

Model 4623 Accelerometer



MEMS Accelerometer
DC Response, Ultra-Stable
Advanced Temp Compensation
Signal Conditioned Output
Integral Strain Relief



The **Model 4623** is a low frequency DC response accelerometer offering outstanding performance over a wide operating temperature range. The accelerometer is available in ranges from ± 2 to $\pm 100g$ and incorporates an EMI/EMC protection circuitry for harsh installations. The output is signal conditioned to provide a low noise amplified signal. The model 4623 incorporates a PFA insulated cable with a rugged strain relief designed for demanding applications.

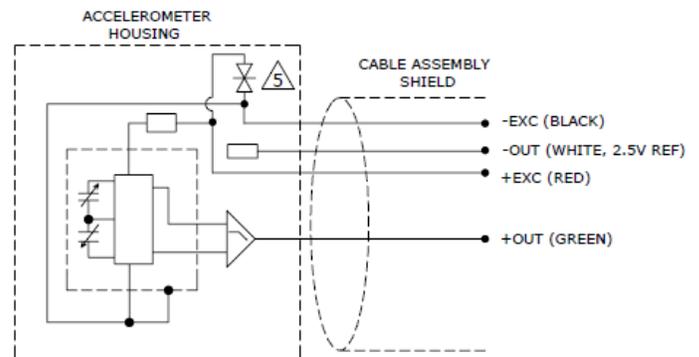
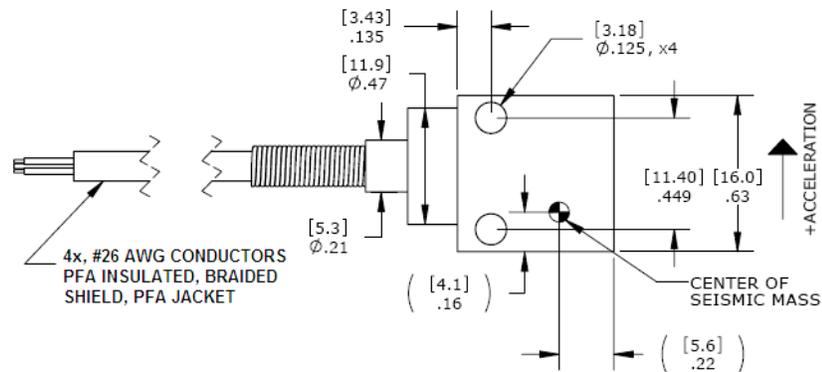
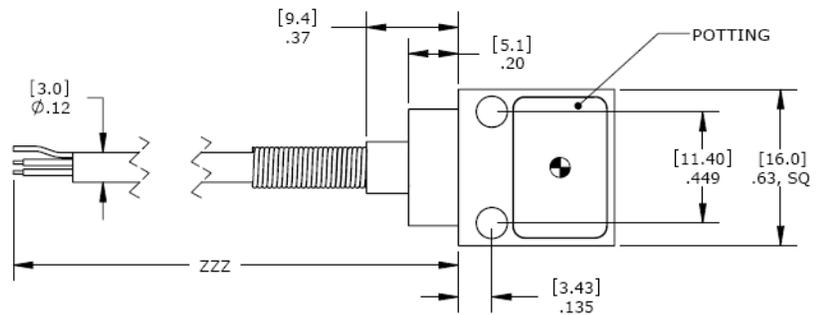
FEATURES

- $\pm 2g$ to $\pm 100g$ Dynamic Range
- Signal Conditioned Output
- EMI/EMC Protection Circuit
- Gas Damping
- Integral Strain Relief
- DC, Low Frequency Response
- 7 to 30Vdc Excitation Voltage

APPLICATIONS

- Harsh Applications
- Structural Testing
- Test & Instrumentation
- Performance Testing
- Transportation
- Flight Testing

dimensions



Model 4623 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

	±2	±5	±10	±25	±50	±100	Notes
Range (g)	1000	400	200	80	40	20	±10%
Sensitivity (mV/g)	0-150	0-150	0-200	0-400	0-600	0-1000	±5% ¹
Frequency Response (Hz)	0-400	0-400	0-550	0-800	0-100	0-1400	±1dB
Natural Frequency (Hz)	700	800	1000	1500	4000	6000	
Non-Linearity (%FSO)	±0.5	±0.5	±0.5	±0.5	±0.5	±0.5	
Transverse Sensitivity (%)	<3	<3	<3	<3	<3	<3	<1 Typical
Damping Ratio	0.7	0.7	0.7	0.7	0.7	0.7	
Shock Limit (g)	5000	5000	5000	5000	5000	5000	
Residual Noise (µV RMS)	500	500	450	550	450	450	Passband
Spectral Noise (µg/√Hz)	35	38	75	219	316	516	Passband

ELECTRICAL

Zero Acceleration Output (mV)	±50						Differential
Excitation Voltage (Vdc)	7 to 30						
Excitation Current (mA)	<5						
Bias Voltage (Vdc)	2.5						
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)	±0.004						Typical
Thermal Sensitivity Shift (%/°C)	±0.010						Typical
Operating Temperature (°C)	-55 to 125						
Storage Temperature (°C)	-55 to 125						
Humidity	Epoxy Encapsulated, IP65						

PHYSICAL

Case Material	Anodized Aluminum					
Cable	4x #26 AWG Conductors, PFA Insulated, Braided Shield, PFA Jacket					
Weight (grams)	14					
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 Limit¹

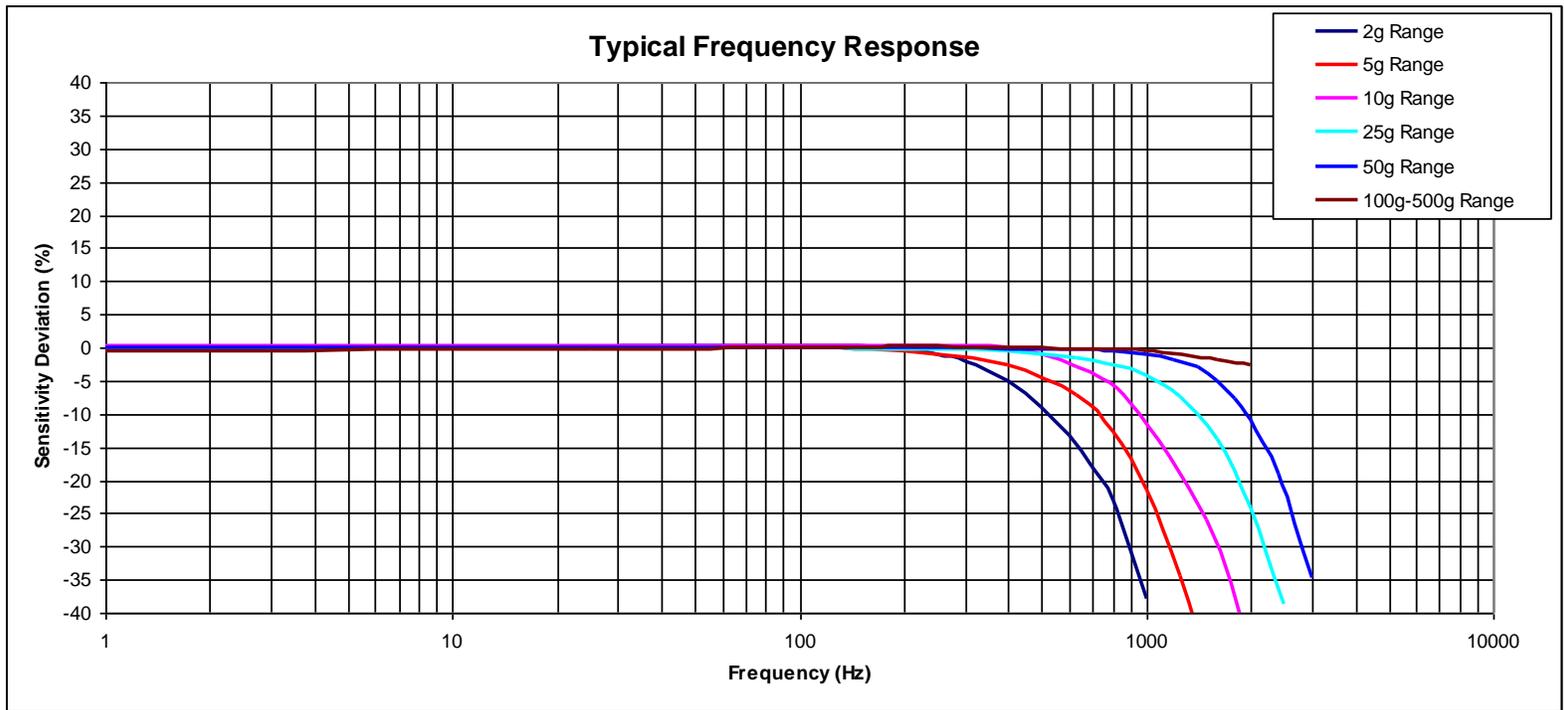
Supplied accessories: AC-A02944 2x #4-40 (3/4 length) Socket Head Cap Screw and Washer

Optional accessories: 121 3-Channel Precision Low Noise DC Amplifier

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performance specifications



ordering info

PART NUMBERING Model Number+Range+Cable Length

4623-GGG-ZZZ-C

| |
 | | Cable (060 is 60 inches)
 | Range (025 is 25g)

Example: 4623-025-060-C
Model 4623, 25g, 060" (5ft) Cable

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