

MODEL 4602 ACCELEROMETER

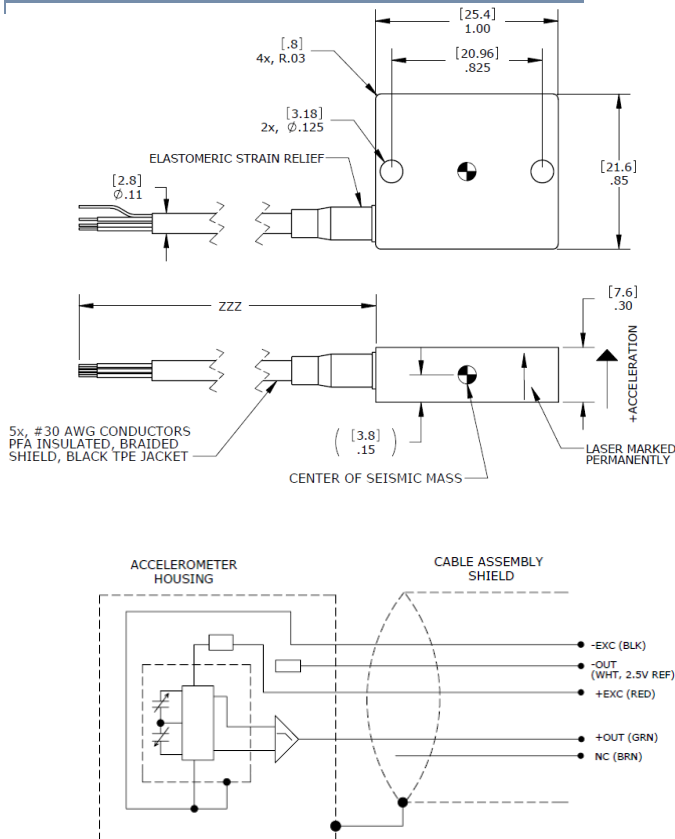


SPECIFICATIONS

- ◆ Advanced Temp Compensation
- ◆ Gas Damped, DC Response
- ◆ Amplified, Signal Conditioned
- ◆ MEMS Accelerometer

The Model 4602 is designed for both static and dynamic measurements in critical and demanding applications. The accelerometers are available in ranges from ± 2 to $\pm 200g$ and offers outstanding thermal performance. The model 4602 is temperature compensated from -55°C to $+125^{\circ}\text{C}$. The accelerometers incorporate a gas damped MEMS sensing element with integral over-range stops for high-g shock protection.

DIMENSIONS



FEATURES

- ◆ $\pm 2g$ to $\pm 200g$ Dynamic Range
- ◆ Amplified Output
- ◆ Low Power Consumption
- ◆ Gas Damping
- ◆ Integral Strain Relief
- ◆ DC, Low Frequency Response
- ◆ 8 to 36Vdc Excitation Voltage

APPLICATIONS

- ◆ Flight Testing
- ◆ Flutter and Nacelle Vibrations
- ◆ Structural Testing
- ◆ Test and Instrumentation
- ◆ Performance Testing
- ◆ Transportation

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									Notes
DYNAMIC									
Range (g)	±2	±5	±10	±30	±50	±100	±200		
Sensitivity (mV/g)	1000	400	200	67	40	20	10		
Frequency Response (Hz)	0-250	0-700	0-1000	0-1000	0-1000	0-1000	0-1000		±5% ¹
Non-Linearity (%FSO)	±0.5	±0.5	±0.5	±0.5	±0.5	±0.5	±0.5		
Transverse Sensitivity (%)	<2	<2	<2	<2	<2	<2	<2		<1 Typical
Damping Ratio	0.7	0.7	0.7	0.7	0.7	0.7	0.6		
Shock Limit (g)	2000	2000	5000	5000	5000	5000	5000		
Residual Noise (µV RMS)	600	750	800	800	800	800	800		Passband
Spectral Noise (µg/√Hz)	35	35	75	197	316	516	1033		Passband

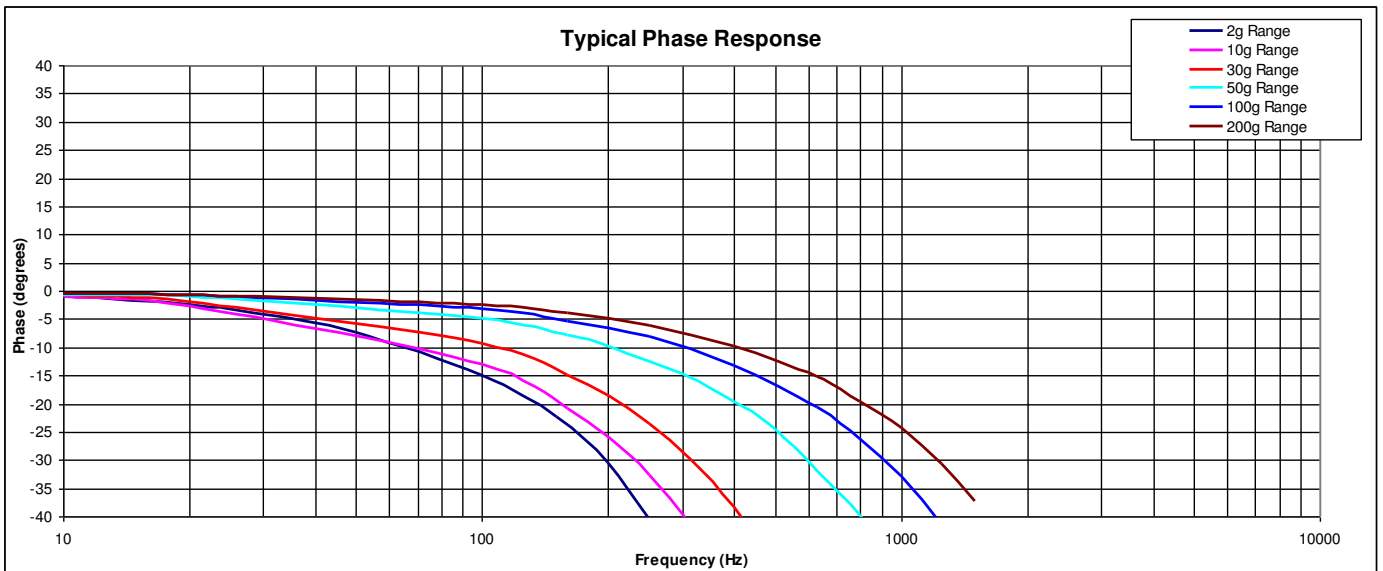
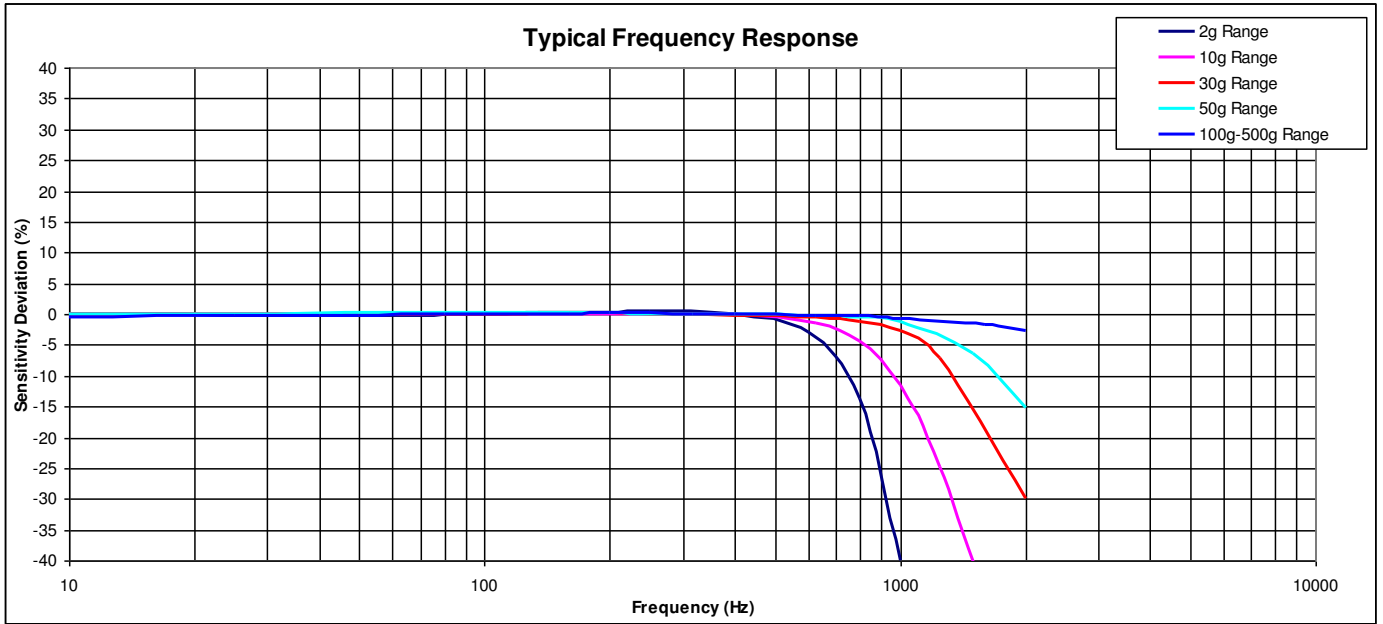
ELECTRICAL									
Zero Acceleration Output (mV)	±50								Differential
Excitation Voltage (Vdc)	8 to 36								
Excitation Current (mA)	<5								
Bias Voltage (Vdc)	2.5								
Output Resistance (Ω)	<100								
Insulation Resistance (MΩ)	>100								@100Vdc
Turn On Time (msec)	<100								
Ground 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)	-55 to 125								
Storage Temperature (°C)	-55 to 125								
Humidity	Epoxy Sealed, IP65								

PHYSICAL									
Case Material	Anodized Aluminum								
Cable	5x #30 AWG Conductors PFA Insulated, Braided Shield, TPE Jacket								
Weight (grams)	8								
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 ¹
Supplied accessories:	AC-A02285	2x #4-40 (7/16 length) Socket Head Cap Screw and Washer
Optional accessories:	AC-D02669 121	Triaxial Mounting Block Three Channel DC Differential Amplifier

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ORDERING INFORMATION

4602	GGG	ZZZ	C
Series Type			
Range			
002=2g			
005=5g			
010=10g			
030=30g			
050=50g			
100=100g			
200=200g			
Cable length			
060=60 inches			
120=120 inches			
180=180 inches			
240=240 inches			
300=300 inches			
360=360 inches			
480=480 inches			
600=600 inches			
197=197 inches, 5 meters			
394=394 inches, 10 meters			

Example; 4602-010-060-C
Model 4602, 10g range, 60inch cable length

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