

# Model 7105A Accelerometer

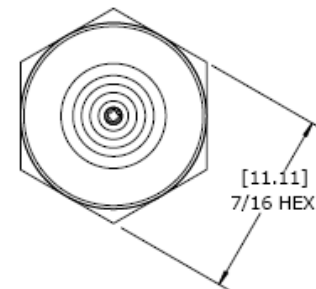


IEPE Accelerometer  
Wide Bandwidth to >10kHz  
10-32 Top Connector  
Stud Mount, Hermetic



The **Model 7105A** is a high performance IEPE accelerometer available in  $\pm 50g$  to  $\pm 500g$  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  $+125^{\circ}\text{C}$ .

## dimensions

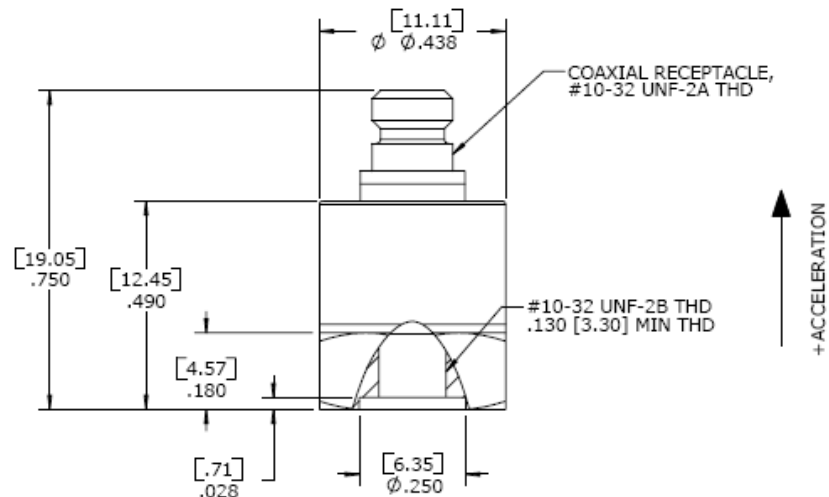


## FEATURES

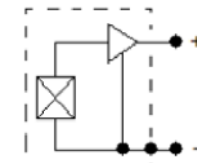
- $\pm 50g$  to  $\pm 500g$  Dynamic Range
- Wide bandwidth up to >10kHz
- Welded Construction
- Hermetically Sealed
- Annular Shear Mode
- Stable Temperature Response
- TEDS Option

## APPLICATIONS

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



## ACCELEROMETER



# Model 7105A 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

				Notes
<b>DYNAMIC</b>				
Range (g)	±50	±100	±500	
Sensitivity (mV/g)	100	50	10	±10%
Frequency Response (Hz)	1-6000	1-6000	1-8000	±5%
Frequency Response (Hz)	0.5-10000	0.5-10000	0.5-10000	±1dB
Natural Frequency (Hz)	>50000	>50000	>50000	
Non-Linearity (%FSO)	±1	±1	±1	
Transverse Sensitivity (%)	<5	<5	<5	
Shock Limit (g)	5000	5000	5000	
<b>ELECTRICAL</b>				
Compliance Voltage (Vdc)	18 to 30	18 to 30	18 to 30	
Excitation Current (mA) <sup>1</sup>	2 to 10	2 to 10	2 to 10	See Note 1
Bias Voltage (Vdc)	8 to 12	8 to 12	8 to 12	Room Temperature
Bias Voltage (Vdc)	6 to 13	6 to 13	6 to 13	-55 to +125°C
Output Impedance (Ω)	<100	<100	<100	
Full Scale Output Voltage (V)	±5	±5	±5	
Residual Noise (g RMS)	0.0004	0.0005	0.0008	Broadband 1Hz to 10kHz
Discharge Time Constant (sec)	0.8 to 1.2			
Grounding	Case Grounded			
<b>ENVIRONMENTAL</b>				
Temperature Response (%)	See Typical Temperature Response Curve			
Operating Temperature (°C)	-55 to +125			
Storage Temperature (°C)	-55 to +125			
Humidity	Hermetically Sealed			
<b>PHYSICAL</b>				
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)			

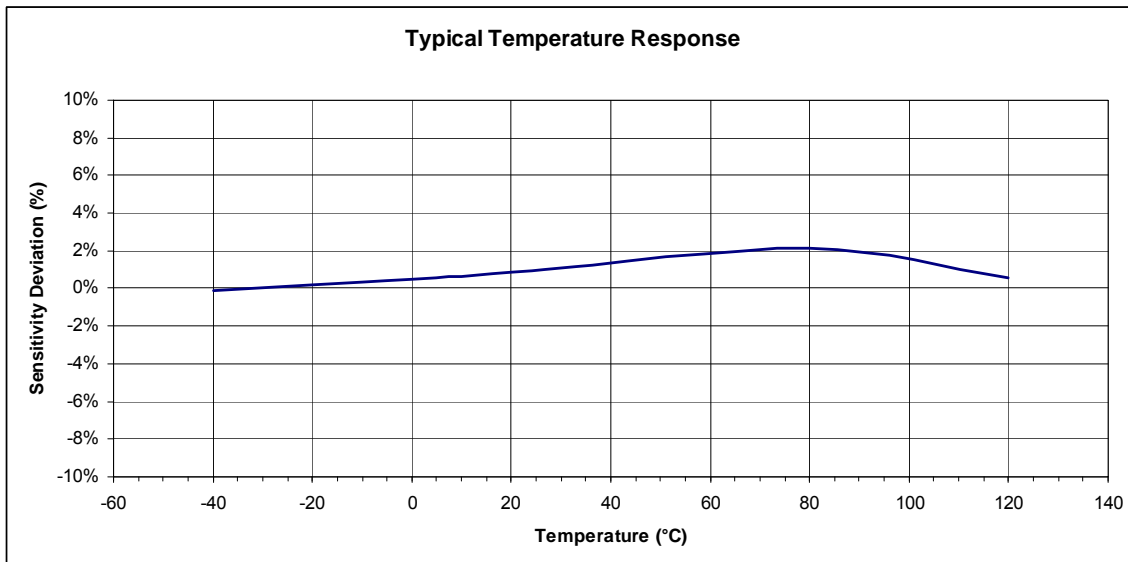
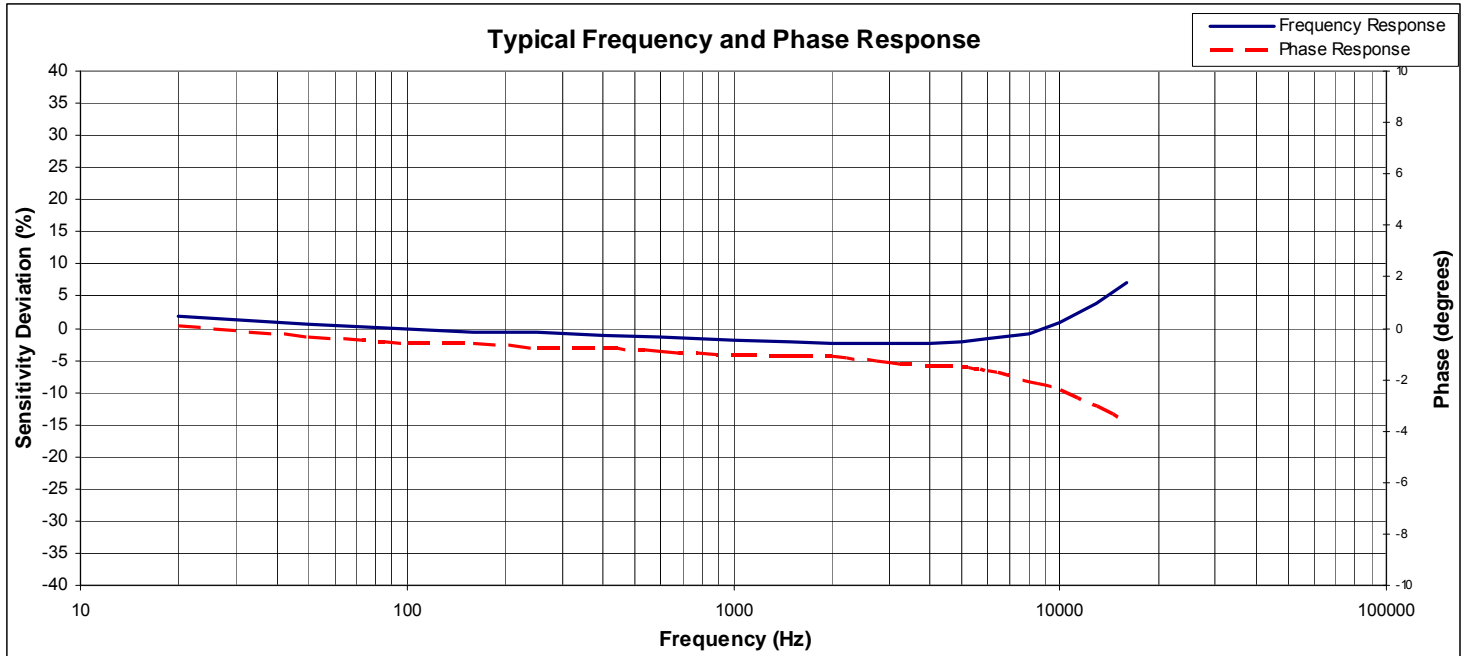
<sup>1</sup> Maximum 4mA at +125°C

<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

The information in this sheet has been carefully reviewed and is believed to be accurate; however, no responsibility is assumed for inaccuracies. Furthermore, this information does not convey to the purchaser of such devices any license under the patent rights to the manufacturer. Measurement Specialties, Inc. reserves the right to make changes without further notice to any product herein. Measurement Specialties, Inc. makes no warranty, representation or guarantee regarding the suitability of its product for any particular purpose, nor does Measurement Specialties, Inc. assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Typical parameters can and do vary in different applications. All operating parameters must be validated for each customer application by customer's technical experts. Measurement Specialties, Inc. does not convey any license under its patent rights nor the rights of others.

# Model 7105A Accelerometer

## performance specifications



## ordering info

PART NUMBERING Model Number+Range

7105AT-GGGG

I | Range (0050 is 50g)

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

Example: 7105A-0050

Model 7105A, 50g