MODEL 4807A ACCELEROMETER

US Patent 8,823,364 applies

SPECIFICATIONS

- **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.

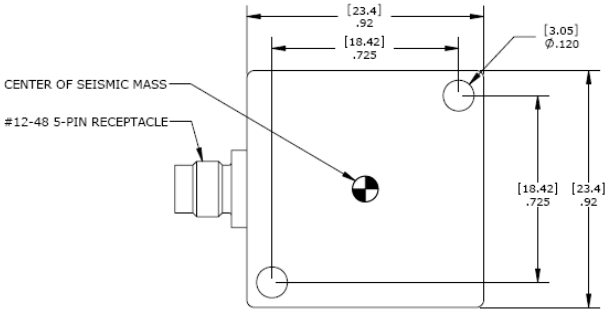
FEATURES

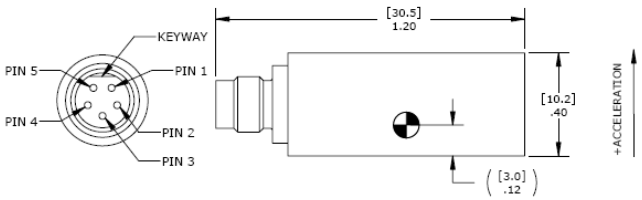
- 98dB Dynamic Range
- ±2g to ±200g Measurement Range
- 8-20Vdc Excitation Voltage
- Hermetically Sealed
- Gas Damped MEMS Element
- Detachable Cable
- Remote Auto-Zero Function

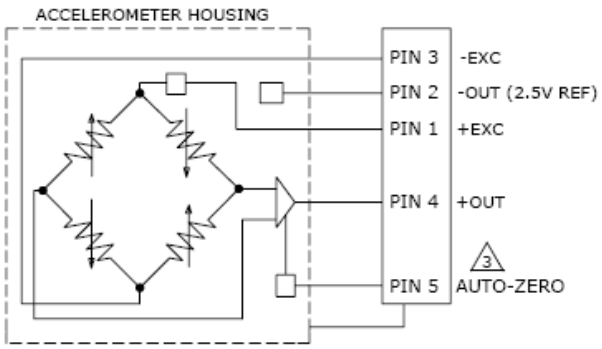
APPLICATIONS

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

DIMENSIONS







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.

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 (MΩ)	>100	@50Vdc
Turn On Time (sec)	<2	
Ground Isolation	Isolated from Mounting Surface	
ENVIRONMENTAL		
Thermal Zero Shift (%FSO)	±2 from -54 to +121°C ref to +24°C	Maximum
Thermal Sensitivity Shift (%)	±2.5 from -54 to +121°C ref to +24°C	Maximum
Operating Temperature (°C)	-54 to 121	
Compensated Temperature (°C)	-54 to 121	
Humidity	Hermetically Sealed, IP67	
PHYSICAL		
Case Material	Stainless Steel	
Weight (grams)	20	
Mounting	2x #4 or M3 Screws	
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)
	341A-XXX	Cable Assembly, 5x #30 AWG, for Auto-Zero Option (XXX designates length in inches, 5ft standard)
	121	3-Channel Precision Low Noise DC Amplifier

ORDERING INFORMATION

PART NUMBERING Model Number+Range

4807A-GGG
l_____Range (010 is 10g)

Example: 4807A-010
Model 4807A, 10g

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