



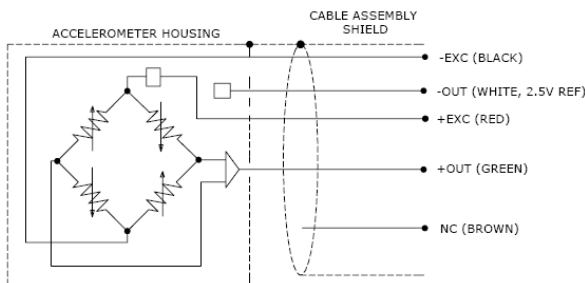
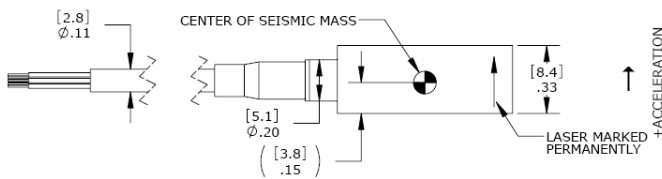
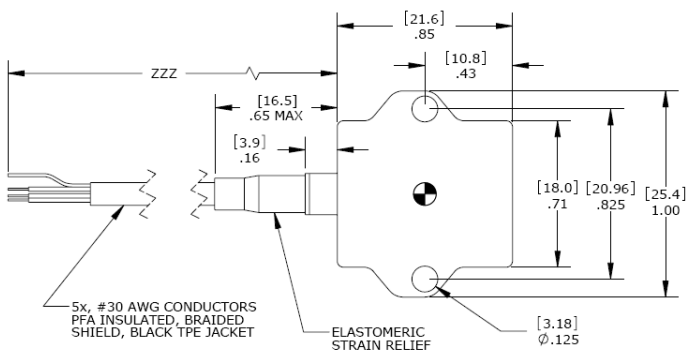
MODEL 4610A ACCELEROMETER

SPECIFICATIONS

- High Performance DC Response
- Micro-g Resolution, Low Noise
- Advanced Temp Compensation
- 5,000g Over-Range Protection

The **Model 4610A** is an ultra-low-noise accelerometer designed for both static and dynamic measurements. The accelerometer offers integral temperature compensation with dynamic range from ± 2 to $\pm 500g$. The **model 4610A** incorporates a gas damped MEMS element with mechanical overload stops for high-g shock protection. The accelerometer has an operating temperature range of $-55^{\circ}C$ to $+125^{\circ}C$.

DIMENSIONS



FEATURES

- $\pm 2g$ to $\pm 500g$ Dynamic Range
- 5,000g Shock Protection
- Signal Conditioned Output
- 8 to 30Vdc Excitation Voltage
- Gas Damping
- Integral Strain Relief
- Temperature Compensated

APPLICATIONS

- Low Frequency Monitoring
- Transportation
- Flight Testing
- Test & Instrumentation
- Machine Control
- Transportation Testing

MODEL 4610A 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.

Parameters

DYNAMIC

	±2	±3	±5	±10	±20	±50	±100	±200	±500	Notes
Range (g)										
Sensitivity (mV/g)	1000	667	400	200	100	40	20	10	4	±10%
Frequency Response (Hz)	0-200	0-250	0-300	0-400	0-600	0-1000	0-1500	0-1500	0-1500	±5%
Frequency Response (Hz)	0-400	0-450	0-500	0-600	0-1000	0-1500	0-2000	0-2000	0-2000	±1dB
Natural Frequency (Hz)	700	750	800	1000	1500	4000	6000	8000	10000	
Non-Linearity (%FSO)	±1.0	±1.0	±1.0	±1.0	±1.0	±1.0	±1.0	±1.0	±1.0	
Transverse Sensitivity (%)	<3	<3	<3	<3	<3	<3	<3	<3	<3	<1 Typical
Damping Ratio	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.5	
Shock Limit (g)	2000	2000	2000	5000	5000	5000	5000	5000	5000	
Residual Noise (µV RMS)	25	30	20	23	31	26	32	32	32	Passband
Residual Noise (µg/√Hz RMS)	2	3	3	6	13	21	41	82	210	Spectral

ELECTRICAL

Zero Acceleration Output (mV)	±50									Differential
Excitation Voltage (Vdc)	8 to 30									
Excitation Current (mA)	<12									
Bias Voltage (Vdc)	2.5									
Full Scale Output Voltage (Vdc)	±2									
Output Resistance (Ω)	<100									
Insulation Resistance (MΩ)	>100									@100Vdc
Turn On Time (msec)	<100									
Ground Isolation	Isolated from Mounting Surface									

ENVIRONMENTAL

Thermal Zero Shift (%FSO/°C)	±0.010									-40 to +100°C
Thermal Sensitivity Shift (%/°C)	±0.014									-40 to +100°C
Operating Temperature (°C)	-55 to +125									
Compensated Temperature (°C)	-40 to +100									
Humidity	Epoxy Sealed, IP62									

PHYSICAL

Case Material	Anodized Aluminum
Cable	4x #30 AWG Conductors PFA Insulated Leads, Braided Shield, TPE Jacket
Weight (grams)	7 (cable not included)
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-D02669 Triaxial Mounting Block
121 3-Channel Precision Low Noise DC Amplifier

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ORDERING INFORMATION

PART NUMBERING Model Number+Range+Cable Length

4610A-GGG-ZZZ

 | |
 | |_____Cable (060 is 60 inches)
 |_____Range (020 is 20g)

Example: 4610A-020-060
 Model 4610A, 20g, 60" (5ft) Cable

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