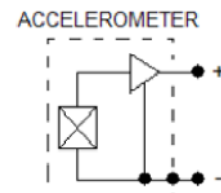
APPLICATIONS

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

dimensions



SCHEMATIC (EACH CHANNEL)



Model 7130A Accelerometer

performance specifications

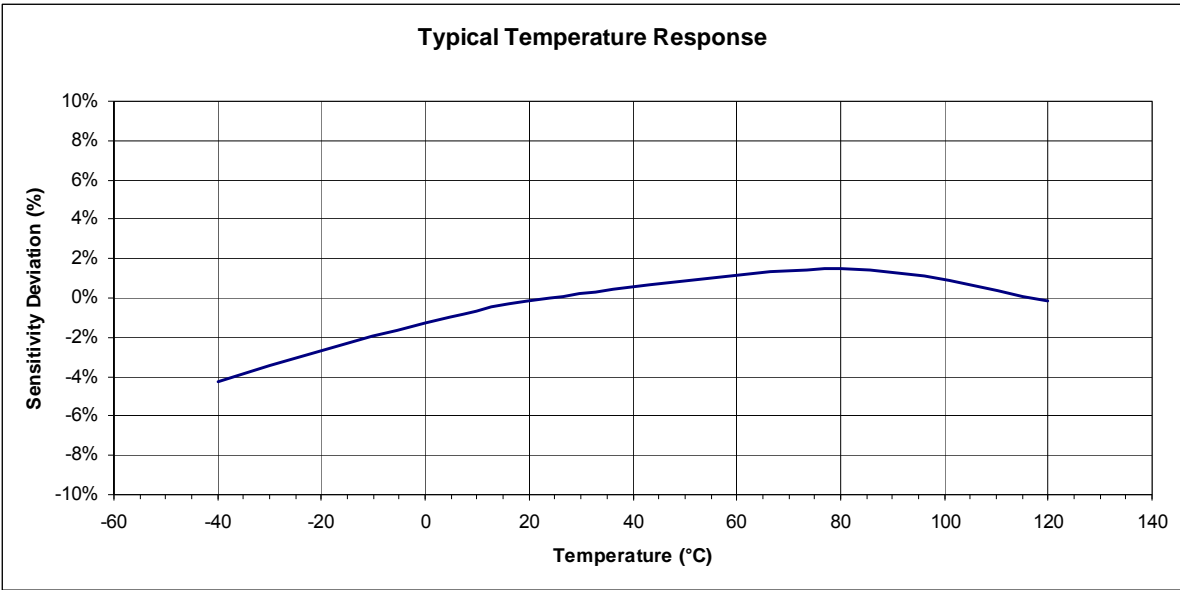
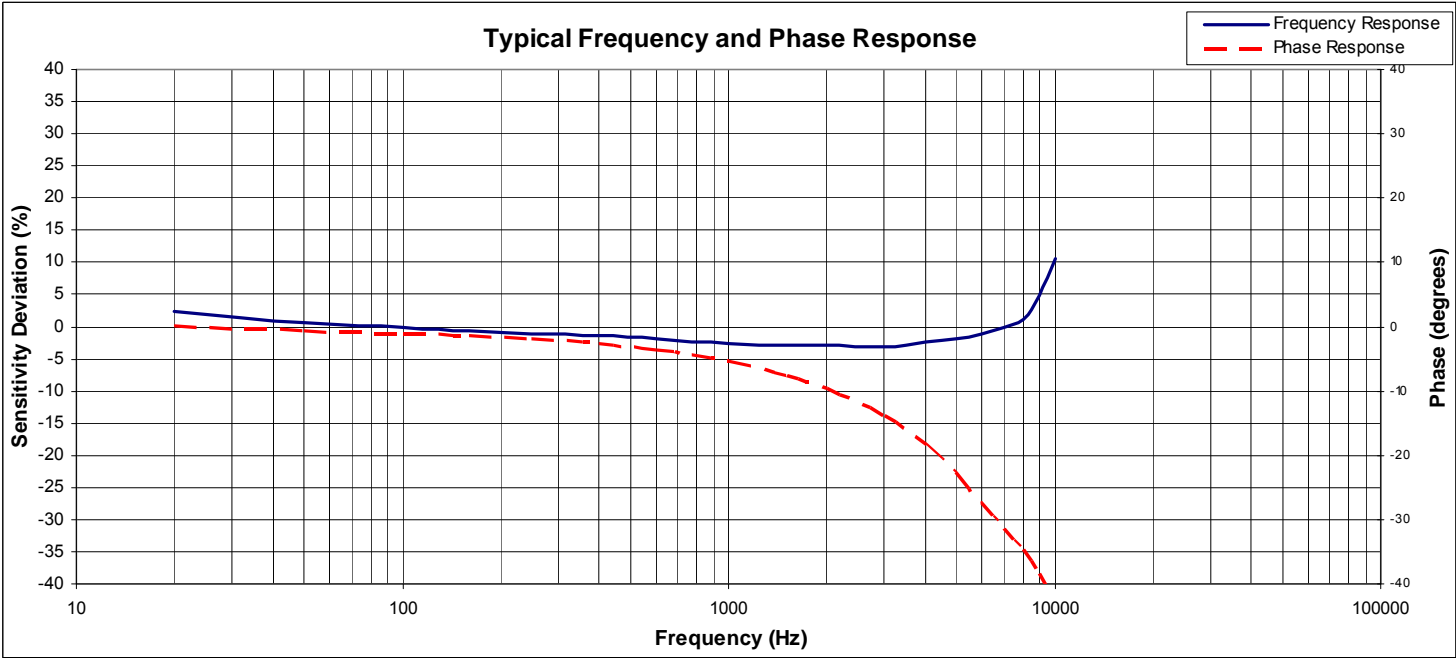
All values are typical at +24°C, 100Hz and 4mA excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice. Standard product parameters are described in PSC-1003 for Plug & Play AC Accelerometers.

Parameters			Notes
DYNAMIC			
Range (g)	±50	±500	
Sensitivity (mV/g)	100	10	±10%
Frequency Response (Hz)	1-7000	1-7000	±10%
Frequency Response (Hz)	0.5-9000	0.5-9000	±2dB
Natural Frequency (Hz)	32000	32000	
Non-Linearity (%FSO)	±1	±1	
Transverse Sensitivity (%)	<5	<5	
Shock Limit (g)	5000	5000	
ELECTRICAL			
Compliance Voltage (Vdc)	18 to 30	18 to 30	
Excitation Current (mA)	2 to 10	2 to 10	
Bias Voltage (Vdc)	8 to 12	8 to 12	Room Temperature
Bias Voltage (Vdc)	6 to 14	6 to 14	-55 to +125°C
Output Impedance (Ω)	<100	<100	
Full Scale Output Voltage (V)	±5	±5	
Residual Noise (g RMS)	0.0004	0.0008	Broadband 1Hz to 10kHz
Discharge Time Constant (sec)	0.8 to 1.2		
Ground Isolation	Isolated from Mounting Surface by Aluminum Case		
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	Hard Anodized Aluminum		
Electrical Connector	10-32 Coaxial Receptacle		
Weight (grams)	15		
Mounting	2x #4 or M3 Screws		
Mounting Torque	6 lb-in (0.7 N-m)		
Supplied accessories:	2x #4-40 (5/8 length) Socket Head Cap Screw and Washer		
Calibration supplied:	CS-FREQ-0100	NIST Traceable Amplitude Calibration from 20Hz to ±2dB 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)	
	161	Three Channel PE & IEPE Signal Conditioner	

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performance specifications



ordering info

PART NUMBERING Model Number+Range

7130A-GGGG
|
| ____ Range (0050 is 50g)

Example: 7130A-0050
Model 7130A, 50g