



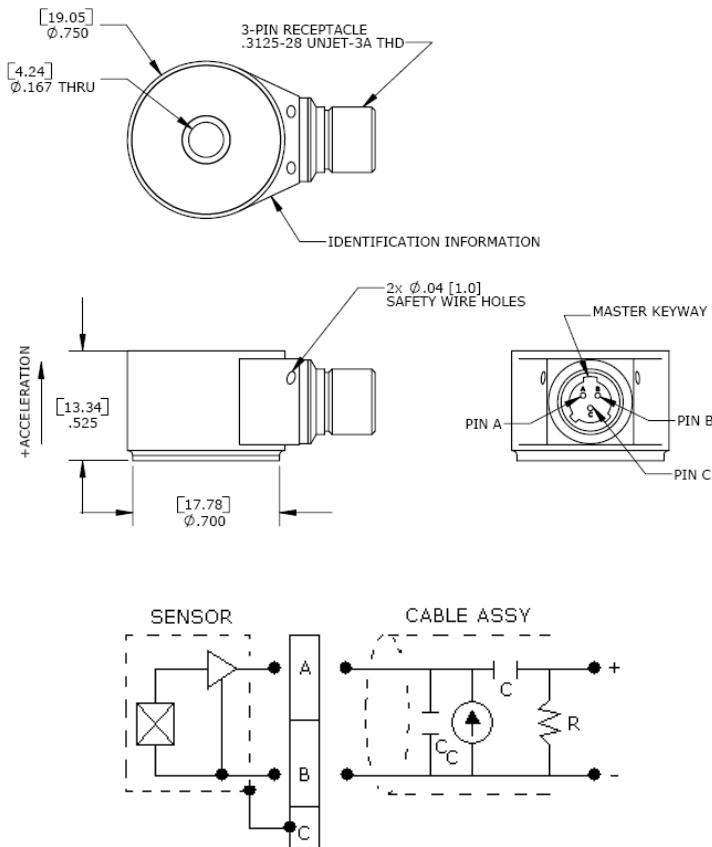
## MODEL 7204A ACCELEROMETER

### SPECIFICATIONS

- ◆ Internally Shielded HUMS Accelerometer
- ◆ 43kHz Resonant Frequency
- ◆ +130°C Operating Temperature
- ◆ Hermetically Sealed, Mil-Aero Qualified

The Model 7204A is a case isolated high temperature IEPE accelerometer with internal shielding. The accelerometer has a flat bandwidth up to greater than 15kHz with a resonant frequency greater than 40kHz. The model 7204A is available in  $\pm 10$  to  $\pm 500g$  ranges and has an operating temperature range up to +130°C. The unit is hermetically sealed and features the popular through hole mount installation for standard mounting screws. A three pin integral connector is featured as the electrical interface.

### DIMENSIONS



### FEATURES

- ◆  $\pm 10g$  to  $\pm 500g$  Dynamic Range
- ◆ Wide bandwidth up to 15kHz
- ◆ Case Isolated, Internally Shielded
- ◆ Hermetically Sealed
- ◆ Annular Shear Mode
- ◆ Through Hole Mount
- ◆ Stable Temperature Response
- ◆ 3-Pin Connector

### APPLICATIONS

- ◆ Health Usage Monitoring Systems
- ◆ Flight Testing
- ◆ Gearbox Vibration Monitoring
- ◆ High Frequency Applications
- ◆ Harsh Environments

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				Notes
<b>DYNAMIC</b>				
Range (g)	±10	±50	±500	
Sensitivity (mV/g)	500	100	10	
Frequency Response (Hz)	1-4000	1-5000	1-10000	±5%
Frequency Response (Hz)	0.6-8000	0.6-10000	0.6-20000	±1dB <sup>2</sup>
Natural Frequency (Hz)	25000	33000	44000	
Non-Linearity (%FSO)	±1	±1	±1	
Transverse Sensitivity (%)	<5	<5	<5	
Shock Limit (g)	5000	5000	5000	
Residual Noise (g RMS)	0.003	0.001	0.0025	
<b>ELECTRICAL</b>				
Compliance Voltage (Vdc)	18 to 30			
Excitation Current (mA)	2 to 20			
Bias Voltage (Vdc)	8 to 12			Room Temperature
Bias Voltage (Vdc)	6 to 13			-55 to +130°C
Output Impedance (Ω)	<100			
Full Scale Output Voltage (V)	±5			
Discharge Time Constant (sec)	0.8 to 1.2			
Warm-Up Time (sec)	2			
Case Grounding	Case Isolated, Internally Shielded			
<b>ENVIRONMENTAL</b>				
Temperature Response (%)	See Typical Temperature Response Curve			
Operating Temperature (°C)	-55 to +130			See Note 1
Storage Temperature (°C)	-55 to +130			See Note 1
Humidity	Hermetically Sealed			
<b>PHYSICAL</b>				
Sensing Element	Ceramic (shear mode)			
Case Material	Stainless Steel			
Electrical Connector	3-Pin Receptacle			
Weight (grams)	23			
Mounting	Through Hole (#8 or M4 cap screw)			
Mounting Torque	20 lb-in (2.3 N-m)			

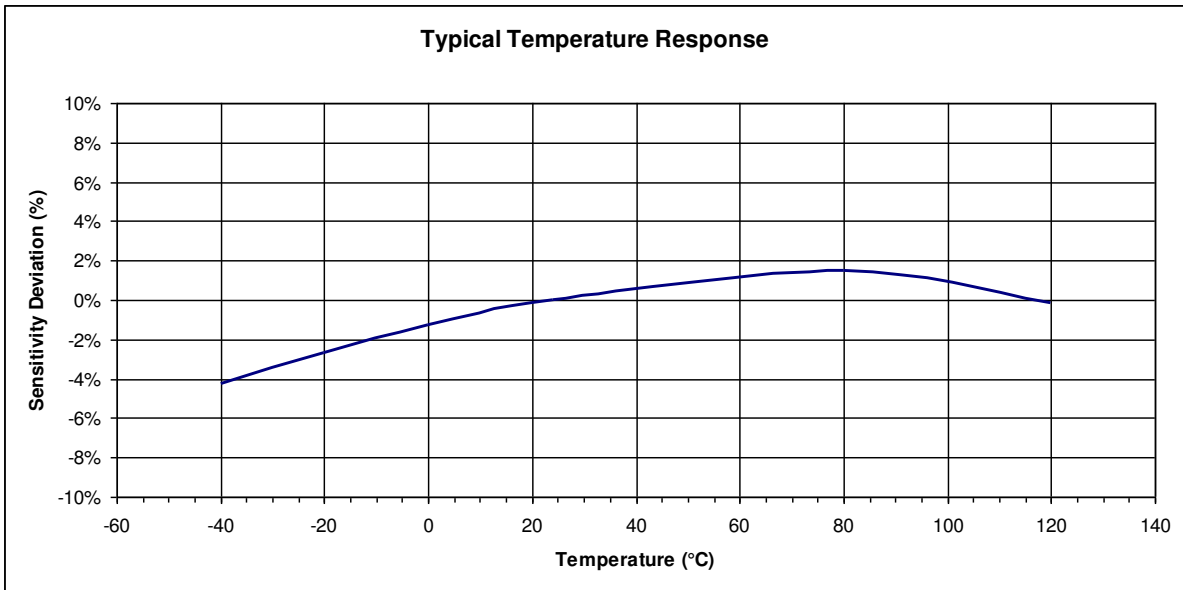
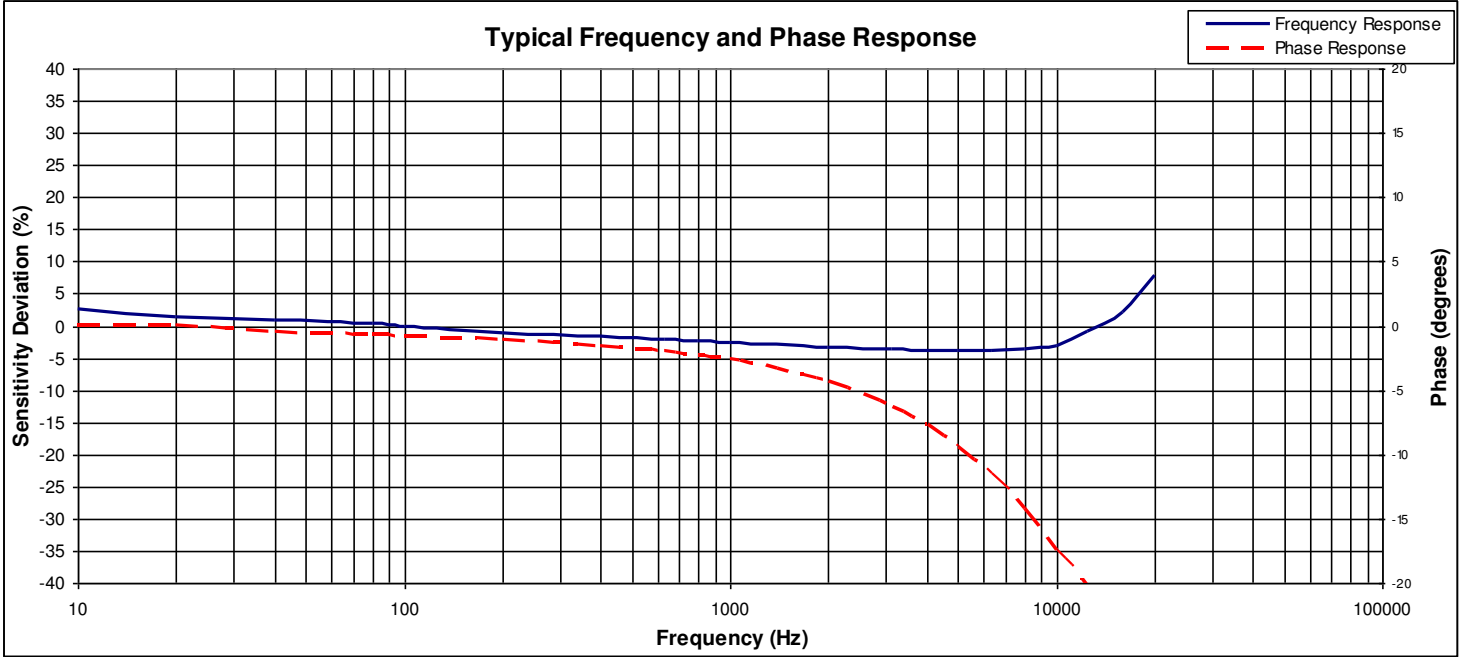
<sup>1</sup> Contact factory for +150°C temperature option.

**Calibration supplied:** CS-FREQ-0100 NIST Traceable Amplitude Calibration from 20Hz to ±1dB Frequency Response Limit<sup>2</sup>

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

**Optional accessories:** 312-XXX Cable Assembly (XXX designates length in inches, 10ft standard)  
161A 4-Channel PE & IEPE Signal Conditioner

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.



### ORDERING INFORMATION

PART NUMBERING    Model Number+Range

7204A-GGGG

  |  
  | \_\_\_\_\_ Range (0500 is 500g)

Example: 7204A-0500  
          Model 7204A, 500g

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.