

Model 64 Accelerometer



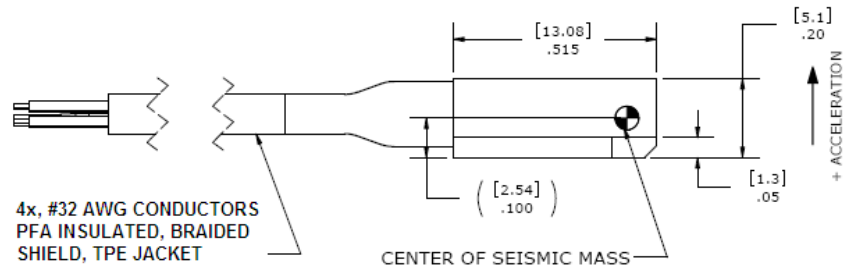
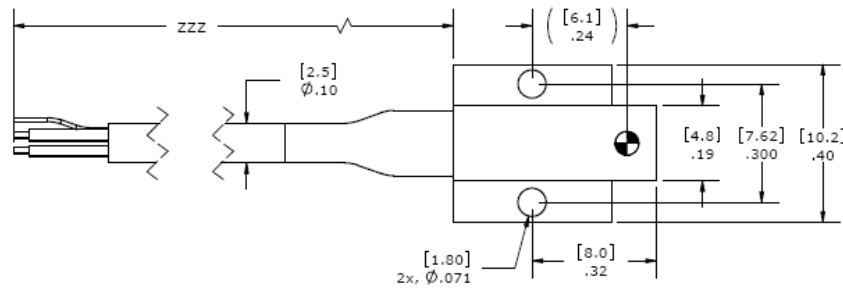
DC Response Accelerometer
Durable Low Noise Cable
Small Package
SAE J2570 Compliant



The Model 64 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 compensated 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 64 is compliant with SAE J211 standards for anthropomorphic dummy instrumentation.

dimensions

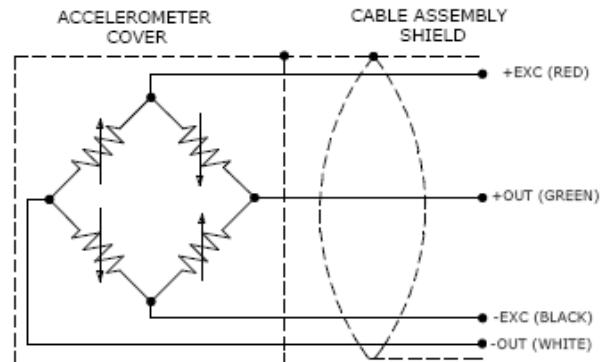


FEATURES

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

APPLICATIONS

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



Model 64 Accelerometer

performance specifications

All values are typical at $\pm 24^\circ\text{C}$, 100 Hz and 10Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice. Standard product parameters are described in PSC-1004 for Plug & Play DC Accelerometers.

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	$\pm 2\%$ ($\pm 3\%$ for 2000g/6000g)
	0-1000	0-1200	0-1400	0-2000	0-5000	0-5000	$\pm 1/2\text{dB}$ ($\pm 7\%$ for 2000g/6000g)
	0-1400	0-1500	0-1900	0-2800	0-7000	0-7000	$\pm 1\text{dB}$ ($\pm 13\%$ for 2000g/6000g)
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	
Repeatability (Equiv. g)	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	After full scale shock
Transverse Sensitivity (%)	< 3	< 3	< 3	< 3	< 3	< 3	$< 1\%$ Option

ELECTRICAL

Zero Acceleration Output (mV)	$< \pm 25$						$< \pm 10\text{mV}$ 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, IP61						

PHYSICAL

Case & Cover Material	Anodized Aluminum Case, Brass Cover						
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

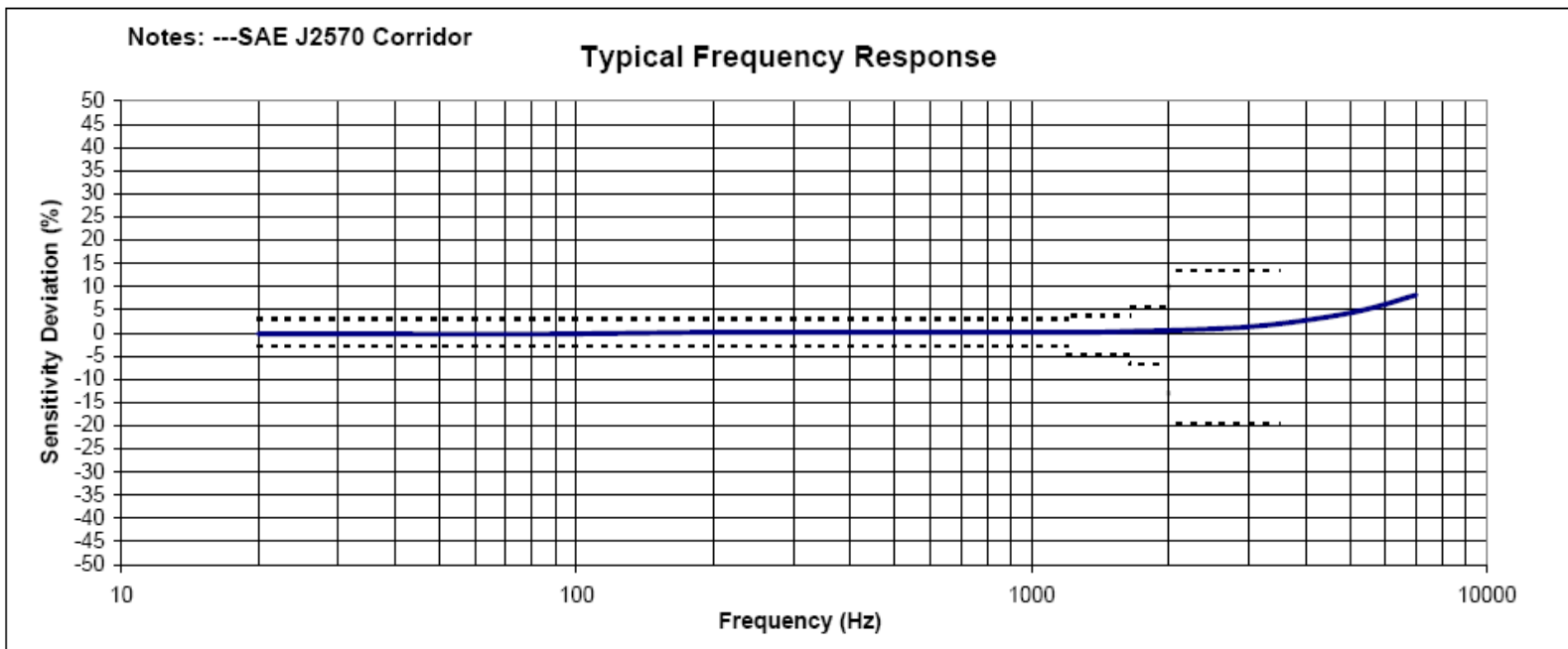
Supplied accessories: AC-A02053 2x #0-80 (3/16 length) Socket Head Cap Screw, 2x #0 Washer, 1x Allen Key

Optional accessories: MTG-E4 Triaxial Mounting Block
121 3-Channel Precision Low Noise DC Amplifier
140 Auto-Zero Inline Amplifier

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Model 64 Accelerometer

performance specifications



ordering info

PART NUMBERING Model Number+Range+Excitation+Cable Length+Options

64-GGGG-YY-CCCT-XY

| | | | | Connector Options (otherwise leave as 'XY')
 | | | | | 1% Transverse Sensitivity when "T" is present.
 | | | | | Cable (360 is 360 inches)
 | | | | | Excitation Voltage (10 is 10Vdc)
 | | | | | Range (0100 is 100g)

Example: 64-2000-10-360-XY

Model 64, Standard Configuration: 2000g, 10V Excitation, 360" (30ft) Cable, No Options.