

Model 4610 Accelerometer



MEMS Accelerometer
 DC Response, Ultra-Stable
 Advanced Temp Compensation
 Signal Conditioned Output
 5,000g Over-Range Protection



The **Model 4610** is an ultra-stable MEMS accelerometer ideal for static and dynamic applications. The accelerometer offers integral temperature compensation with dynamic range from ± 2 to $\pm 500g$. The model 4610 incorporates a gas damped MEMS element with mechanical overload stops that provide shock protection to 5,000g. The accelerometer has an operating temperature range of -55°C to $+125^{\circ}\text{C}$.

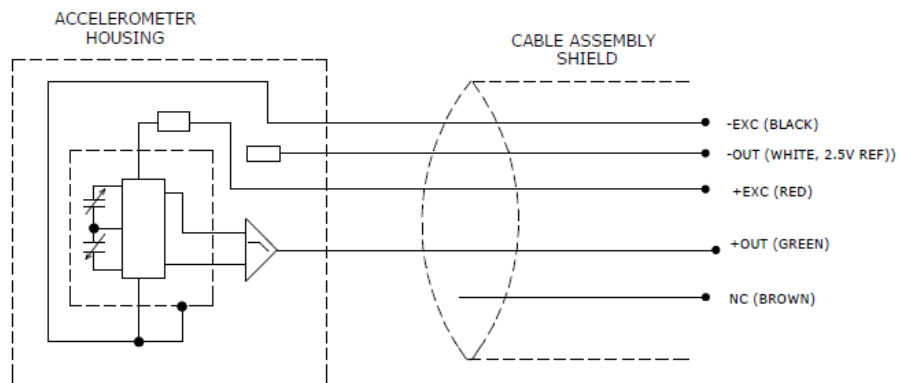
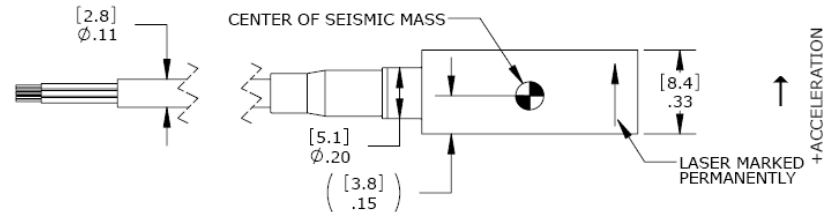
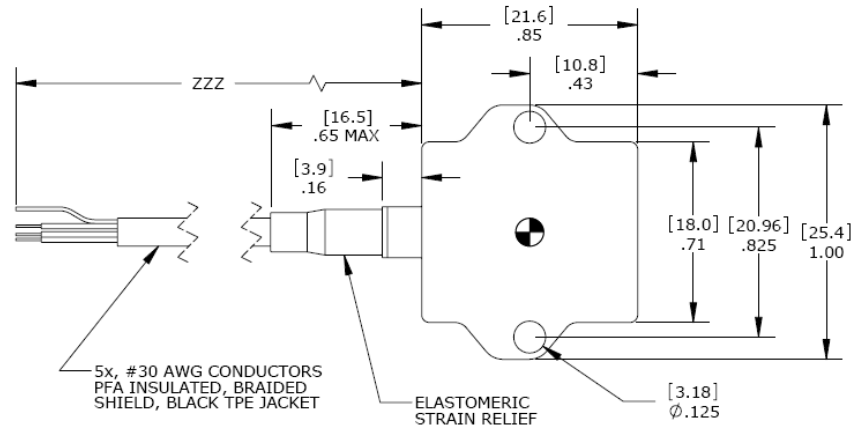
FEATURES

- $\pm 2g$ to $\pm 500g$ Dynamic Range
- 5000g Shock Protection
- -55°C to $+125^{\circ}\text{C}$ Operating Range
- 8 to 36Vdc Excitation Voltage
- Gas Damping, DC Response
- Integral Cable
- Temperature Compensated

APPLICATIONS

- Low Frequency Monitoring
- Transportation
- Test & Instrumentation
- Machine Control
- Road Vehicle Testing

dimensions



Model 4610 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	±20	±50	±100	±200	±500	Notes
Range (g)	±2	±5	±10	±20	±50	±100	±200	±500	
Sensitivity (mV/g)	1000	400	200	100	40	20	10	4	
Frequency Response (Hz)	0-250	0-700	0-1000	0-1000	0-1000	0-1500	0-1500	0-1500	±5% ¹
Natural Frequency (Hz)	700	800	1000	1500	4000	6000	8000	10000	
Non-Linearity (%FSO)	±0.5	±0.5	±0.5	±0.5	±0.5	±0.5	±0.5	±0.5	
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	500	500	550	500	500	500	400	Passband
Spectral Noise (µg/√Hz)	35	72	125	208	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								
Full Scale Output Voltage (V)	±2								
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								
Housing (Active Element & Electronics)	Hermetic Solder Seal								
Humidity (Housing)	Epoxy Seal, IP65								

PHYSICAL

Case Material	Anodized Aluminum
Cable	5x #30 AWG Conductors PFA Insulated Leads, Braided Shield, TPE Jacket
Weight (grams)	6 (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 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 3-Channel Precision Low Noise DC Amplifier

ordering info

PART NUMBERING Model Number+Range+Cable Length

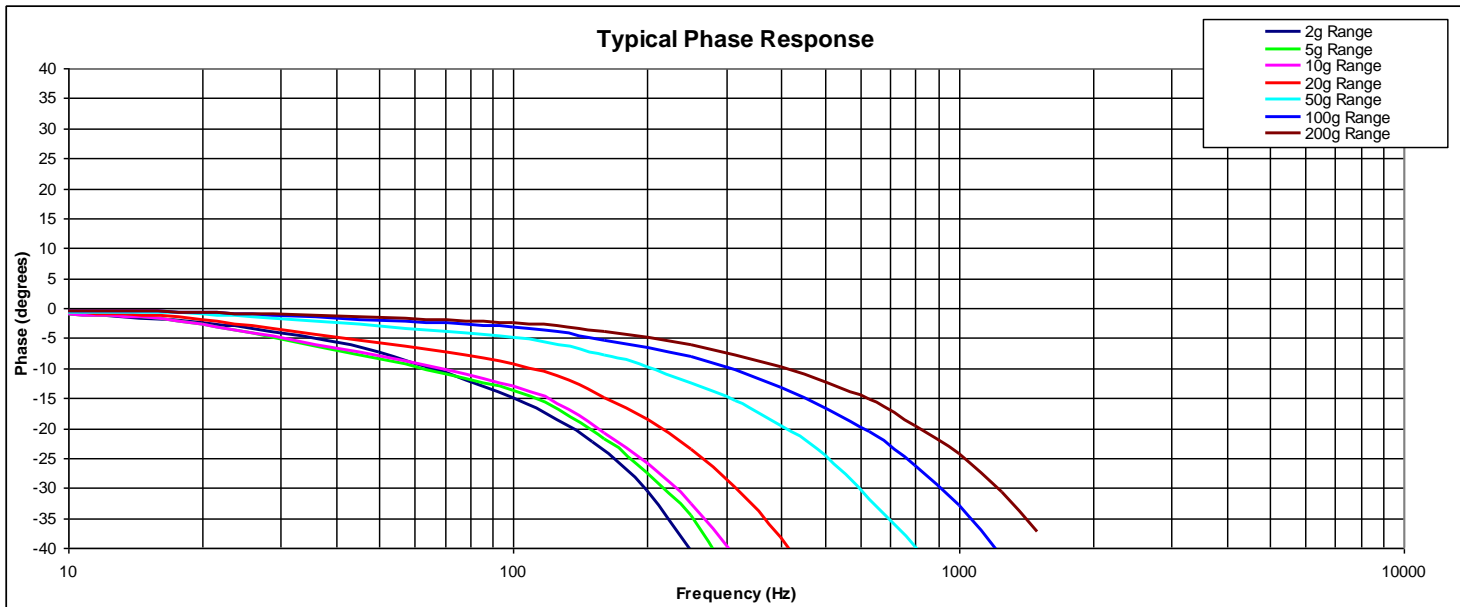
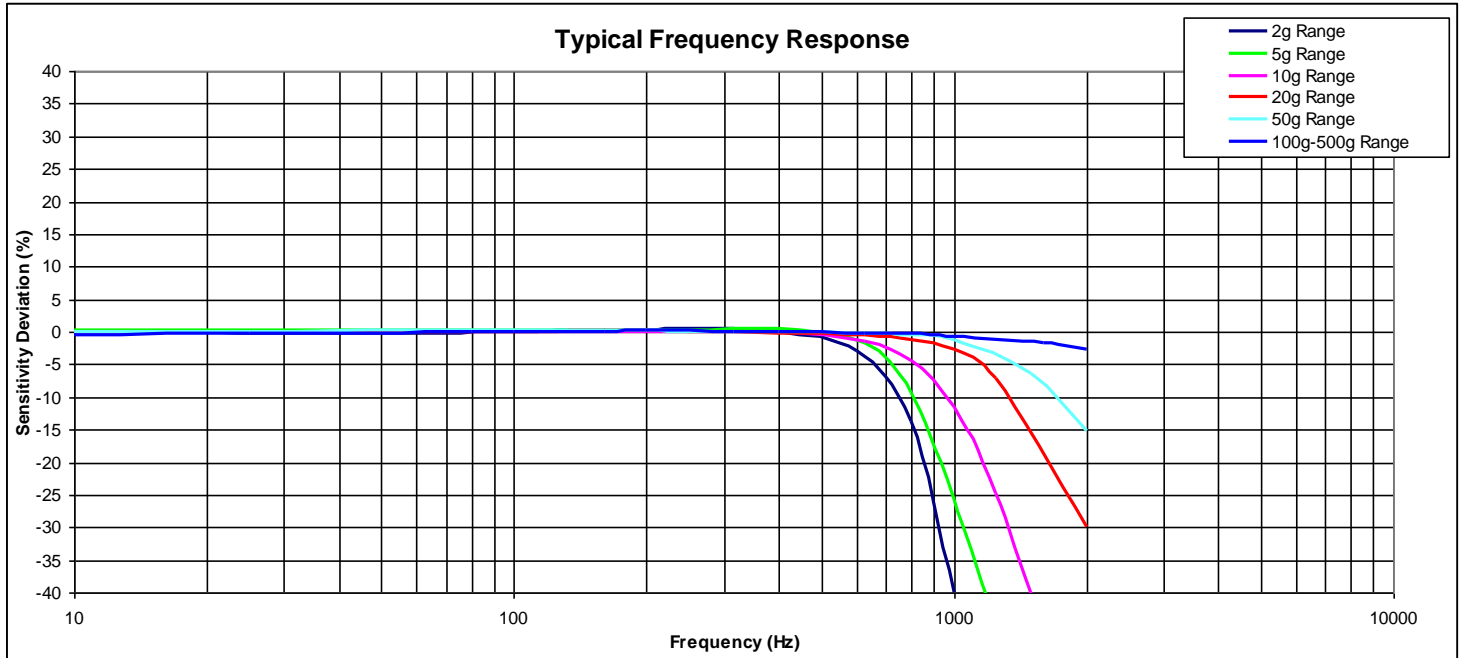
4610-GGG-ZZZ-C

| |
| | Cable (060 is 60 inches)
| Range (020 is 20g)

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

Model 4610 Accelerometer

performance specifications



联系方式



深圳市亿为测控电子有限公司
Shenzhen Bill-Well Measurement & Control Electronics Co., Ltd.

广东省深圳市南山区创业路怡海广场东座2407 邮编：518000

电话：+86 755 2641 9890 传真：+86 755 2641 9680

电子邮箱：sales@bill-well.com