



MODEL 4630A TRIAXIAL ACCELEROMETER

SPECIFICATIONS

- **MEMS Triaxial Accelerometer**
- **Micro-g Resolution, Low Noise**
- **Accurate Temp Compensation**
- **Signal Conditioned Output**

The Model 4630A is an ultra low-noise triaxial accelerometer offering both static and dynamic response. The silicon MEMS accelerometer is gas damped in order to provide a wide stable frequency response. The three independent circuit assemblies have independent signal conditioning and can operate on common or separate power supplies. The model 4630A accelerometer is available in ranges from ± 2 to $\pm 100g$ with an operating temperature range of $-55^{\circ}C$ to $+125^{\circ}C$.

For a single axis version, TE Connectivity also offers the model 4610A accelerometer.

APPLICATIONS

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

FEATURES

- Three Independent Circuits
- $\pm 2g$ to $\pm 100g$ Dynamic Range
- 5,000g Shock Protection
- 8 to 30Vdc Excitation Voltage
- Gas Damping
- Integral Strain Relief
- Temperature Compensated

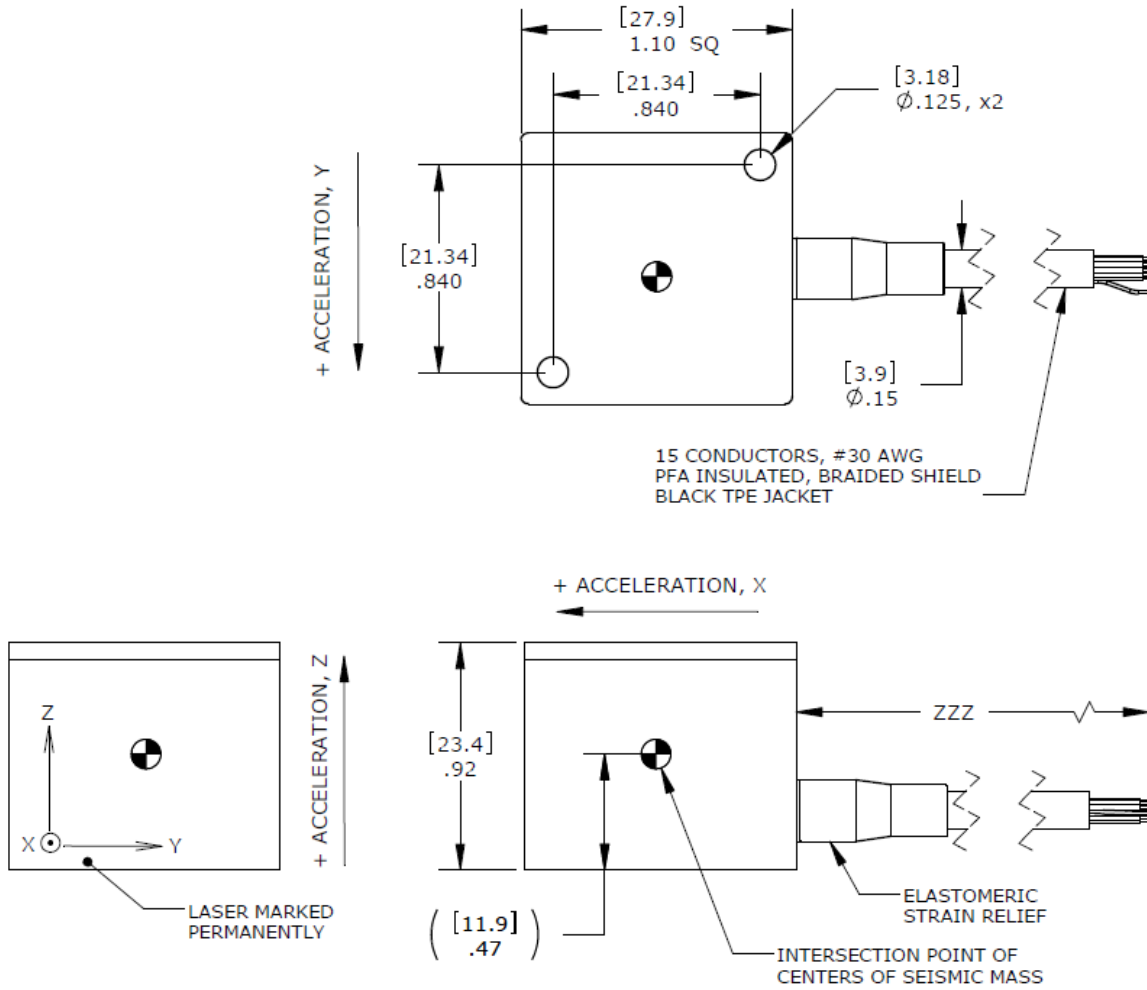
PERFORMANCE SPECIFICATIONS

All values are typical at +24°C, 80Hz and 12Vdc excitation unless otherwise stated. TE Connectivity reserves the right to update and change these specifications without notice.

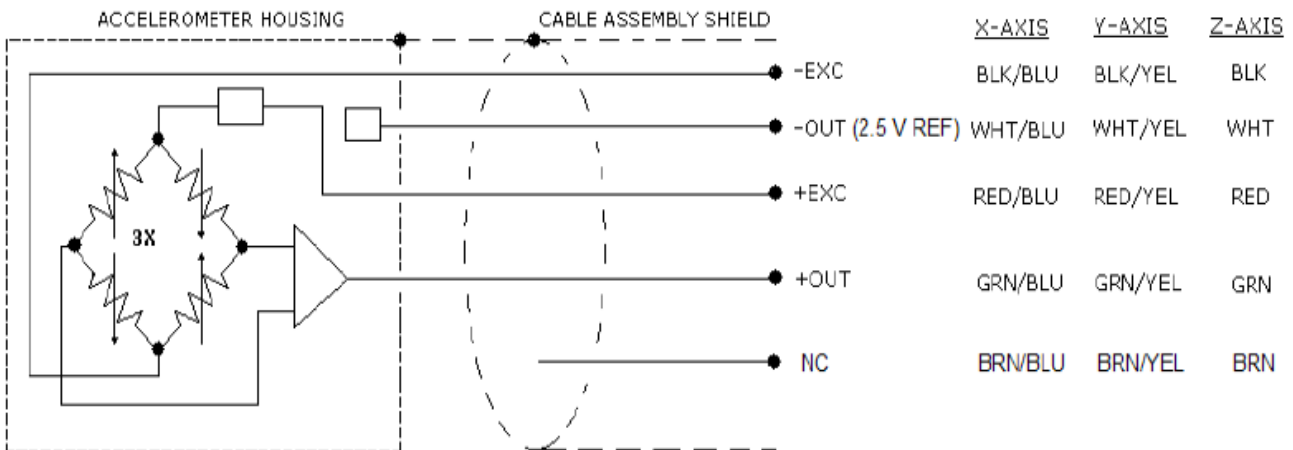
Parameters							Notes
DYNAMIC							
Range (g)	±2	±5	±10	±20	±50	±100	
Sensitivity (mV/g)	1000	400	200	100	40	20	±10%
Frequency Response (Hz)	0-150	0-300	0-400	0-600	0-800	0-1000	±5%
Frequency Response (Hz)	0-400	0-500	0-600	0-800	0-1100	0-1300	±1dB
Natural Frequency (Hz)	700	800	1000	1500	4000	6000	
Non-Linearity (%FSO)	±1.0	±1.0	±1.0	±1.0	±1.0	±1.0	
Transverse Sensitivity (%)	<3	<3	<3	<3	<3	<3	<1 Typical
Damping Ratio	0.7	0.7	0.7	0.7	0.7	0.7	
Shock Limit (g)	2000	2000	5000	5000	5000	5000	
Residual Noise (µV RMS)	25	20	23	31	26	32	Passband
Residual Noise (µg/√Hz RMS)	2	3	6	13	21	41	Spectral
ELECTRICAL							
Zero Acceleration Output (mV)	±50						Differential
Excitation Voltage (Vdc)	8 to 30						
Excitation Current (mA)	<36						
Bias Voltage (Vdc)	2.5						
Full Scale Output Voltage (Vdc)	±2						
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)	±0.010						-40 to +100°C
Thermal Sensitivity Shift (%/°C)	±0.014						-40 to +100°C
Operating Temperature (°C)	-55 to +125						
Compensated Temperature (°C)	-40 to +100						
Humidity	Epoxy Sealed, IP65						
PHYSICAL							
Case Material	Anodized Aluminum						
Cable	15x #30 AWG Conductors PFA Insulated Leads, Braided Shield, TPE Jacket						
Weight (grams)	65 (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					
Supplied accessories:	AC-D02855	2x #4-40 (1 ^{1/8} length) Socket Head Cap Screw and Washer					
Optional accessories:	AC-D02744 121	Adhesive Mounting Adaptor 3-Channel Precision Low Noise DC Amplifier					

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DIMENSIONS



SCHEMATIC



ORDERING INFORMATION

4630A	GGG	ZZZ
Range		
002=2g		
005=5g		
010=10g		
020=20g		
050=50g		
100=100g		
Cable length		
060=60 inches		
120=120 inches		
240=240 inches		
360=360 inches		
480=480 inches		
600=600 inches		
197=197 inches, 5 meters		
394-394 inches, 10 meters		

Example; 4630A-010-060
Model 4630A, 10g range, 60inch (5ft) cable length

NORTH AMERICA
Measurement Specialties, Inc.,
a TE Connectivity Company
Tel: 800-522-6752
customercare.akrn@te.com

EUROPE
MEAS France SAS
a TE Connectivity Company
Tel: +31 73 624 6999
customercare.lcsb@te.com

ASIA
Measurement Specialties (China), Ltd.,
a TE Connectivity Company
Tel: 0400-820-6015
customercare.shzn@te.com

TE.com/sensorsolutions

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