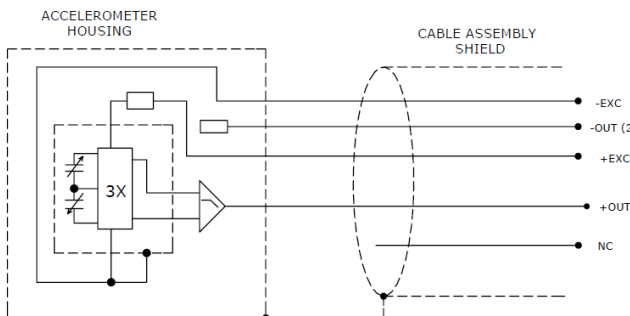
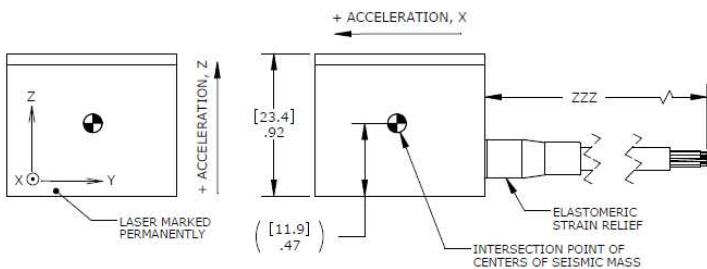
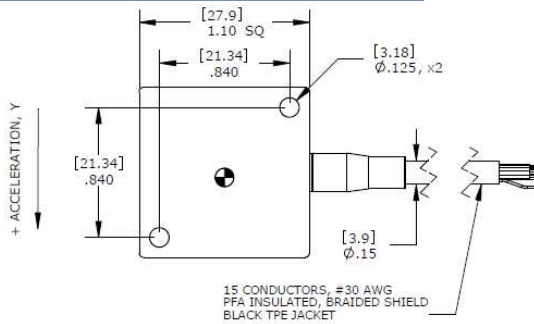


MODEL 4630 ACCELEROMETER



DIMENSIONS



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.

FEATURES

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

APPLICATIONS

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

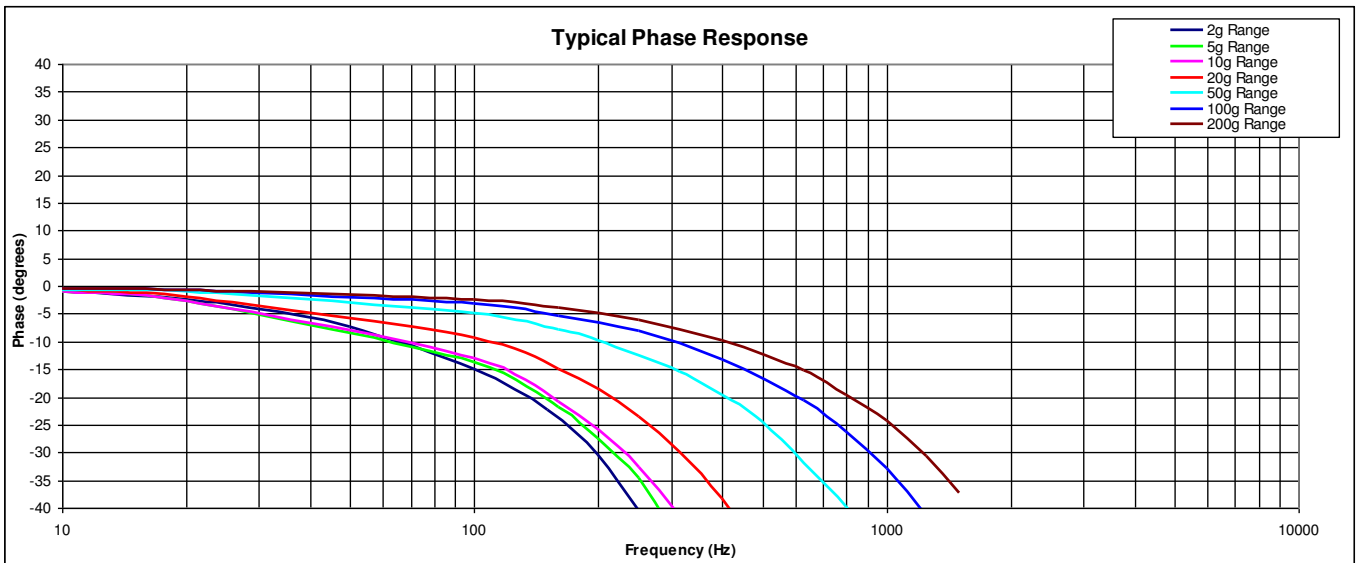
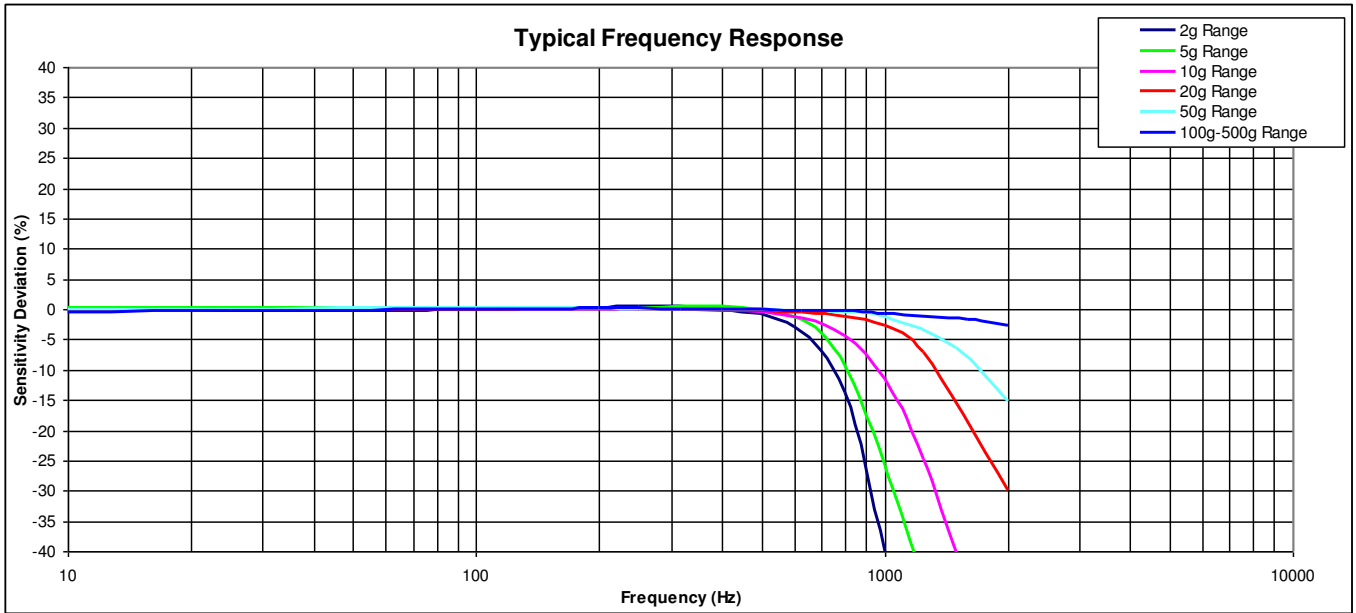
X-AXIS	Y-AXIS	Z-AXIS
-EXC	BLK/BLU	BLK/YEL
-OUT (2.5V REF)	WHT/BLU	WHT/YEL
+EXC	RED/BLU	RED/YEL
+OUT	GRN/BLU	GRN/YEL
NC	BRN/BLU	BRN/YEL

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

4630	GGG	ZZZ	C
Series Type			
Range			
002=2g			
005=5g			
010=10g			
020=20g			
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; 4630-010-060-C
Model 4630, 10g range, 60inch cable length

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