

Model 4623 Accelerometer



Gas Damped, DC Response
High Sensitivity
EMI/EMC Protection
Integral Strain Relief
MEMS Accelerometer



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 $\pm 500g$ 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.

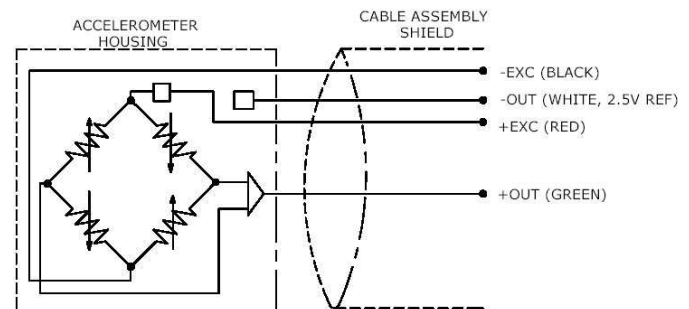
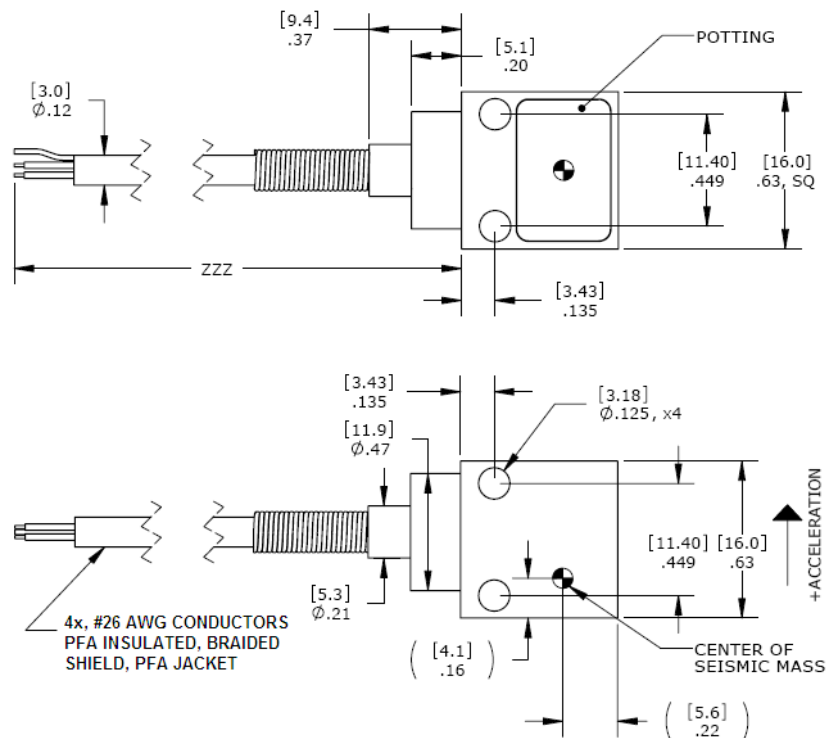
FEATURES

- $\pm 2g$ to $\pm 500g$ 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, 100Hz 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	±250	±500	Notes
Range (g)	±2	±5	±10	±25	±50	±100	±250	±500	
Sensitivity (mV/g)	1000	400	200	80	40	20	10	4	±10%
Frequency Response (Hz)	0-150	0-150	0-200	0-400	0-600	0-1000	0-1000	0-1000	±5% ¹
Frequency Response (Hz)	0-400	0-400	0-550	0-800	0-100	0-1400	0-1500	0-1500	±1dB
Natural Frequency (Hz)	700	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	
Transverse Sensitivity (%)	<3	<3	<3	<3	<3	<3	<3	<3	<1 Typical
Damping Ratio	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.5	
Shock Limit (g)	5000	5000	5000	5000	5000	5000	5000	5000	
Residual Noise (µV RMS)	500	300	300	350	400	400	400	400	Passband
Spectral Noise (µg/√Hz)	35	38	75	219	316	516	1581	2582	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)	±0.008								Typical
Thermal Sensitivity Shift (%/°C)	±0.010								Typical
Operating Temperature (°C)	-55 to 125								
Compensated Temperature (°C)	-40 to 100								
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

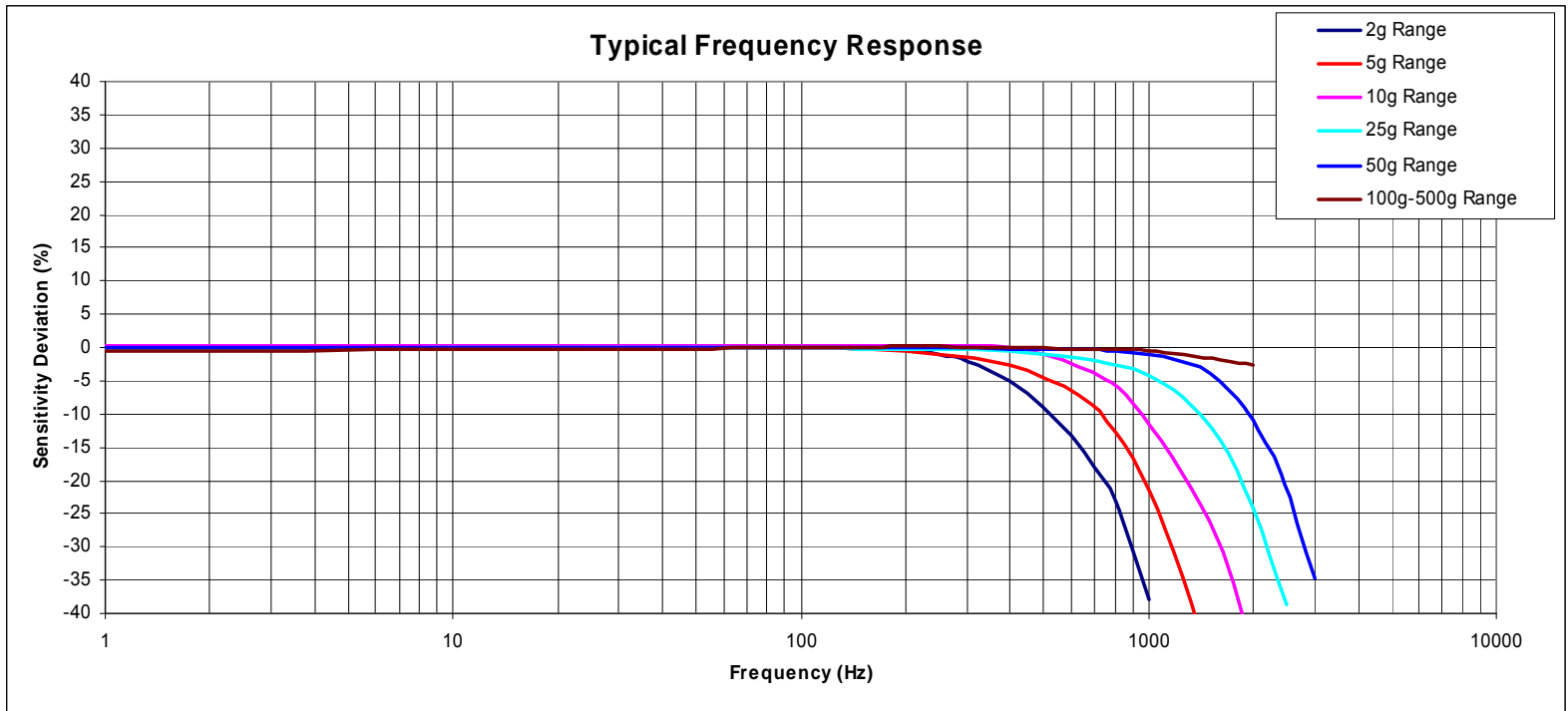
Supplied accessories: AC-A02944 2x #4-40 (3/4 length) Socket Head Cap Screw and Washer

Optional accessories: 101 Three Channel DC Signal Conditioner Amplifier

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performance specifications



ordering info

PART NUMBERING Model Number+Range+Cable Length

4623-GGG-CCC

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

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