



MODEL 4610A ACCELEROMETER

SPECIFICATIONS

- High Performance DC Response
- Micro-g Resolution, Low Noise
- Advanced Temp Compensation
- 5,000g Over-Range Protection

The Model 4610A is an ultra-low-noise accelerometer designed for both static and dynamic measurements. The accelerometer offers integral temperature compensation with dynamic range from ± 2 to $\pm 100g$. The model 4610A incorporates a gas damped MEMS element with mechanical overload stops for high-g shock protection. The accelerometer has an operating temperature range of $-55^{\circ}C$ to $+125^{\circ}C$.

For a triaxial version, TE Connectivity also offers the model 4630A accelerometer.

APPLICATIONS

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

FEATURES

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

PERFORMANCE SPECIFICATIONS

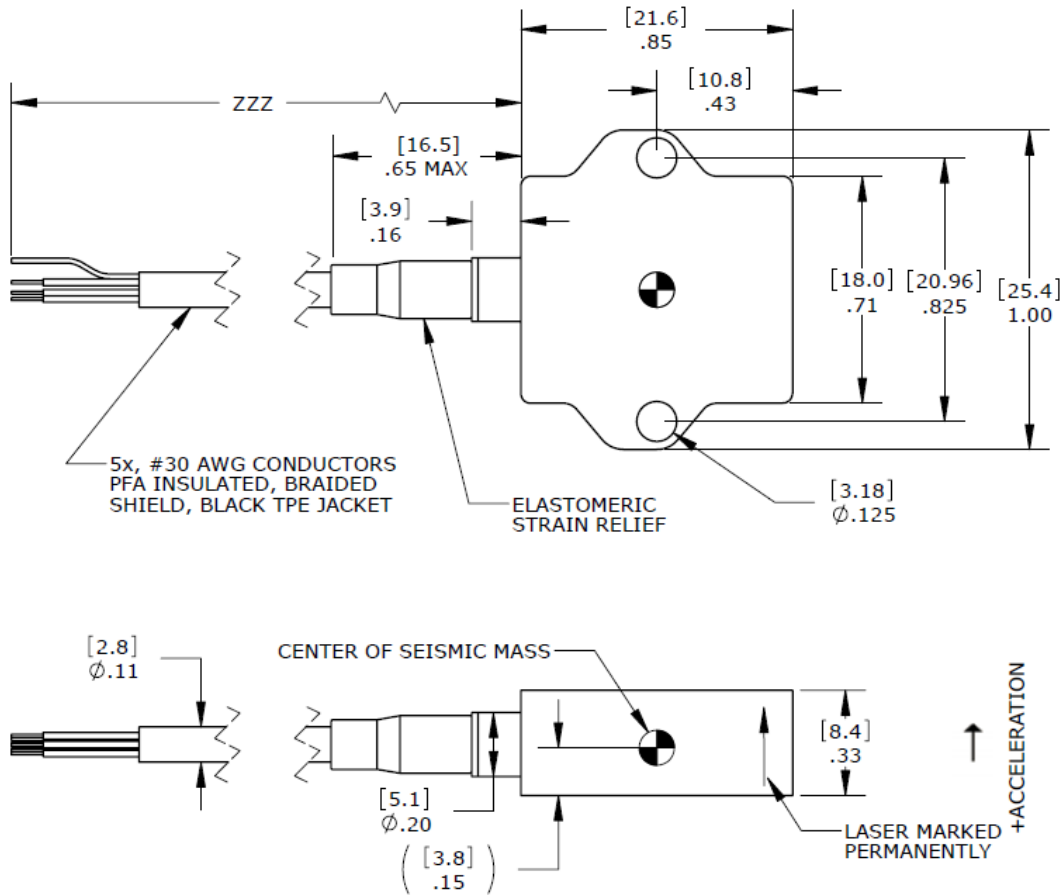
All values are typical at +24°C, 80Hz and 12Vdc excitation unless otherwise stated. TE Connectivity reserves the right to update and change these specifications without notice.

Parameters								Notes
DYNAMIC								
Range (g)	±2	±5	±10	±20	±50	±100		
Sensitivity (mV/g)	1000	400	200	100	40	20		±10%
Frequency Response (Hz)	0-200	0-300	0-400	0-600	0-1000	0-1500		±5%
Frequency Response (Hz)	0-400	0-500	0-600	0-1000	0-1500	0-2000		±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)	<12							
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	4x #30 AWG Conductors PFA Insulated Leads, Braided Shield, TPE Jacket							
Weight (grams)	7 (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-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						

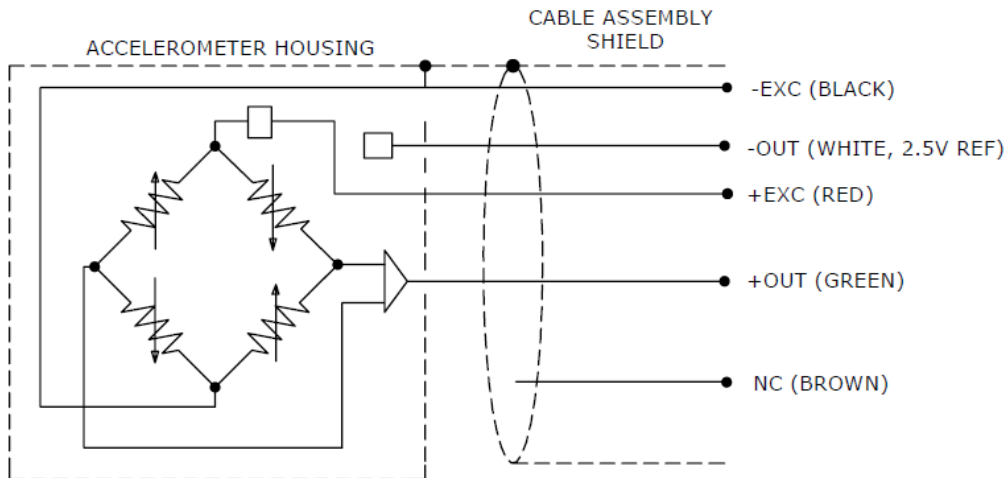
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DIMENSIONS

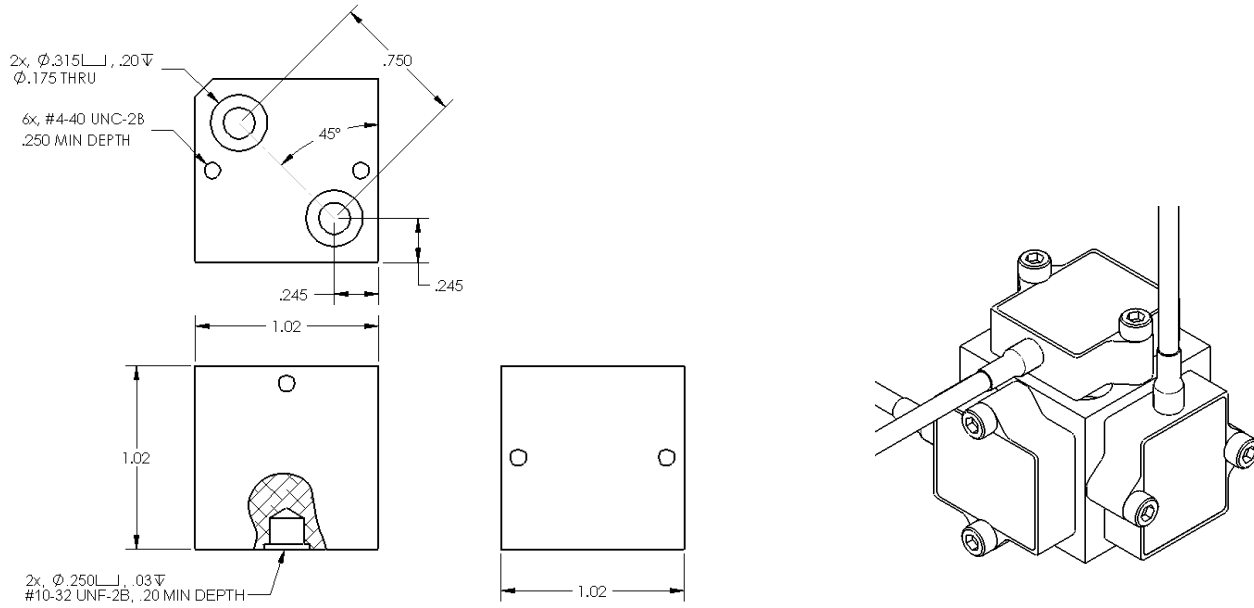


SCHEMATIC



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TRIAxIAL MOUNTING BLOCK (PN AC-D02669)



ORDERING INFORMATION

4610A	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; 4610A-002-060
Model 4610A, 2g range, 60inch (5ft) cable length

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