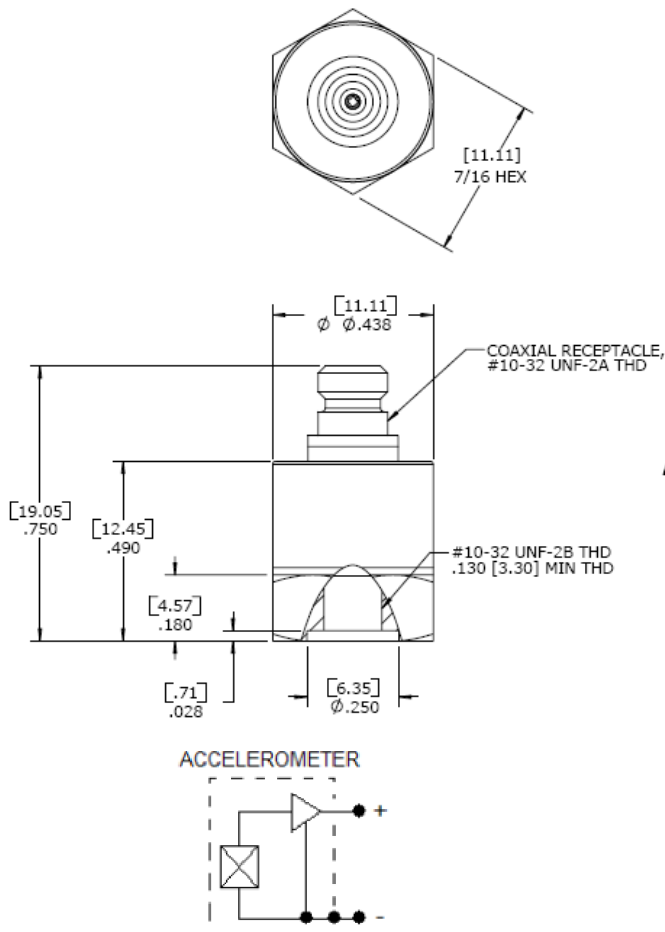




## DIMENSIONS



## MODEL 7105A ACCELEROMETER

### SPECIFICATIONS

- ◆ **IEPE Accelerometer**
- ◆ **Wide Bandwidth to >10kHz**
- ◆ **10-32 Top Connector**
- ◆ **Stud Mount, Hermetic**

The **Model 7105A** is a high performance IEPE accelerometer available in  $\pm 50g$  to  $\pm 1000g$  dynamic ranges. The stud mounted accelerometer features a welded hermetic construction with a top mount connector. The model 7105A 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  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ .

### FEATURES

- ◆  $\pm 50g$  to  $\pm 1000g$  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

**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	±1000	<b>Notes</b>
Range (g)	±50	±100	±500	±1000	
Sensitivity (mV/g)	100	50	10	5	±10%
Frequency Response (Hz)	0.5-6000	0.5-6000	0.5-8000	0.5-8000	±5%
Frequency Response (Hz)	0.3-10000	0.3-10000	0.3-10000	0.3-10000	±1dB
Natural Frequency (Hz)	>50000	>50000	>50000	>50000	
Non-Linearity (%FSO)	±1	±1	±1	±1	
Transverse Sensitivity (%)	<5	<5	<5	<5	
Shock Limit (g)	5000	5000	5000	5000	

**ELECTRICAL**

Compliance Voltage (Vdc)	18 to 30	18 to 30	18 to 30	18 to 30	
Excitation Current (mA) <sup>1</sup>	2 to 10	2 to 10	2 to 10	2 to 10	See Note 1
Bias Voltage (Vdc)	8 to 12	8 to 12	8 to 12	8 to 12	Room Temperature
Bias Voltage (Vdc)	6 to 13	6 to 13	6 to 13	6 to 13	-55 to +125°C
Output Impedance (Ω)	<100	<100	<100	<100	
Full Scale Output Voltage (V)	±5	±5	±5	±5	
Residual Noise (g RMS)	0.0004	0.0005	0.0008	0.0014	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

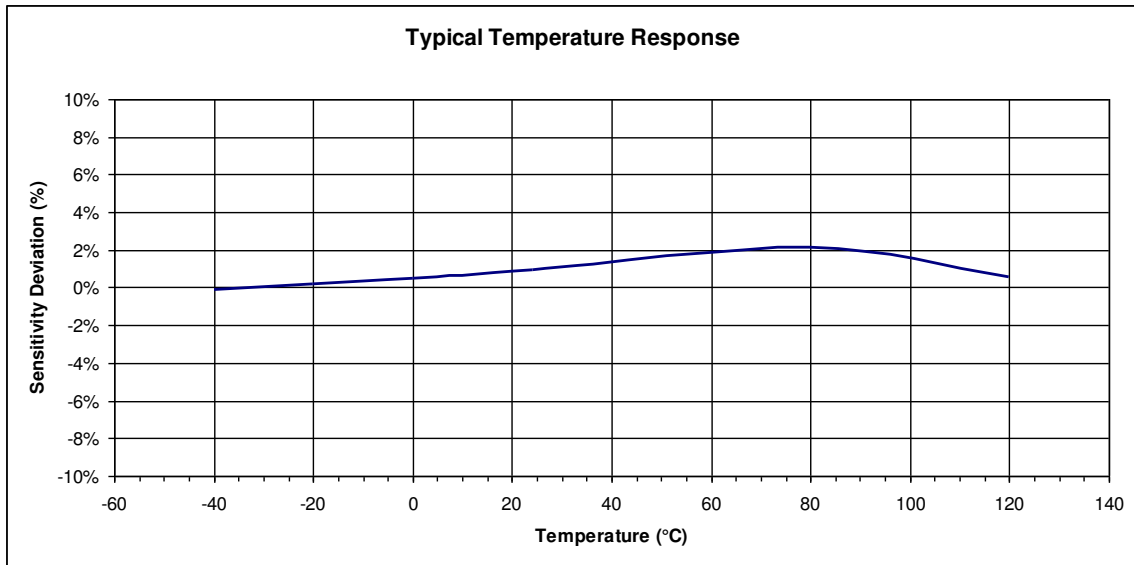
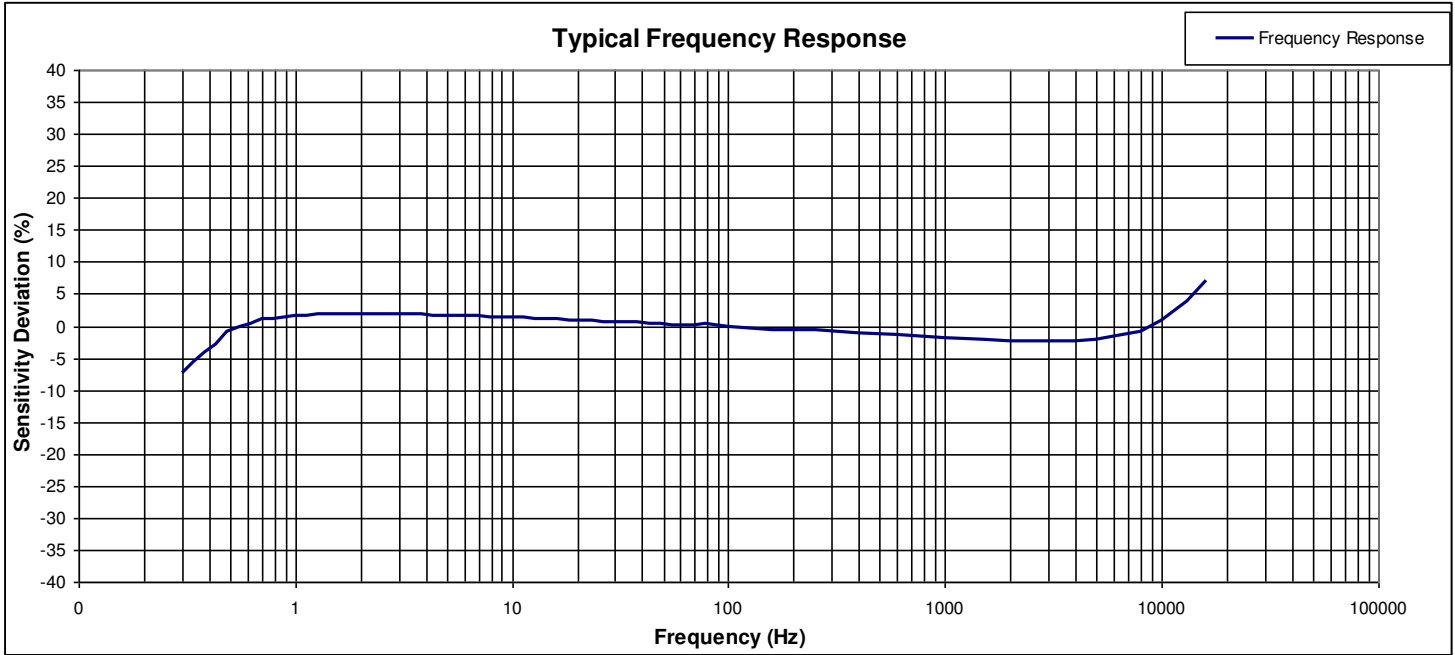
**PHYSICAL**

Sensing Element	Ceramic (shear mode)
Case Material	Stainless Steel
Electrical Connector	10-32 Coaxial Receptacle
Weight (grams)	7.3
Mounting	#10-32 to #10-32 Mounting Stud (included)
Mounting Torque	18 lb-in (2.0 N-m)

<sup>1</sup> Maximum 4mA at +125°C

<b>Calibration supplied:</b>	CS-FREQ-0100	NIST Traceable Amplitude Calibration from 20Hz to ±1dB Frequency Response Limit
<b>Supplied accessories:</b>	AC-D02298	10-32 to 10-32 mounting stud
<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-A03470	Adhesive Mounting Adaptor
	AC-A03471	Magnetic Mounting Adaptor
	AC-A03500	Isolated Mounting Adaptor (#10-32 to M5x0.8 thread)
	161A	4-Channel PE & IEPE Signal Conditioner, Bench Top

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## ORDERING INFORMATION

PART NUMBERING Model Number+Range

7105AT-GGGG

I I Range (0050 is 50g)

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

Example: 7105A-0050

Model 7105A, 50g



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