

MODEL 64B ACCELEROMETER

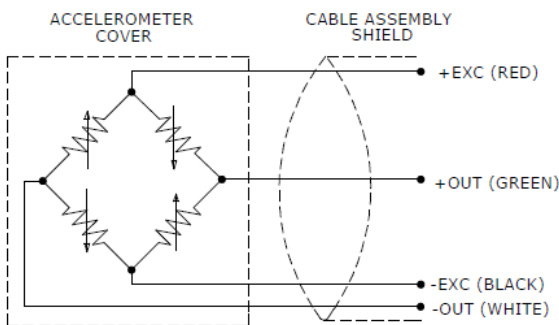
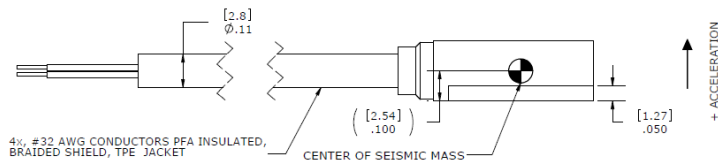
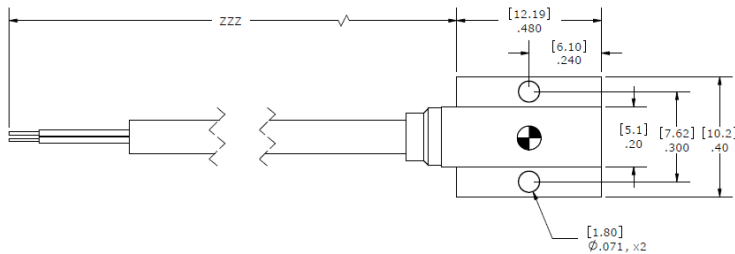


SPECIFICATIONS

- DC Response Accelerometer
- Durable Low Noise Cable
- Environmentally Sealed
- SAE J2570 Compliant

The Model 64B 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 +50° C. A slight amount of internal gas damping provides outstanding shock survivability and a flat amplitude and phase response up to 7kHz. The Model 64B is compliant with SAE J211 standards for anthropomorphic dummy instrumentation.

DIMENSIONS



FEATURES

- Piezoresistive MEMS Sensor
- ±50g to ±6,000g Ranges
- 2-10 Vdc Excitation
- 0-50°C Temperature Range
- Low Noise Jacketed Cable
- 1% Transverse Sensitivity Option
- <±25 mV Zero Offset

APPLICATIONS

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

PERFORMANCE SPECIFICATIONS

All values are typical at $\pm 24^{\circ}\text{C}$, 80Hz and 10Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

Parameters

DYNAMIC

	± 50	± 100	± 200	± 500	± 2000	± 6000	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	0-600	0-800	0-3000	0-3000	$\pm 2\%$
	0-1000	0-1200	0-1400	0-2000	0-5000	0-5000	$\pm 1/2\text{dB}$
	0-1400	0-1500	0-1900	0-2800	0-7000	0-7000	$\pm 1\text{dB}$
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						< $\pm 10\text{mV}$ Option
Excitation (Vdc)	2 to 10						
Input Resistance (Ω)	2400-6000						
Output Resistance (Ω)	2400-6000						
Insulation Resistance (M Ω)	>100						@100Vdc
Residual Noise ($\mu\text{V RMS}$)	<10						
Ground Isolation	Isolated from mounting surface						

ENVIRONMENTAL

Thermal Zero Shift (%FSO/ $^{\circ}\text{C}$)	± 0.04						From 0 to $+50^{\circ}\text{C}$
Thermal Sensitivity Shift (%/ $^{\circ}\text{C}$)	-0.20 ± 0.05						From 0 to $+50^{\circ}\text{C}$
Operating Temperature ($^{\circ}\text{C}$)	-40 to $+121$						
Storage Temperature ($^{\circ}\text{C}$)	-40 to $+121$						
Humidity	Epoxy Sealed, IP65						

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

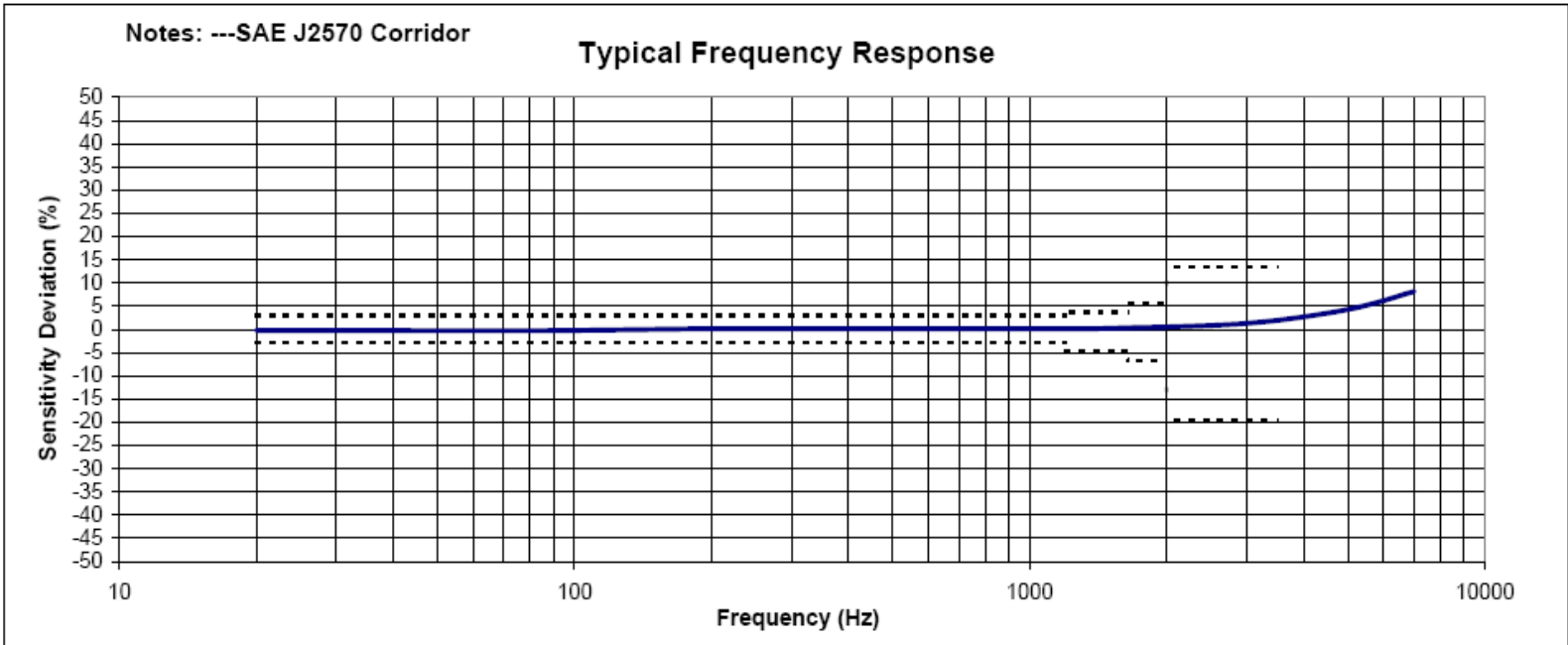
¹ Output is ratiometric to excitation voltage

Calibration supplied: CS-FREQ-0100 NIST Traceable Amplitude Calibration from 20Hz to $\pm 1\text{dB}$ 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-E4 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

64B-GGGG-CCCT-ZZZ

| | | | Options
 | | | 1% Transverse Sensitivity when "T" is present
 | | Cable (360 is 360 inches)
 | Range (0100 is 100 g)

Optional Dash Numbers
 -001 5Vdc Calibration
 -004 ZMO <10mV
 -005 2Vdc Calibration

Example: 64B-2000-360

Model 64B, 2000g, 360" (30ft) Cable), No Options.

t&m@meas-spec.com

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