

Model 7100A Accelerometer

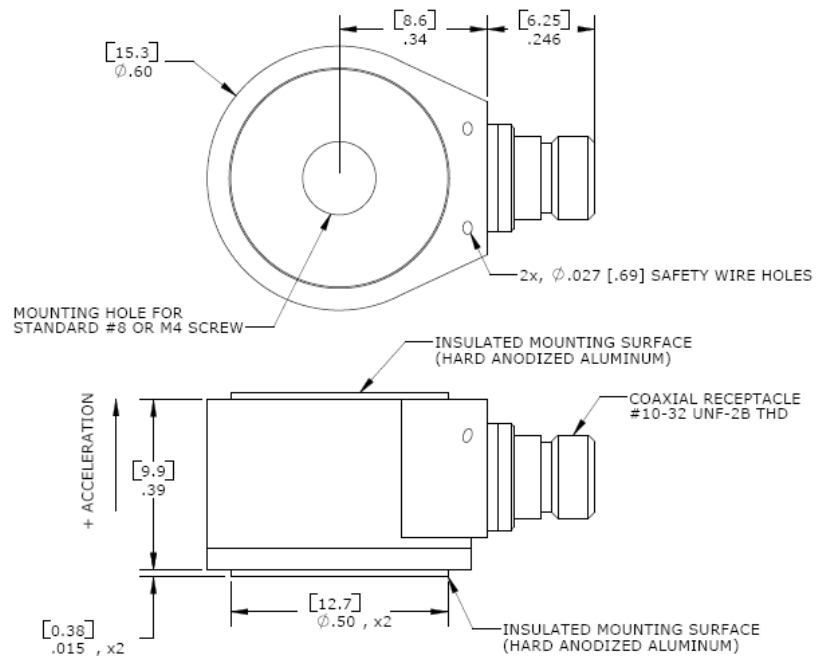


+150°C IEPE Accelerometer
Wide Bandwidth to 15kHz
Hermetically Sealed
Through Hole Mount



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.

dimensions

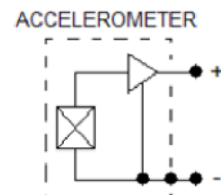


FEATURES

- $\pm 50g$ 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



Model 7100A 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)	1-5000	1-7000	±5%
Frequency Response (Hz)	0.5-10000	0.5-15000	±1dB
Natural Frequency (Hz)	33000	43000	
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 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	
Residual Noise (g RMS)	0.0001	0.00025	Broadband 1Hz to 10kHz
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)

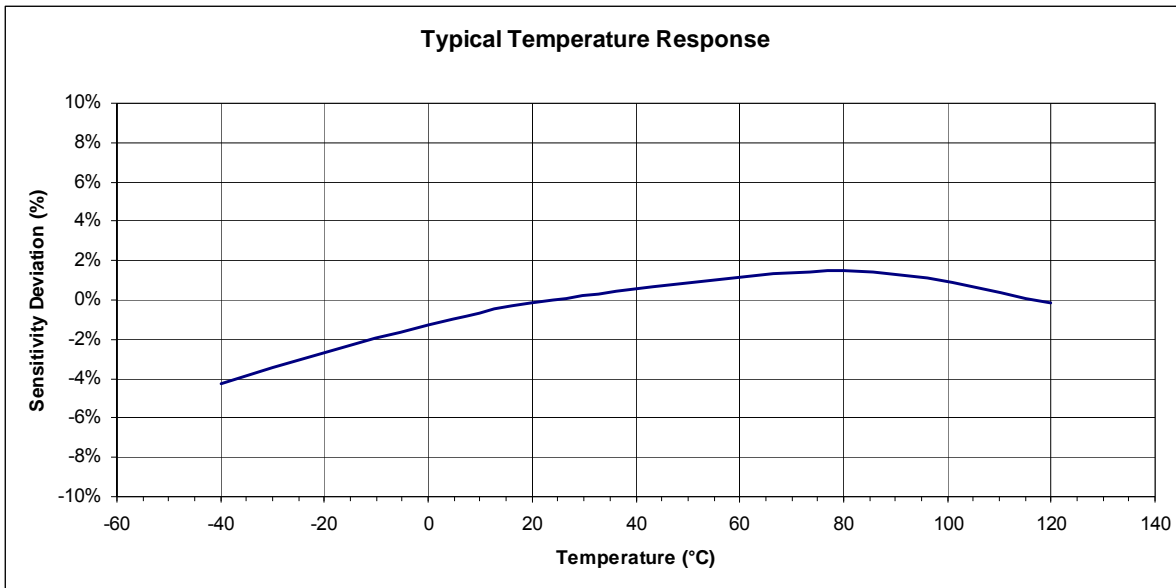
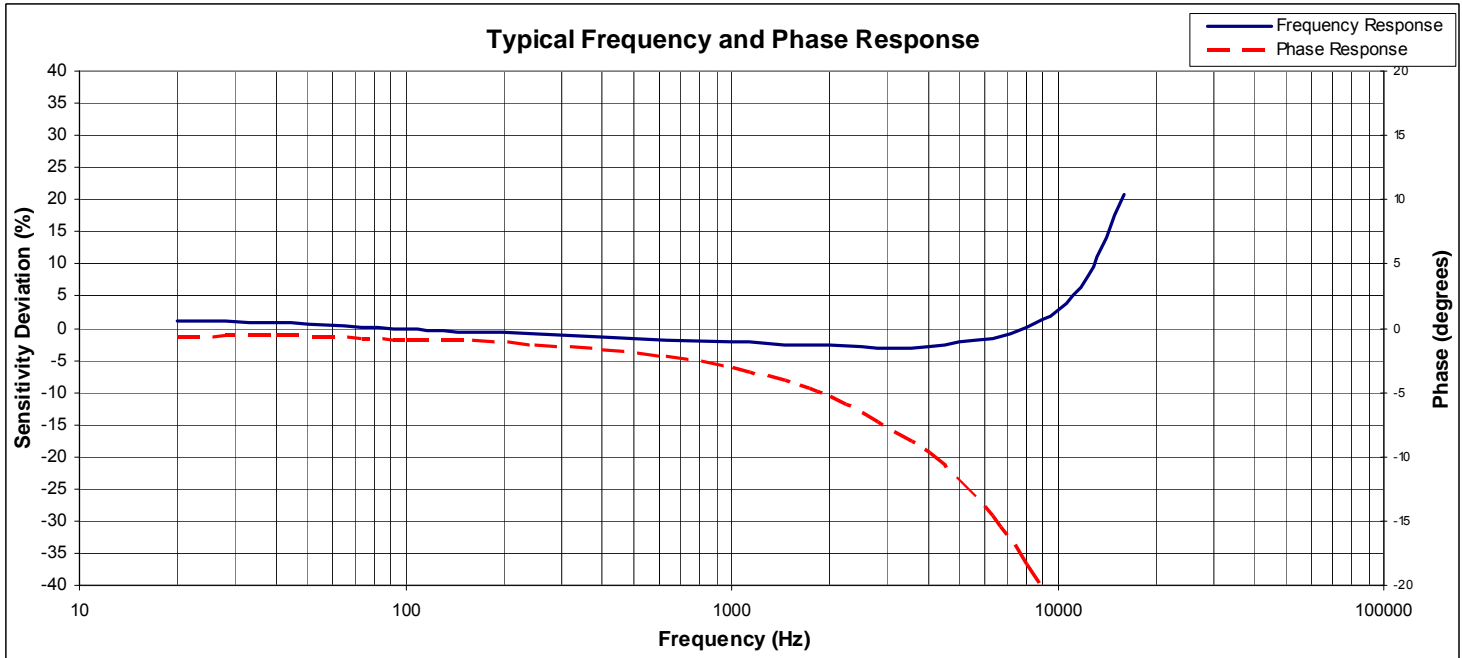
¹ Contact factory for +175°C temperature option.

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

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performance specifications



ordering info

PART NUMBERING Model Number+Range

7100AT-GGGG

I | Range (0050 is 50g)

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

Example: 7100A-0050

Model 7100A, 50g