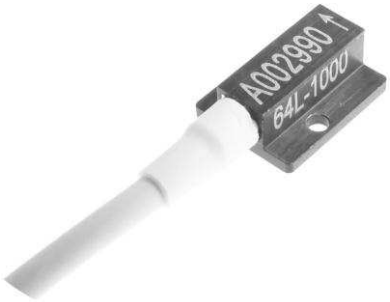
MODEL 64L ACCELEROMETER

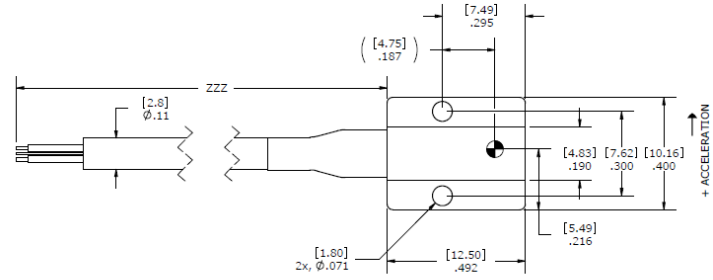


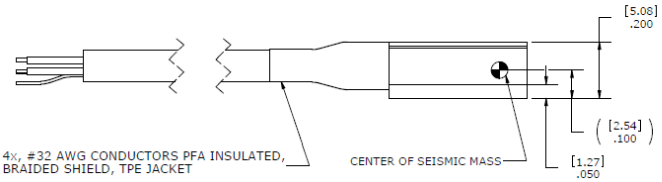
SPECIFICATIONS

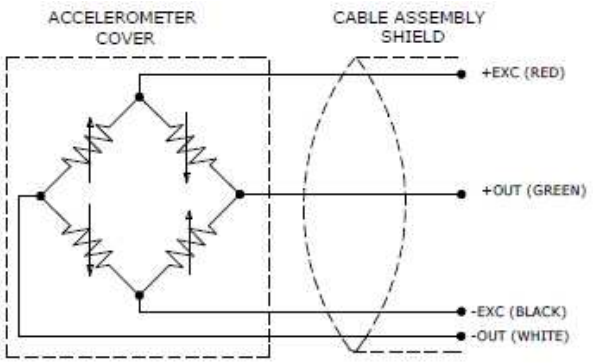
- **DC Response Accelerometer**
- **Durable Cable, Small Package**
- **Transverse Sensitive Axis**
- **SAE J2570 Compliant**

The Model 64L Accelerometer is based on an advanced piezoresistive MEMS sensing element which offers exceptional dynamic range and stability. This unit features a full bridge output configuration with a temperature range from 0 to +50º C. A slight amount of internal gas damping provides outstanding shock survivability and a flat amplitude/phase response up to >4kHz. The Model 64L is compliant with SAE J211 standards for anthropomorphic dummy instrumentation.

DIMENSIONS







FEATURES

- Piezoresistive MEMS Sensor
- ±50g to ±6,000g Ranges
- 2-10 Vdc Excitation
- -40 to +121ºC Temp Range
- Low Noise Jacketed Cable
- 1% Transverse Sensitivity Option
- <±25 mV Zero Offset

APPLICATIONS

- Safety Crash Testing
  - Auto
  - Truck
  - Recreational Vehicles
- Shock Testing

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PERFORMANCE SPECIFICATIONS

All values are typical at ±24°C, 80Hz and 10Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

Parameters							
DYNAMIC							**Notes**
Range(g)	±50	±100	±200	±500	±2000	±6000	
Sensitivity (mV/g) [1]	2	0.9	0.8	0.4	0.15	0.10	
Frequency Response (Hz)	0-400	0-500	0-500	0-600	0-2000	0-2000	± 2%
	0-1000	0-1200	0-1200	0-1400	0-3500	0-3500	± ½dB
	0-1400	0-1500	0-1500	0-2000	0-4500	0-4500	± 1dB
Resonant Frequency (Hz)	4000	6000	8000	15000	26000	26000	
Damping Ratio	0.5	0.5	0.5	0.3	0.05	0.05	Typical
Shock Limit (g)	5000	5000	5000	10000	10000	10000	
Non-Linearity (% of reading)	±1	±1	±1	±1	±1	±1	
Transverse Sensitivity (%)	<3	<3	<3	<3	<3	<3	<1% Option
ELECTRICAL							
Zero Acceleration Output (mV)	<±25						<±10mV Option
Excitation (Vdc)	2 to 10						
Input Resistance (Ω)	2400-6000						
Output Resistance (Ω)	2400-6000						
Insulation Resistance (MΩ)	>100						@100Vdc
Residual Noise (µV RMS)	<10						
Ground Isolation	Isolated from mounting surface						
ENVIRONMENTAL							
Thermal Zero Shift (%FSO/°C)	±0.04						From 0 to +50°C
Thermal Sensitivity Shift (%/°C)	-0.20 ±0.05						From 0 to +50°C
Operating Temperature (°C)	-40 to +121						
Storage Temperature (°C)	-40 to +121						
Humidity	Epoxy Sealed, IP61						
PHYSICAL							
Case & Cover Material	Anodized Aluminum						
Cable (Integral 30 Foot Cable)	4x #32 AWG Conductors PFA Insulated, Braided Shield, TPE Jacket						
Weight (grams)	1.0						Cable Not Included
Mounting	2x #0-80 x 3/16" Socket Head Cap Screws						Torque 3 lb-in

[1] Output is ratiometric to excitation voltage

Calibration supplied:	CS-FREQ-0100	NIST Traceable Amplitude Calibration from 20Hz to ±1dB Frequency Limit
Supplied accessories:	AC-A02053	2x #0-80 (3/16 length) Socket Head Cap Screw, 2x #0 Washer, 1x Allen Key
Optional accessories:	MTG-E2	Triaxial Mounting Block
	121	3-Channel Precision Low Noise DC Amplifier
	140A	Auto-Zero Inline Amplifier

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ORDERING INFORMATION

PART NUMBERING Model Number+Range+Cable Length+Options

64L-GGGG-CCCT-ZZZ
- l l l l_____Options
- l l l_____1% Transverse Sensitivity when “T” is present
- l l_____Cable (360 is 360 inches)
- l_____Range (0100 is 100 g)

Optional Dash Numbers
-001 5Vdc Calibration
-002 2Vdc Calibration

Example: 64L-2000-360
Model 64L, 2000g, 360” (30ft) Cable), No Options.

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