

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 $-55^{\circ}C$ to $+125^{\circ}C$ and a flat frequency response to 9kHz.

FEATURES

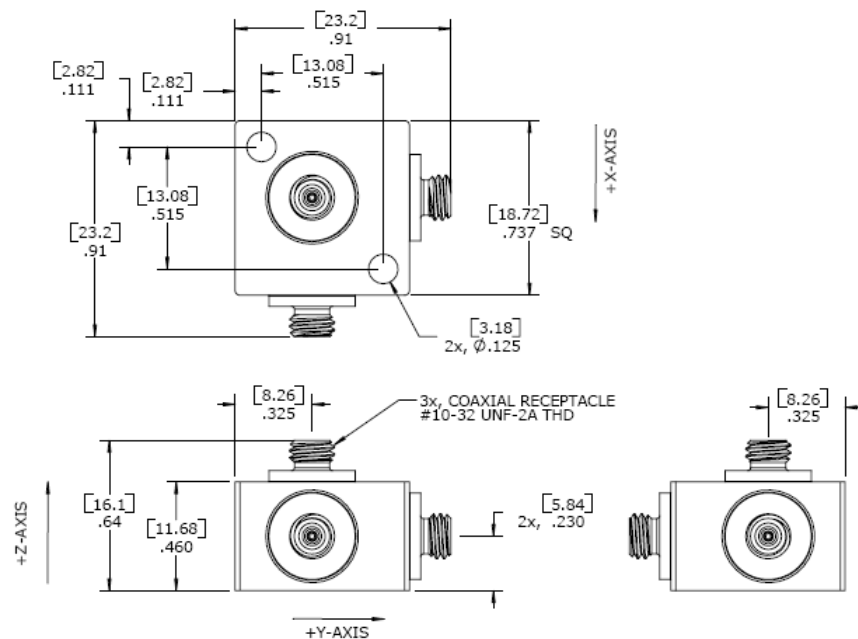
- $\pm 50g$ to $\pm 500g$ Dynamic Range
- Wide bandwidth up to 9kHz
- Isolated Aluminum Housing
- Independent Channels
- Annular Shear Mode Crystals
- Stable Temperature Response

APPLICATIONS

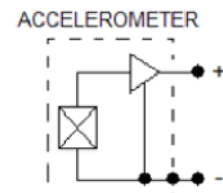
- Vibration & Shock Monitoring
- Laboratory Testing
- Modal Applications
- High Frequency Applications
- General Purpose Usage



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.

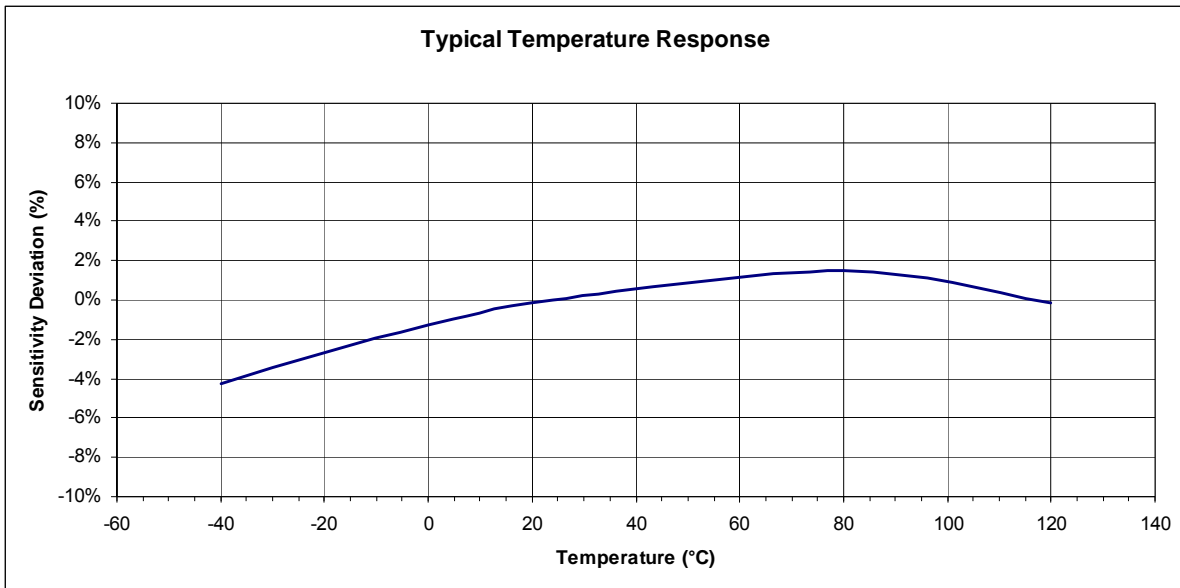
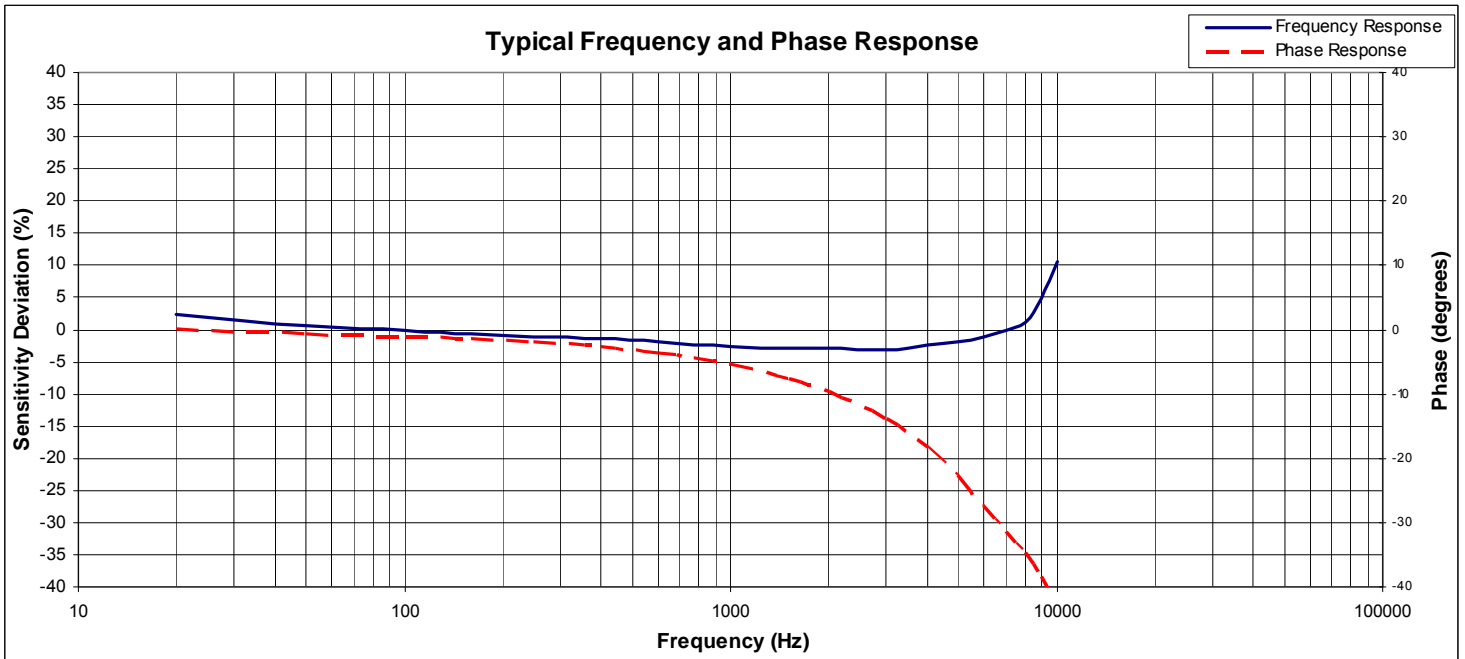
Parameters

			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	

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 7130A Accelerometer

performance specifications



ordering info

PART NUMBERING Model Number+Range

7130A-GGGG

|
| ____ Range (0050 is 50g)

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