

Model 7204A Accelerometer



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 ± 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.

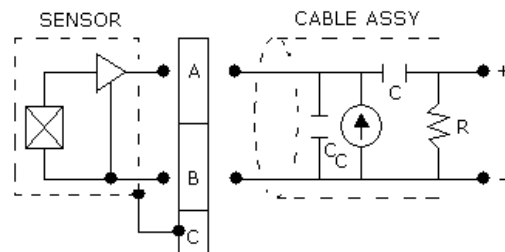
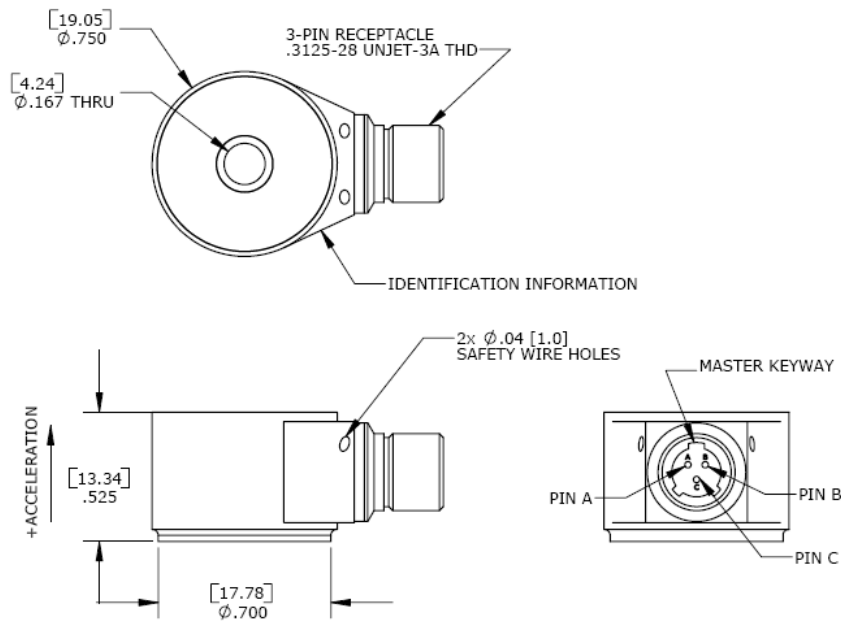
FEATURES

- $\pm 10g$ 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, 80Hz 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 ²
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	

ELECTRICAL

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			

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)

¹ Contact factory for +150°C temperature option.

Calibration supplied: CS-FREQ-0100 NIST Traceable Amplitude Calibration from 20Hz to ±1dB Frequency Response Limit²

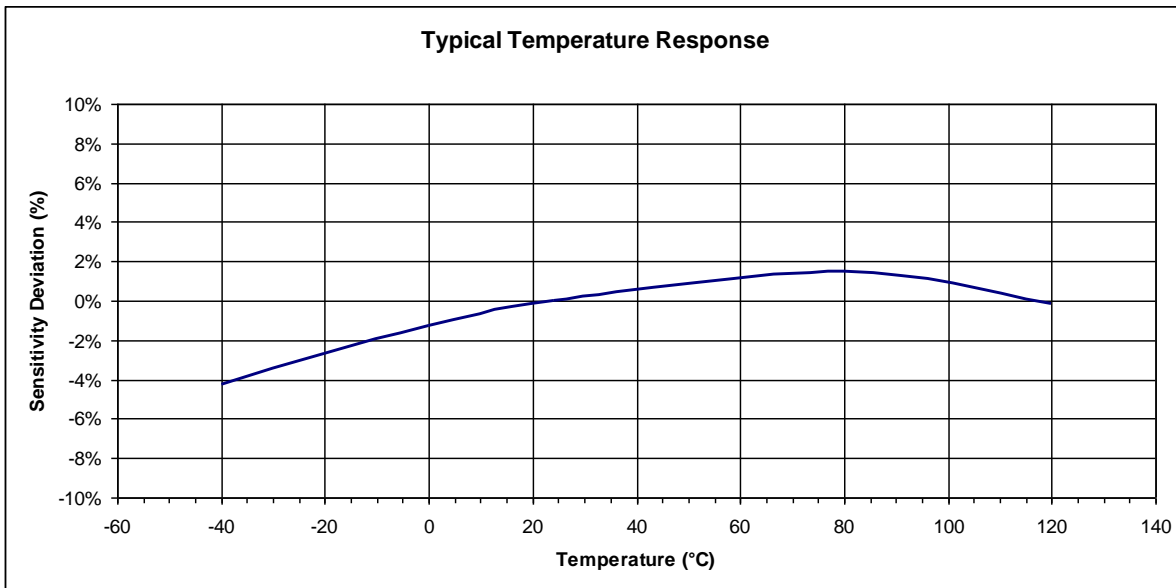
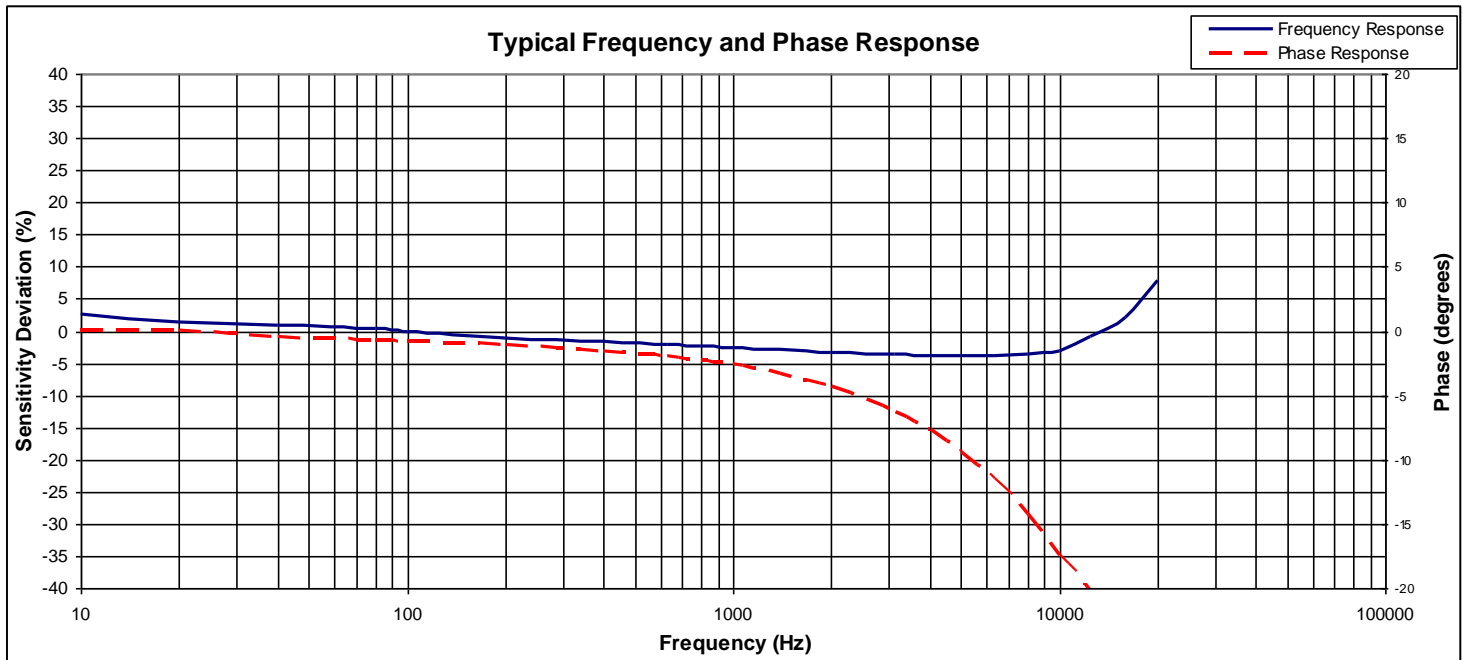
Supplied accessories: 1x #8-32 Mounting Screw (5/8 inch length)

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

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performance specifications



ordering info

PART NUMBERING Model Number+Range

7204A-GGGG

|
| _____ Range (0500 is 500g)

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

北京赛斯维测控技术有限公司
北京市朝阳区望京西路48号
金隅国际D座302
电话：+86 010 8477 5646
传真：+86 010 5894 9029
邮箱：sales@sensorway.cn
<http://www.sensorway.cn>