



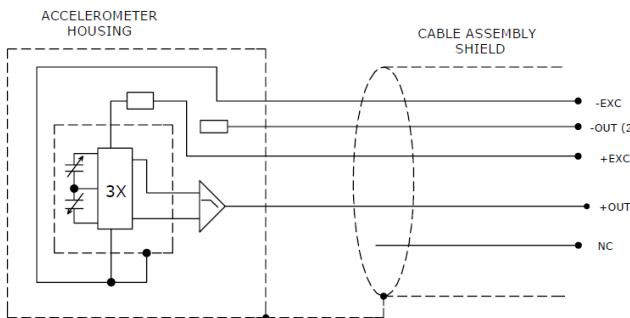
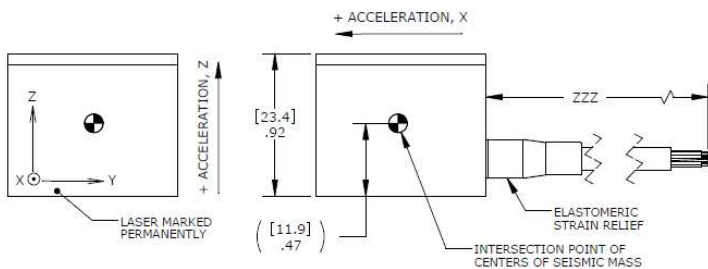
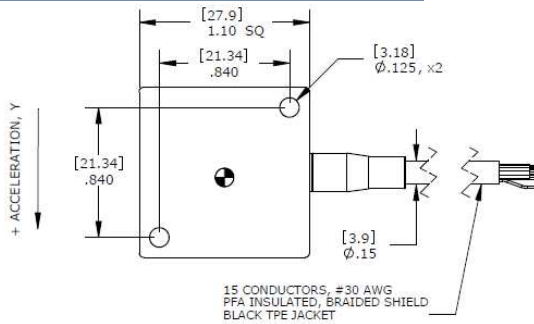
MODEL 4630 ACCELEROMETER

SPECIFICATIONS

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

The Model 4630 is an ultra-stable triaxial accelerometer offering both static and dynamic response. The silicon MEMS accelerometer incorporates integral temperature compensation that provides a stable output over a wide operating range. The three independent circuit assemblies have independent signal conditioning and can operate on common or separate power supplies. The advanced MEMS sensing elements are gas damped in order to provide a wide stable frequency response.

DIMENSIONS



FEATURES

- Three Independent Circuits
- Low Current Consumption
- Ranges: $\pm 2g$ to $\pm 200g$
- Gas Damped, DC Response
- High Over-Range Protection
- $-55^{\circ}C$ to $+125^{\circ}C$ Operating Range
- Low Transverse Sensitivity

APPLICATIONS

- Transportation
- Vibration/Shock Monitoring
- Road Vehicle Testing
- Low Frequency Applications
- Modal Analyses

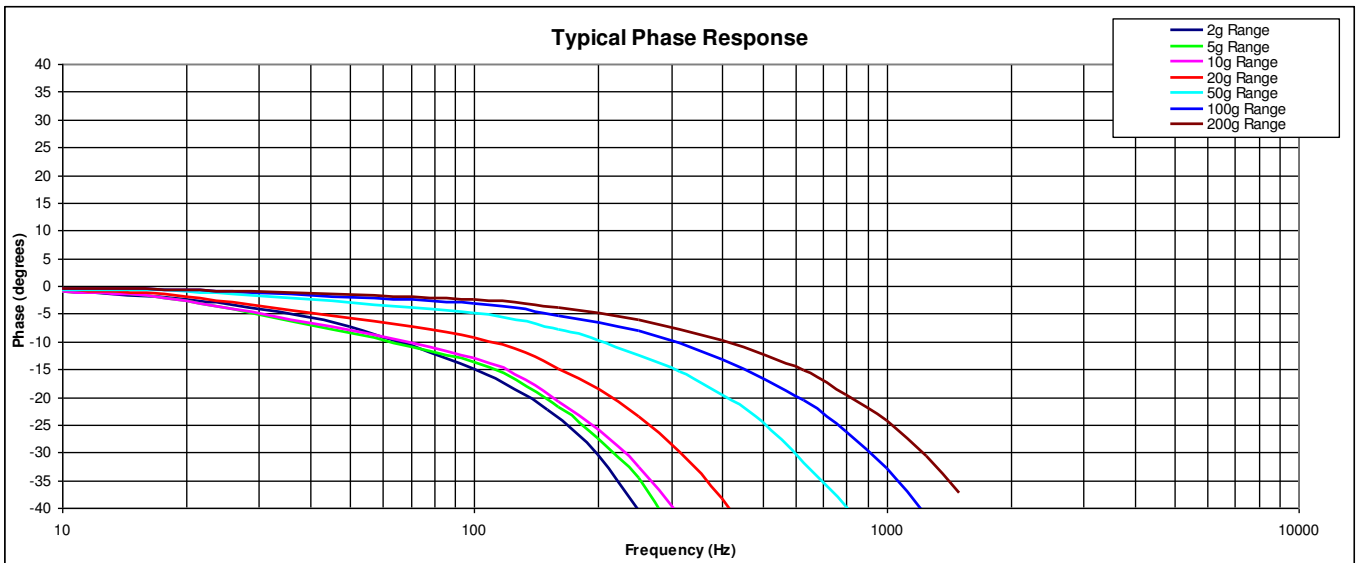
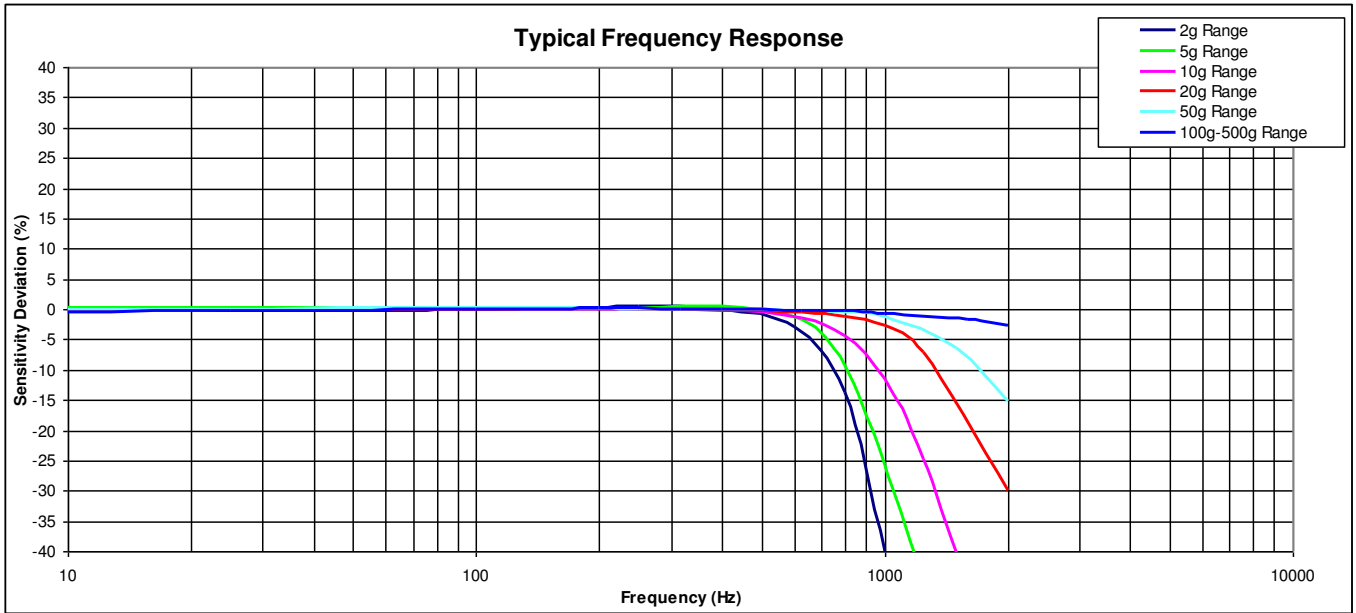
X-AXIS	Y-AXIS	Z-AXIS
-EXC	BLK/BLU	BLK/YEL
-OUT (2.5V REF)	WHT/BLU	WHT/YEL
+EXC	RED/BLU	RED/YEL
+OUT	GRN/BLU	GRN/YEL
NC	BRN/BLU	BRN/YEL

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	±20	±30	±50	±100	±200		
Sensitivity (mV/g)	1000	400	200	100	67	40	20	10		
Frequency Response (Hz)	0-200	0-600	0-800	0-800	0-800	0-800	0-1000	0-1000	±5% ¹	
Natural Frequency (Hz)	700	800	1000	1500	1500	4000	6000	8000		
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	0.7	0.6		
Shock Limit (g)	2000	5000	5000	5000	5000	5000	5000	5000		
Residual Noise (µV RMS)	550	700	750	1100	750	750	800	800		Passband
Spectral Noise (µg/√Hz)	38	71	126	379	378	632	1265	2530		Passband
ELECTRICAL										
Zero Acceleration Output (mV)	±50									Differential
Excitation Voltage (Vdc)	8 to 36									
Excitation Current (mA)	<15 (<5 per channel)									
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	15x #30 AWG Conductors PFA Insulated Leads, Braided Shield, TPE Jacket									
Weight (grams)	40									
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-D02855	2x #4-40 (1 ^{1/8} length) Socket Head Cap Screw and Washer								
Optional accessories:	121	3-Channel Precision Low Noise DC Amplifier								

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ORDERING INFORMATION

PART NUMBERING Model Number+Range+Cable Length

4630-GGG-ZZZ-C

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

Example: 4630-020-060-C

Model 4630, 20g, 60" (5ft) Cable

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