

Model 4602 Accelerometer



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 $\pm 500g$ 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.

FEATURES

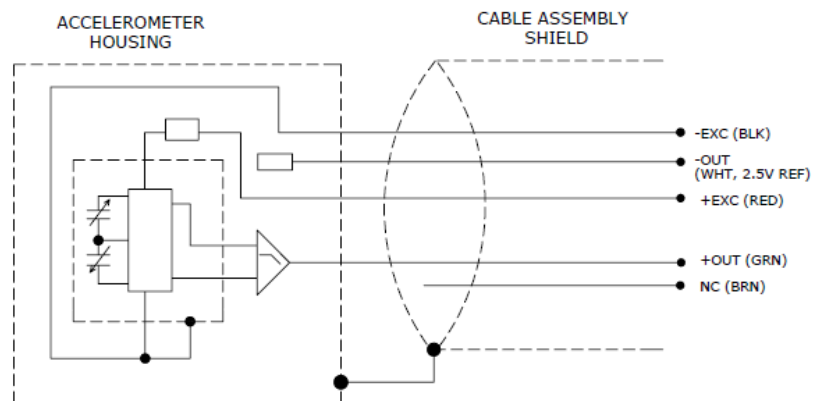
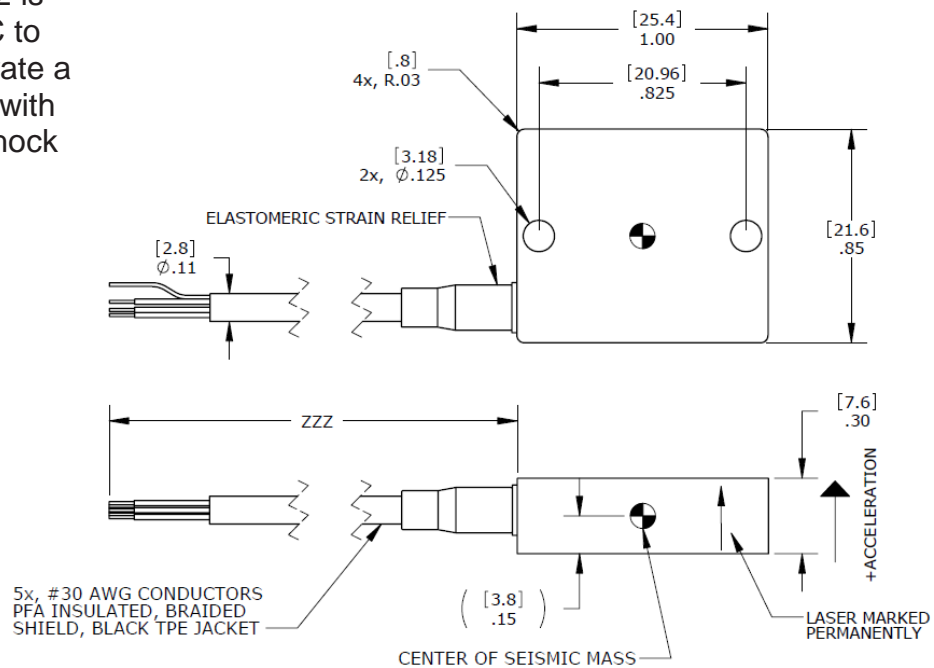
- $\pm 2g$ to $\pm 500g$ Dynamic Range
- Amplified Output
- Low Power Consumption
- Gas Damping
- Integral Strain Relief
- DC, Low Frequency Response
- 8 to 36Vdc Excitation Voltage

APPLICATIONS

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



dimensions



Model 4602 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

	±2	±10	±30	±50	±100	±200	±500	Notes
DYNAMIC								
Range (g)	±2	±10	±30	±50	±100	±200	±500	
Sensitivity (mV/g)	1000	200	67	40	20	10	4	
Frequency Response (Hz)	0-200	0-800	0-1000	0-1200	0-1500	0-1500	0-1500	±5% ¹
Frequency Response (Hz)	0-400	0-1000	0-1300	0-1700	0-2000	0-2000	0-2000	±1dB
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	0.6	0.5	
Shock Limit (g)	2000	5000	5000	5000	5000	5000	5000	
Residual Noise (µV RMS)	500	300	350	400	400	400	400	Passband
Spectral Noise (µg/√Hz)	35	75	197	316	516	1033	2582	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							

PHYSICAL

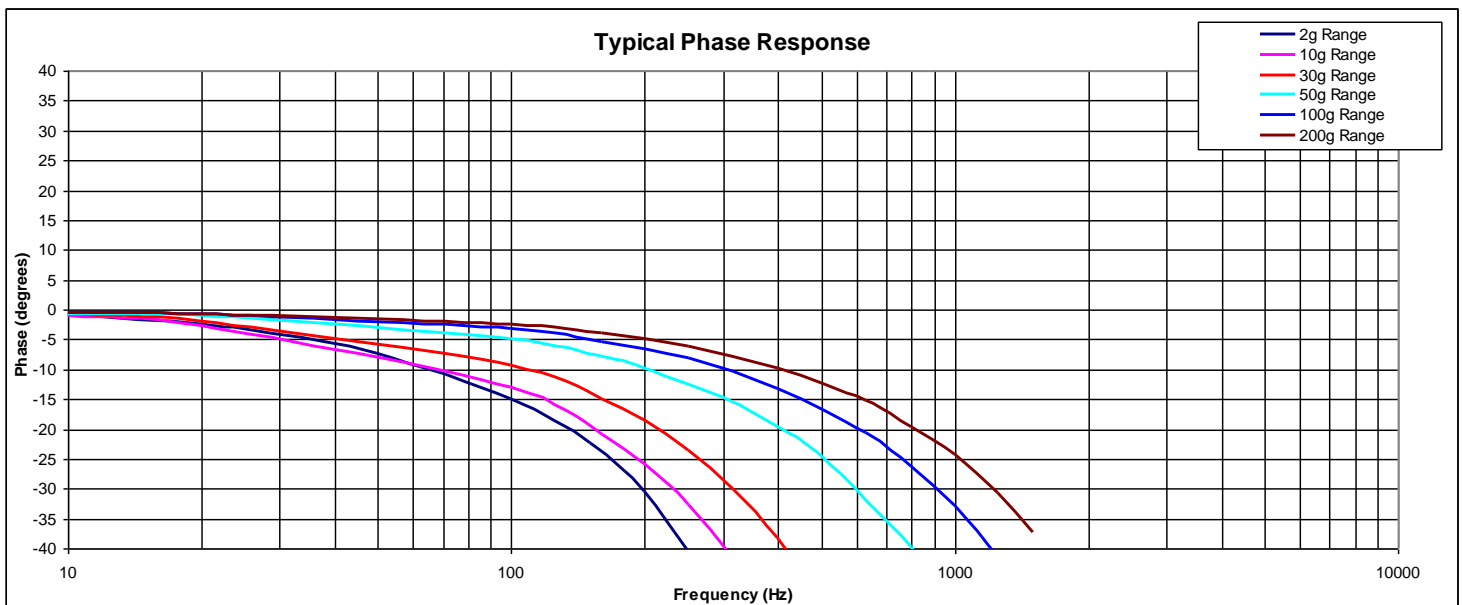
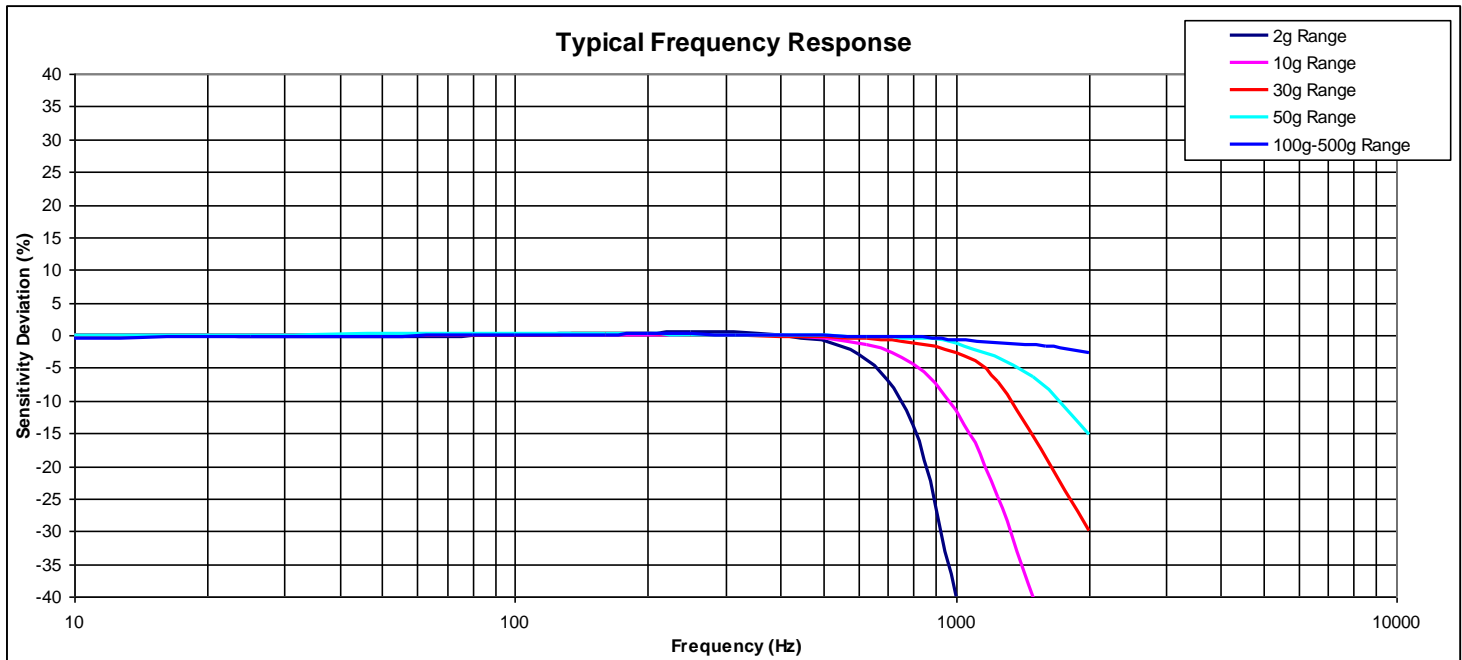
Case Material	Anodized Aluminum							
Cable	5x #30 AWG Conductors PFA Insulated, Braided Shield, TPE Jacket							
Weight (grams)	8							
Mounting	2x #4 or M3 Screws							
Mounting Torque	6 lb-in (0.7 N-m)							

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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Model 4602 Accelerometer

performance specifications



ordering info

PART NUMBERING Model Number+Range+Cable Length

4602-GGG-ZZZ-C-XX

I I Cable (060 is 60 inches)
I Range (010 is 10g)

Optional Dash Numbers

-01 4-pole LP filter option
-02 8-pole LP filter option

Example: 4602-010-060-C
Model 4602, 10g, 060" (5ft) Cable