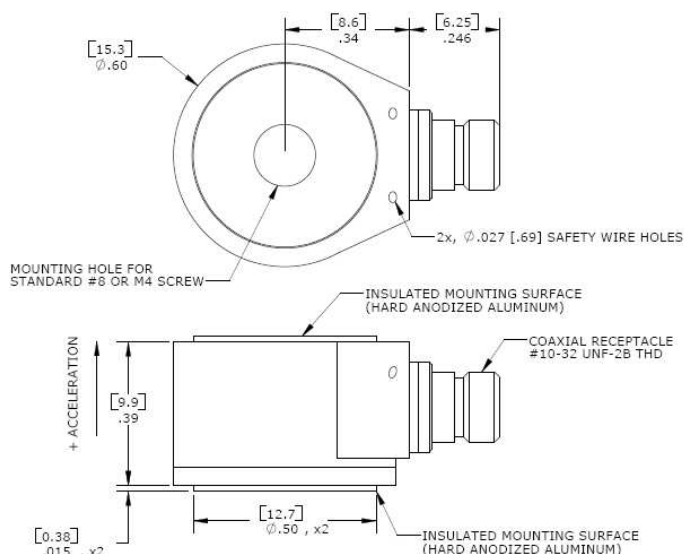
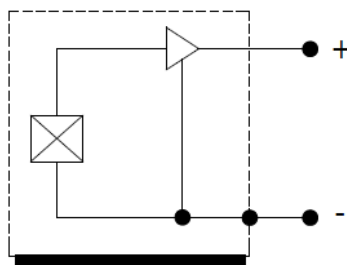




DIMENSIONS



ACCELEROMETER



MODEL 7100A ACCELEROMETER

SPECIFICATIONS

- ✦ +150°C IEPE Accelerometer
- ✦ Wide Bandwidth to 15kHz
- ✦ Hermetically Sealed
- ✦ Through Hole Mount

The Model 7100A is a high performance IEPE accelerometer with an operating temperature range of -55°C to +150°C. The accelerometer is available in ± 50 to $\pm 500g$ ranges and provides a flat frequency response up to 15kHz. The model 7100A is hermetically sealed and features the popular through hole mount installation for use with standard mounting screws.

FEATURES

- ✦ $\pm 50g$ to $\pm 500g$ Dynamic Range
- ✦ Wide bandwidth up to 15kHz
- ✦ Through Hole Mount
- ✦ Hermetically Sealed
- ✦ Annular Shear Mode
- ✦ Isolated Mounting Surface
- ✦ Stable Temperature Response
- ✦ TEDS Option

APPLICATIONS

- ✦ Vibration & Shock Monitoring
- ✦ High Temp IEPE Applications
- ✦ Flight Testing
- ✦ Gearbox Vibration Monitoring
- ✦ High Frequency Applications
- ✦ HUMS

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	±100	±500	Notes
Range (g)	±50	±100	±500	
Sensitivity (mV/g)	100	50	10	±10%
Frequency Response (Hz)	1-5000	1-5000	1-6000	±5%
Frequency Response (Hz)	0.5-10000	0.5-10000	0.5-15000	±1dB
Natural Frequency (Hz)	33000	33000	43000	
Non-Linearity (%FSO)	±1	±1	±1	
Transverse Sensitivity (%)	<5	<5	<5	
Shock Limit (g)	5000	5000	5000	
Residual Noise (g RMS)	0.001	0.0015	0.0025	Broadband 1Hz to 10kHz

ELECTRICAL

Compliance Voltage (Vdc)	18 to 30	18 to 30		
Excitation Current (mA)	2 to 20	2 to 20		
Bias Voltage (Vdc)	8 to 12	8 to 12		Room Temperature
Bias Voltage (Vdc)	6 to 14	6 to 14		-55 to +150°C
Output Impedance (Ω)	<100	<100		
Full Scale Output Voltage (V)	±5	±5		
Discharge Time Constant (sec)	0.8 to 1.2			
Warm-Up Time (sec)	2			
Grounding	Isolated from Mounting Surface			

ENVIRONMENTAL

Temperature Response (%)	See Typical Temperature Response Curve		
Operating Temperature (°C)	-55 to +150		See Note 1
Storage Temperature (°C)	-55 to +150		See Note 1
Humidity	Hermetically Sealed		

PHYSICAL

Sensing Element	Ceramic (shear mode)
Case Material	Stainless Steel
Electrical Connector	10-32 Coaxial Receptacle
Weight (grams)	11
Mounting	Through Hole (#8 or M4 cap screw)
Mounting Torque	16 lb-in (1.8 N-m)

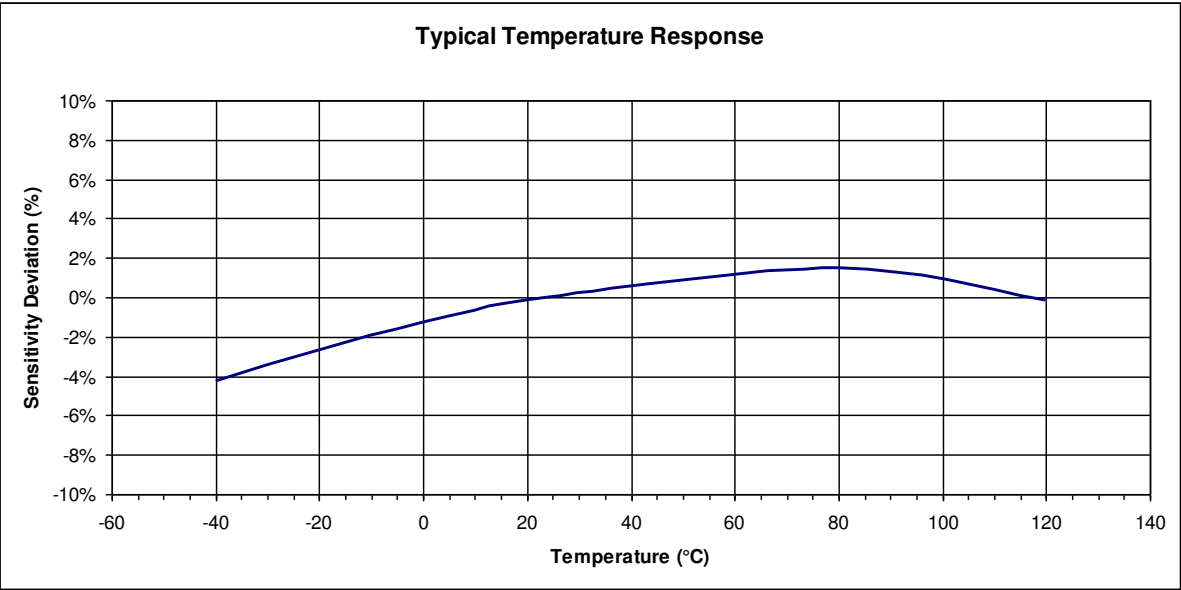
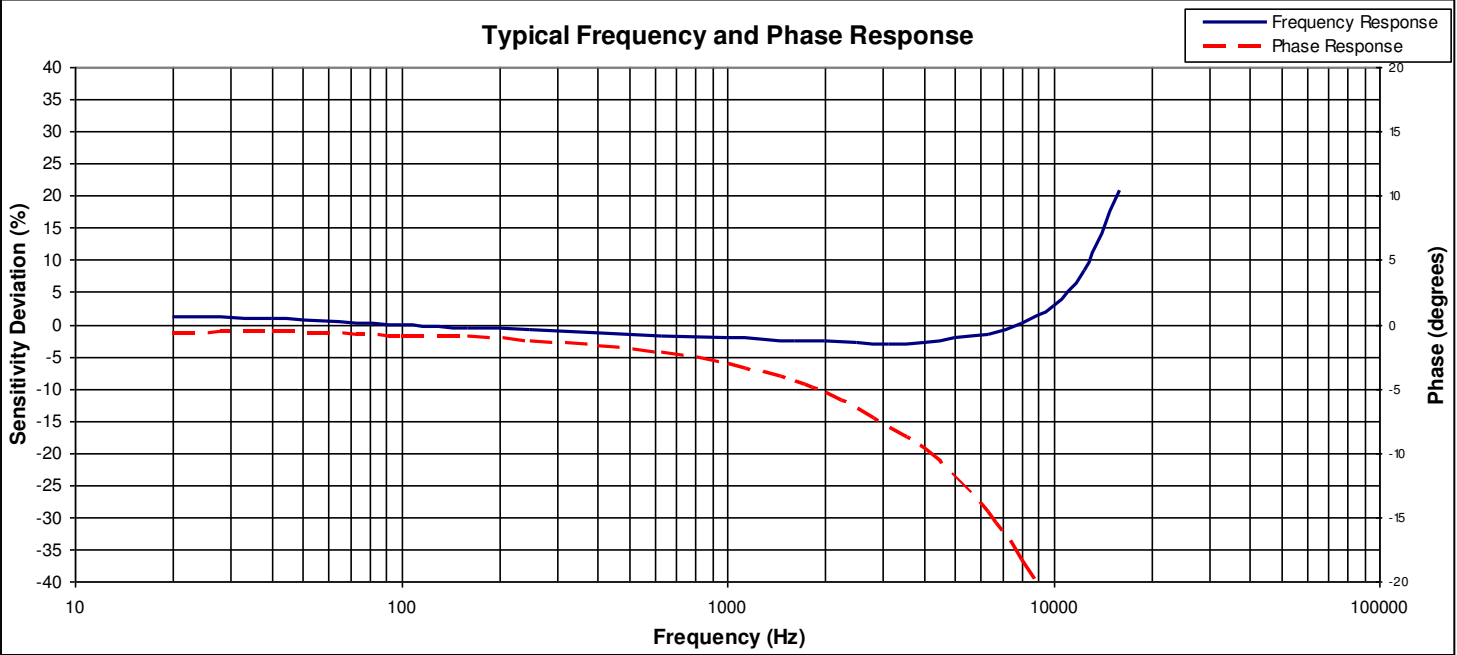
¹ Contact factory for +175°C temperature option.

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

Supplied accessories: AC-D02787 1x #8-32 Mounting Screw (5/8 inch length)

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-A03389 Triaxial Mounting Block
 AC-A03388 Adhesive Mounting Adaptor
 AC-A03472 Magnetic Mounting Adaptor
 161A 4-Channel PE & IEPE Signal Conditioner, Bench Top

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ORDERING INFORMATION

PART NUMBERING Model Number+Range

7100AT-GGGG

I I Range (0050 is 50g)

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

Example: 7100A-0050

Model 7100A, 50g

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