





Ultra Low Noise, DC Response
Micro-g Resolution
Includes Auto-Zero Function
Hermetically Sealed
<2% Total Error Band

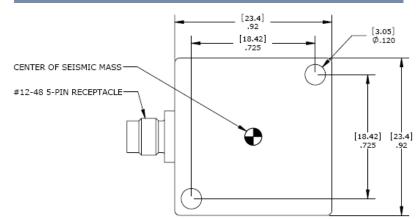
The Model 4807A is an ultra low noise DC response accelerometer offering micro-g resolution – an order of magnitude better than the competition.

The accelerometer is hermetically sealed and offers an amplified signal output covering ranges from ±2 to ±200g. The model 4807A incorporates gas damped silicon MEMS sensing elements with wide bandwidth from DC up to 1500Hz, and built-in mechanical overload stops for shock protection to 5,000g. The patented Auto-Zero function allows the user to minimize zero offset at the output.



US Patent 8,823,364 applies

## dimensions

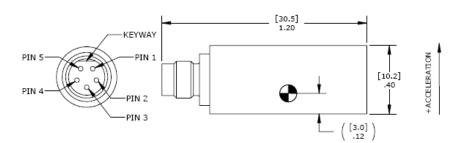


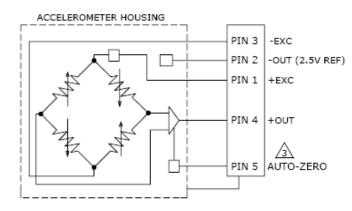
#### **FEATURES**

- 98dB Dynamic Range
- ±2g to ±200g Measurement Range
- 8-20Vdc Excitation Voltage
- Hermetically Sealed
- Gas Damped MEMS Element
- Detachable Cable
- Remote Auto-Zero Function

### **APPLICATIONS**

- Vibration Isolation
- Flight Testing
- Trajectory Profiling
- Structural Monitoring
- Research & Development





# Model 4807A Accelerometer



## performance specifications

All values are typical at +24°C, 80Hz and 12Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice. Standard product parameters are described in PSC-1004 for Plug & Play DC Accelerometers.

Parameters								
DYNAMIC								Notes
Range (g)	±2	±5	±10	±20	±50	±100	±200	
Sensitivity (mV/g)	1000	400	200	100	40	20	10	±2%
Frequency Response (Hz)	0-200	0-300	0-350	0-600	0-800	0-1300	0-1500	±5%
Natural Frequency (Hz)	700	800	1000	1500	4000	6000	8000	
Non-Linearity (%FSO)	±1.0	±1.0	±1.0	±1.0	±1.0	±1.0	±1.0	
Transverse Sensitivity (%)	<3	<3	<3	<3	<3	<3	<3	<1 Typical
Damping Ratio	0.7	0.7	0.7	0.7	0.6	0.5	0.4	
Shock Limit (g)	5000	5000	5000	5000	5000	5000	5000	
Residual Noise (µV RMS)	25	20	23	31	26	32	32	Passband
Residual Noise (µg/√Hz RMS)	2	3	6	12	21	41	82	Spectral

**ELECTRICAL** 

Zero Acceleration Output (mV) ±25 (±1.5 after auto-zero actuation) Differential Excitation Voltage (Vdc) 8 to 20 Excitation Current (mA) 15 Bias Voltage (Vdc) 2.5 Full Scale Output Voltage (Vpk) ±2 Output Impedance (Ω) <100 Insulation Resistance (M $\Omega$ ) >100 @50Vdc Turn On Time (sec)

Ground Isolation Isolated from Mounting Surface

**ENVIRONMENTAL** 

Thermal Zero Shift (%FSO) ±2 from -54 to +121°C ref to +24°C Maximum ±2.5 from -54 to +121°C ref to +24°C Thermal Sensitivity Shift (%) Maximum

Operating Temperature (°C) -54 to 121 Compensated Temperature (°C) -54 to 121

Humidity Hermetically Sealed, IP67

**PHYSICAL** 

Case Material Stainless Steel

Weight (grams)

2x #4 or M3 Screws Mounting Mounting Torque 6 lb-in (0.7 N-m)

Calibration supplied: CS-FREQ-0100 NIST Traceable Amplitude Calibration from 20Hz to ±5% Frequency Response Limit

Supplied accessories: AC-A02285 2x #4-40 (7/16 length) Socket Head Cap Screw and Washer

Optional accessories: AC-D02652 Triaxial Mounting Block

> 340A-XXX Cable Assembly, 4x #28 AWG, (XXX designates length in inches, 5ft standard)

Cable Assembly, 5x #30 AWG, for Auto-Zero Option (XXX designates length in inches, 5ft standard) 341A-XXX

121 3-Channel Precision Low Noise DC Amplifier

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### ordering info

PART NUMBERING	Model Number+Range				
4807A-GGG					

Range (010 is 10g)

Example: 4807A-010

Model 4807A, 10g