

# Model 7204A Accelerometer



Internally Shielded IEPE Accelerometer  
43kHz Resonant Frequency  
+130°C Operating Temperature  
Hermetically Sealed



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.

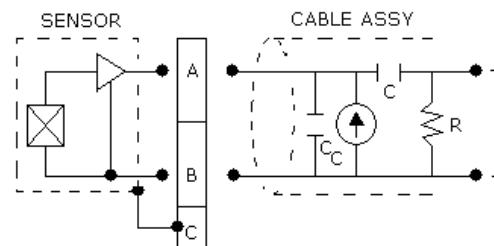
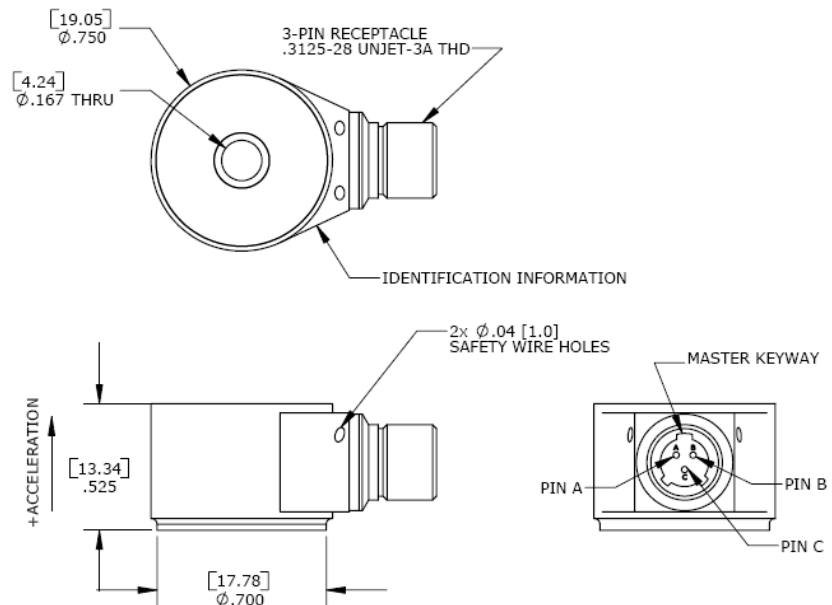
## FEATURES

- $\pm 10g$  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

## dimensions



# Model 7204A 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

	±10	±50	±500	Notes
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	

#### ELECTRICAL

Compliance Voltage (Vdc)	18 to 30	18 to 30	18 to 30	
Excitation Current (mA)	2 to 20	2 to 20	2 to 20	
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 +130°C
Output Impedance (Ω)	<100	<100	<100	
Full Scale Output Voltage (V)	±5	±5	±5	
Residual Noise (g RMS)	0.0003	0.0001	0.00025	
Discharge Time Constant (sec)	0.8 to 1.2			
Warm-Up Time (sec)	2			
Case Grounding	Case Isolated, Internally Shielded			

#### ENVIRONMENTAL

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			

#### PHYSICAL

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>

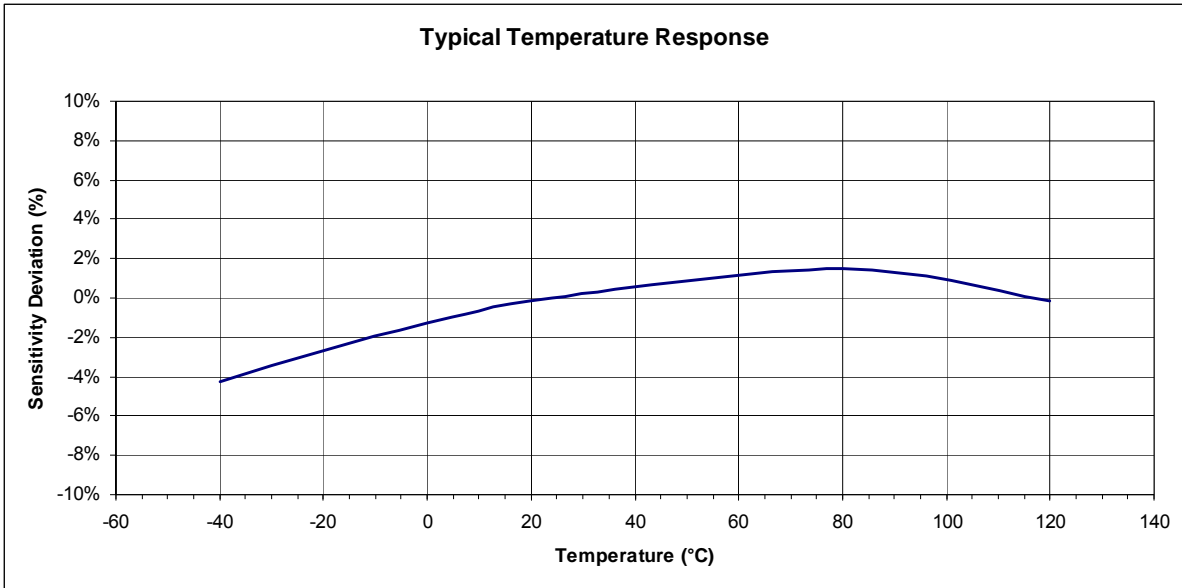
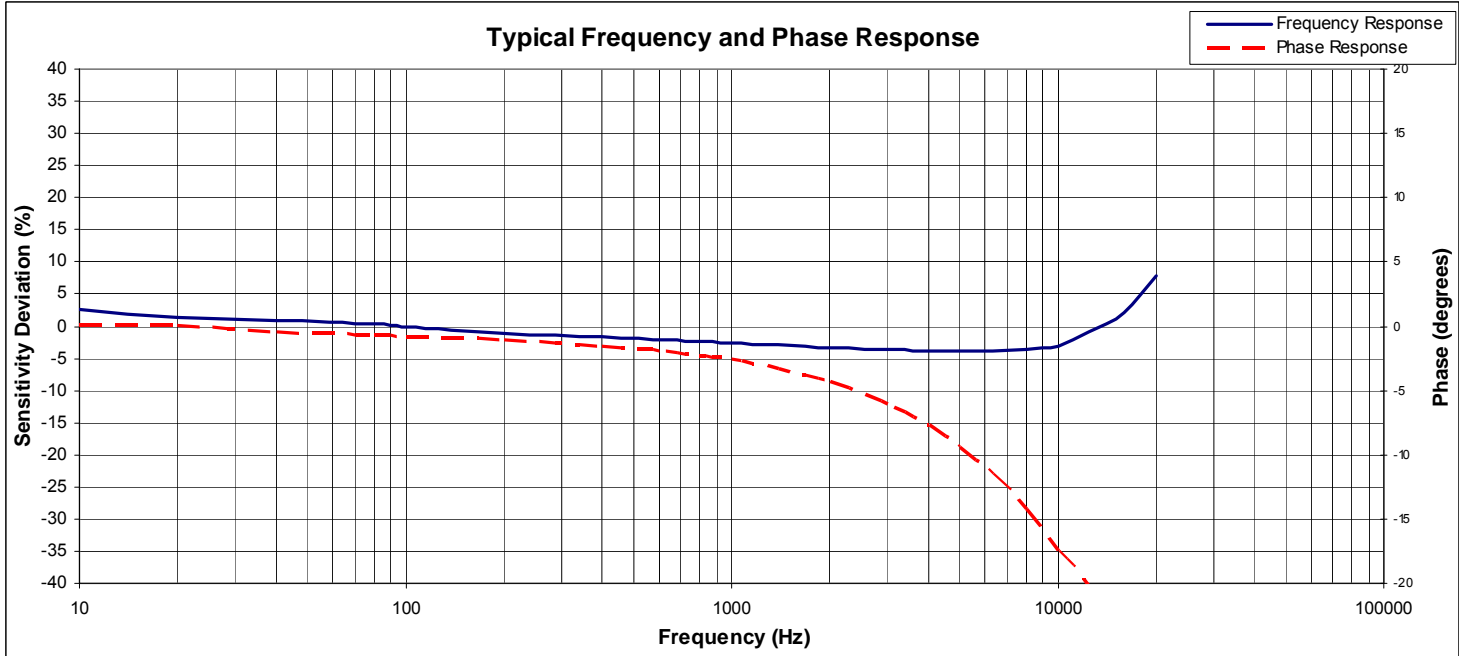
**Supplied accessories:** 1x #8-32 Mounting Screw (5/8 inch length)

**Optional accessories:** 312-XXX Cable Assembly (XXX designates length in inches, 10ft standard)

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# Model 7204A Accelerometer

## performance specifications



## ordering info

PART NUMBERING Model Number+Range

7204A-GGGG

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

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