

Model 7514A Accelerometer



+260°C Charge Output Accelerometer
50pC/g output, 14kHz Bandwidth
Hermetically Sealed
Stud Mount, Side Connector



The **Model 7514A** is a stud mounted piezoelectric charge mode accelerometer with an operating temperature range to +260°C. The accelerometer is designed for high frequency vibration and shock measurements and offers a wide bandwidth to >14kHz with a nominal charge output of 50pC/g. The model 7514A features a hermetically sealed stainless steel housing and a #10-32 stud mount configuration.

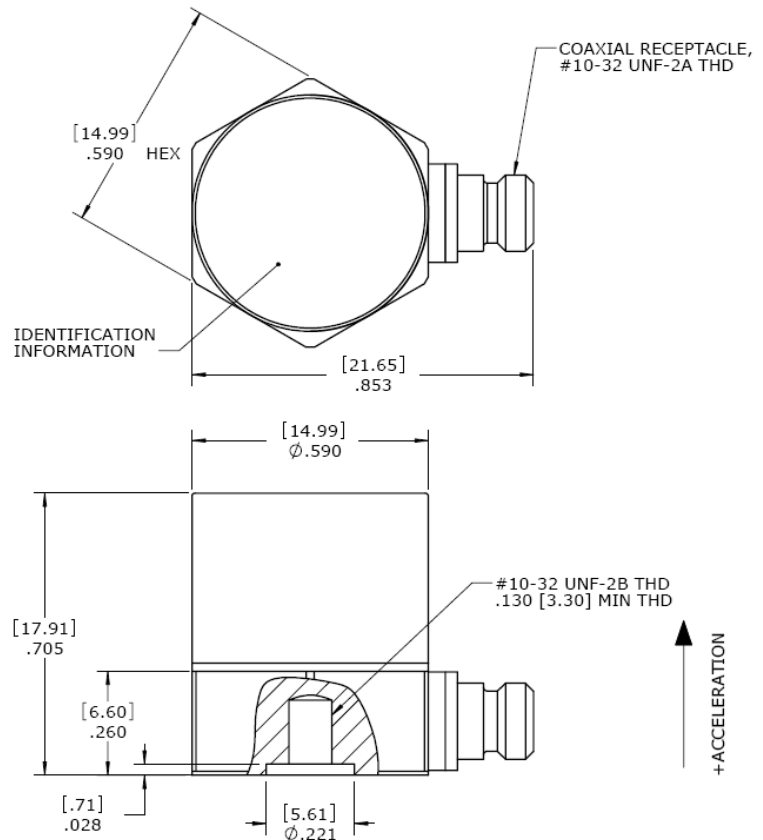
FEATURES

- 13pC/g to 50pC/g Sensitivity
- Wide bandwidth up to >14kHz
- Stud Mounted
- Hermetically Sealed
- Annular Shear Mode
- -73°C to +260°C Operating Range
- Stable Temperature Response

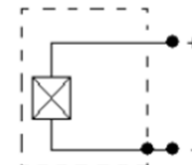
APPLICATIONS

- Vibration & Shock Monitoring
- High Temp Applications
- Laboratory Testing
- High Frequency Applications
- Gearbox Vibration Monitoring

dimensions



ACCELEROMETER



Model 7514A Accelerometer

performance specifications

All values are typical at +24°C, 100Hz 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 |
|--------------------------------------|---|-----------|-----------|-----------|---------|
| DYNAMIC | | | | | |
| Dash Number | -50 | -30 | -20 | -13 | |
| Sensitivity (pC/g) | 50 | 30 | 20 | 13 | Typical |
| Sensitivity (pC/g) | 40 | 24 | 14.5 | 9.0 | Minimum |
| Frequency Response (Hz) ² | 0.5-6000 | 0.5-7000 | 0.5-9000 | 0.5-11000 | ±10% |
| Frequency Response (Hz) ² | 0.1-9000 | 0.1-10000 | 0.1-12000 | 0.1-14000 | ±2dB |
| Natural Frequency (Hz) | 26000 | 28000 | 30000 | 33000 | |
| Non-Linearity (%FSO) | ±1/1000g | ±1/1000g | ±1/1000g | ±1/1000g | |
| Transverse Sensitivity (%) | <5 | <5 | <5 | <5 | |
| Dynamic Range (g) ¹ | ±500 | ±800 | ±1250 | ±2000 | |
| Shock Limit (g) | 10000 | 10000 | 10000 | 10000 | |
| ELECTRICAL | | | | | |
| Capacitance (pF) | 1050 | 1050 | 1050 | 1050 | Nominal |
| Insulation Resistance (MΩ) | >100 | >100 | >100 | >100 | @100Vdc |
| Grounding | Case Grounded | | | | |
| ENVIRONMENTAL | | | | | |
| Temperature Response (%) | See Typical Temperature Response Curve | | | | |
| Operating Temperature (°C) | -73 to +260 | | | | |
| Storage Temperature (°C) | -73 to +260 | | | | |
| Humidity | Hermetically Sealed | | | | |
| PHYSICAL | | | | | |
| Sensing Element | Ceramic (shear mode) | | | | |
| Case Material | Stainless Steel | | | | |
| Electrical Connector | 10-32 Coaxial Receptacle | | | | |
| Weight (grams) | 19 | | | | |
| Mounting | #10-32 to #10-32 Mounting Stud (included) | | | | |
| Mounting Torque | 18 lb-in (2.0 N-m) | | | | |

¹ Operating range over which the accelerometer meets the linearity specifications

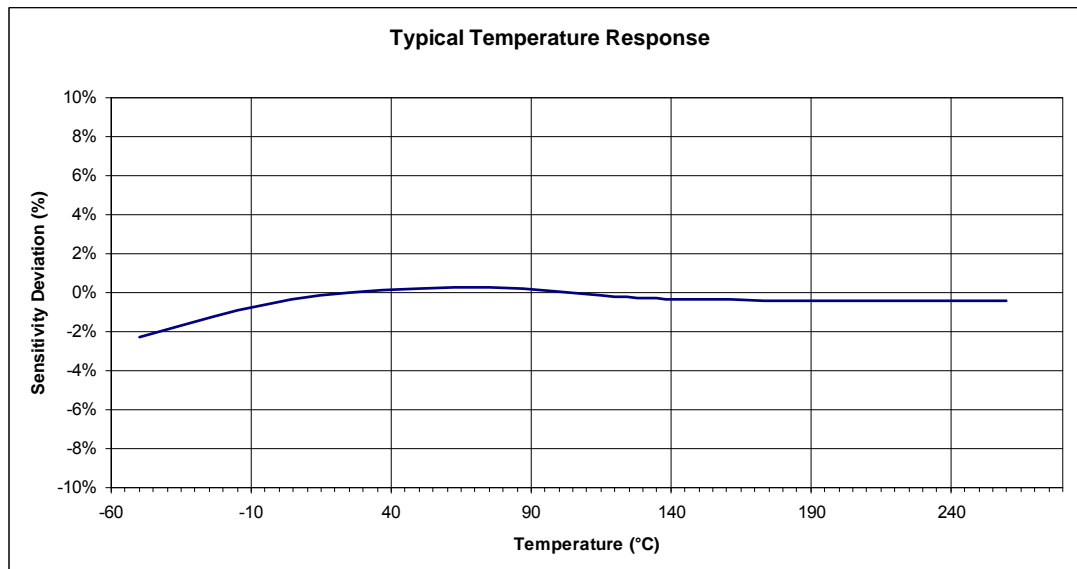
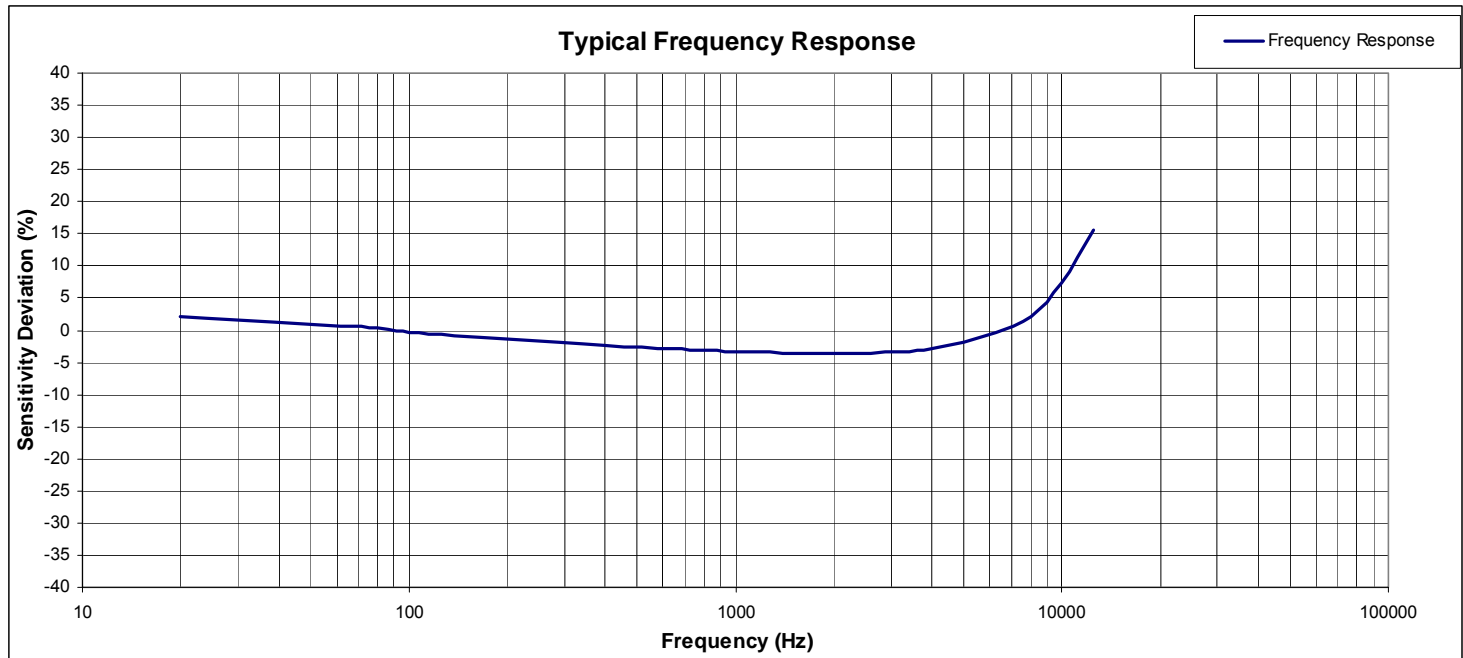
² Low-end response of the accelerometer is a function of its associated electronics.

| | | |
|------------------------------|--------------|---|
| Calibration supplied: | CS-FREQ-0100 | NIST Traceable Amplitude Calibration from 20Hz to ±2dB Frequency Response Limit |
| Supplied accessories: | AC-D02298 | 10-32 to 10-32 mounting stud |
| Optional accessories: | 320-XXX | Cable Assembly, 10-32 to 10-32 (XXX designates length in inches, 10ft standard) |
| | 324-XXX | Cable Assembly, 10-32 to BNC (XXX designates length in inches, 10ft standard) |
| | 130 | In-Line Charge Converter |
| | 161A | 4-Channel PE & IEPE Signal Conditioner |
| | AC-D03105 | Adhesive Mounting Adaptor |
| | AC-D03106 | Magnetic Mounting Adaptor |

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Model 7514A Accelerometer

performance specifications



ordering info

PART NUMBERING Model Number+Sensitivity

7514A-GG

|
| _____ (50 is 50pC/g)

Example: 7514A-50
Model 7514A, 50pC/g