

Model 7104A Accelerometer



IEPE Accelerometer
Wide Bandwidth to >10kHz
10-32 Side Connector
Stud Mount, Hermetic



The **Model 7104A** is a high performance IEPE accelerometer available in $\pm 50g$ to $\pm 500g$ dynamic ranges. The stud mounted accelerometer features a welded hermetic construction with a side mount connector. The model 7104A incorporates stable piezo-ceramic crystals in annular shear mode which provide a flat frequency response up to >10kHz. The standard operating temperature range extends from -55°C to $+125^{\circ}\text{C}$.

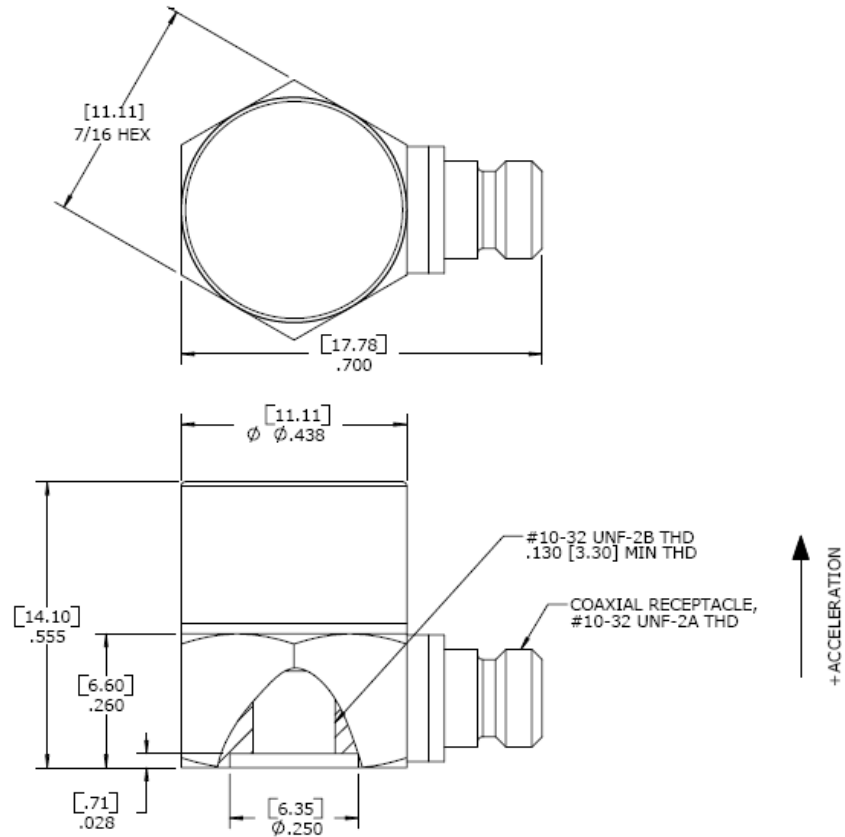
FEATURES

- $\pm 50g$ to $\pm 500g$ Dynamic Range
- Wide bandwidth up to >10kHz
- Welded Construction
- Hermetically Sealed
- Annular Shear Mode
- Stable Temperature Response
- TEDS Option

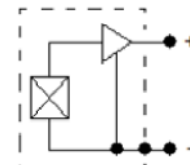
APPLICATIONS

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

dimensions



ACCELEROMETER



Model 7104A 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

DYNAMIC

			Notes
Range (g)	±50	±500	
Sensitivity (mV/g)	100	10	±10%
Frequency Response (Hz)	1-6000	1-8000	±5%
Frequency Response (Hz)	0.5-10000	0.5-10000	±1dB
Natural Frequency (Hz)	<50000	>50000	
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) ¹	2 to 10	2 to 10	See Note 1
Bias Voltage (Vdc)	8 to 12	8 to 12	Room Temperature
Bias Voltage (Vdc)	6 to 13	6 to 13	-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		
Grounding	Case Grounded		

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	Stainless Steel
Electrical Connector	10-32 Coaxial Receptacle
Weight (grams)	8.6
Mounting	#10-32 to #10-32 Mounting Stud (included)
Mounting Torque	18 lb-in (2.0 N-m)

¹ Maximum 4mA at +125°C

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

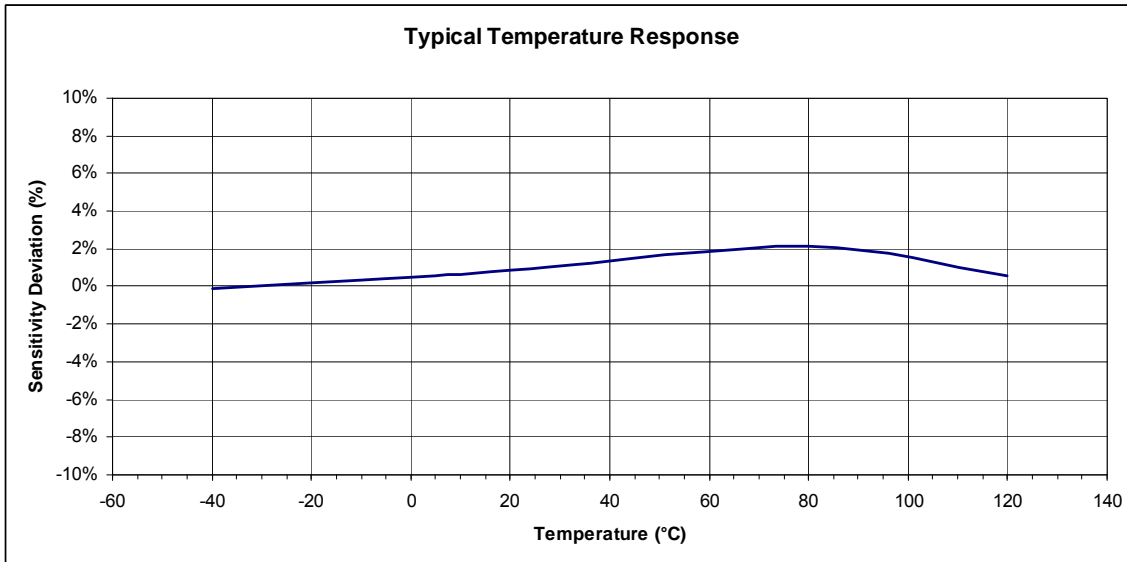
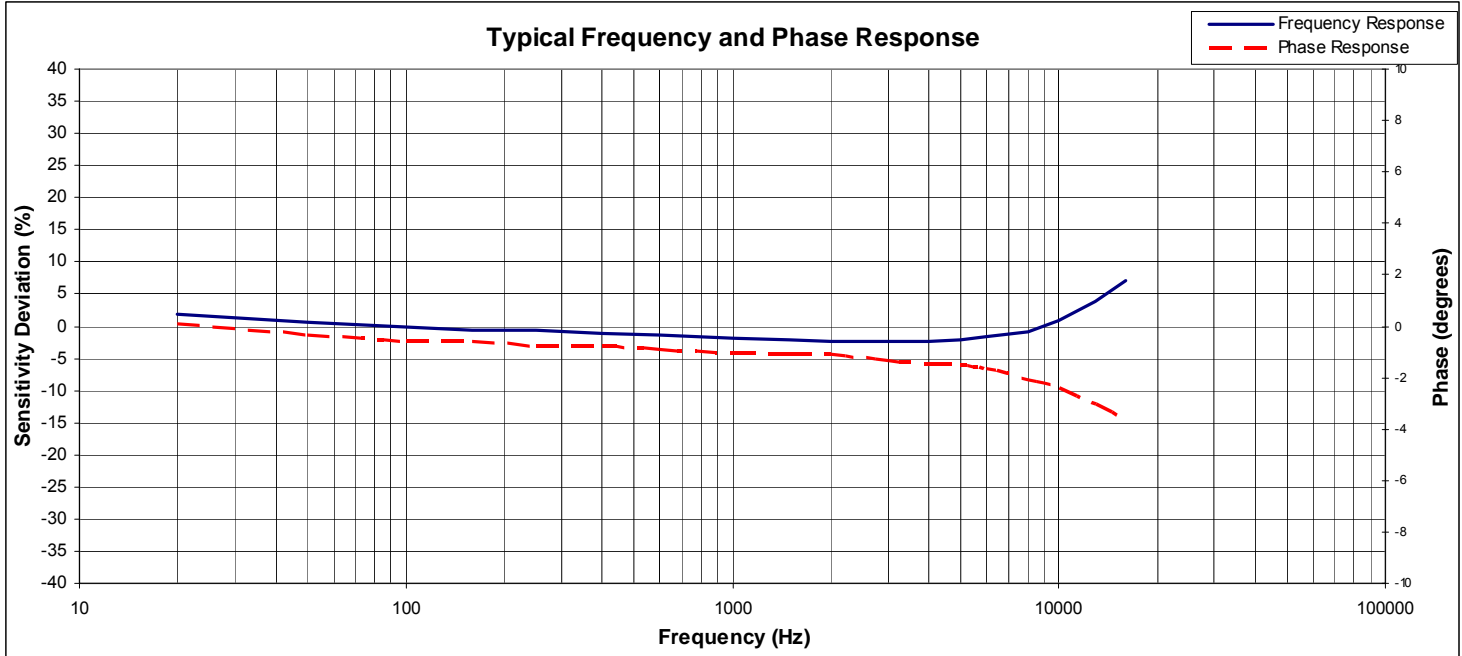
Supplied accessories: AC-D02298 10-32 to 10-32 mounting stud

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)
 AC-A03470 Adhesive Mounting Adaptor
 AC-A03471 Magnetic Mounting Adaptor

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Model 7104A Accelerometer

performance specifications



ordering info

PART NUMBERING Model Number+Range

7104AT-GGGG

I | Range (0050 is 50g)

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

Example: 7104A-0050

Model 7104A, 50g