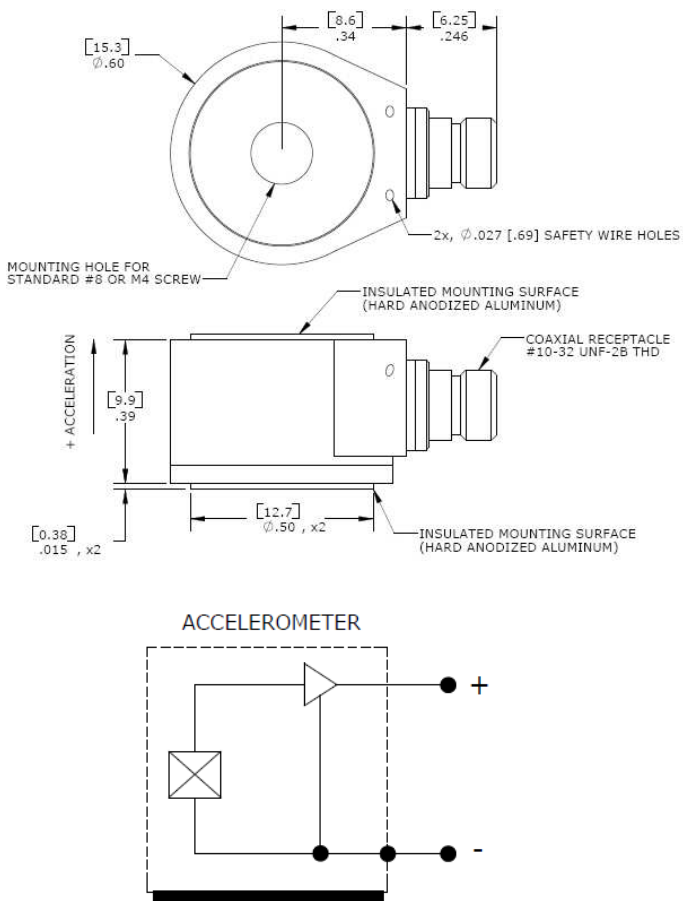


# MODEL 7100A ACCELEROMETER



## DIMENSIONS



## 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  $\pm 50$  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			

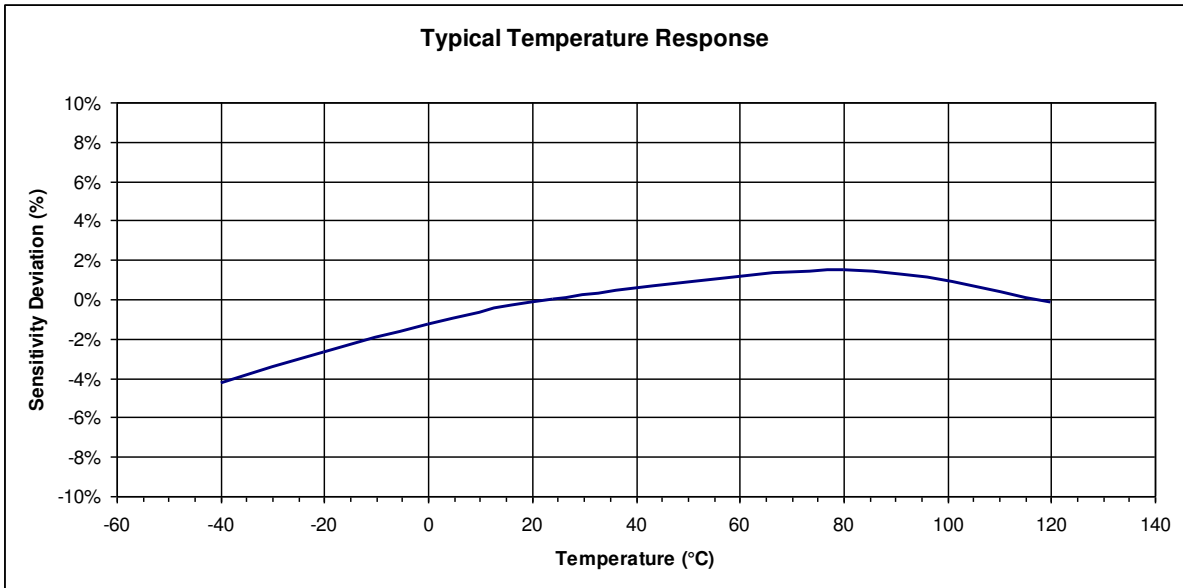
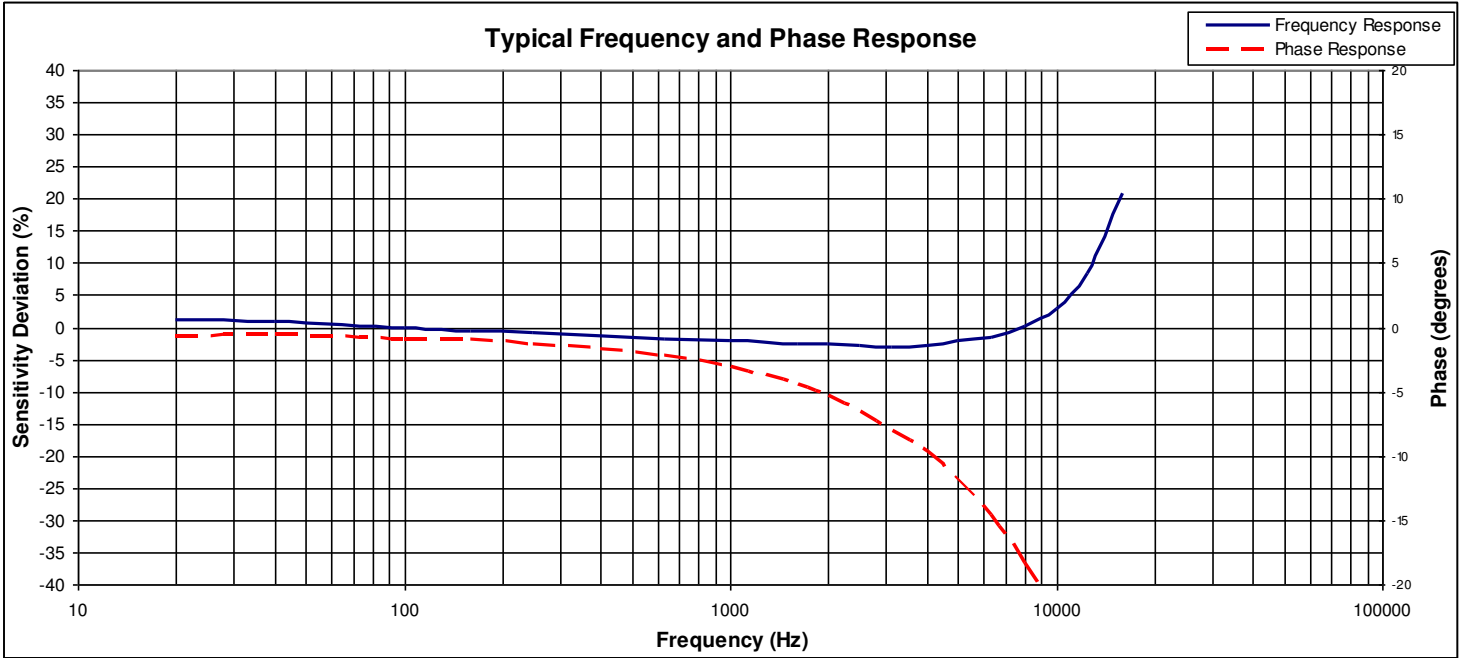
**PHYSICAL**

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)

<sup>1</sup> Contact factory for +175°C temperature option.

<b>Calibration supplied:</b>	CS-FREQ-0100	NIST Traceable Amplitude Calibration from 20Hz to ±1dB Frequency Response Limit
<b>Supplied accessories:</b>	AC-D02787	1x #8-32 Mounting Screw (5/8 inch length)
<b>Optional accessories:</b>	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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