

Model 63 Accelerometer



Triaxial DC Accelerometer
MEMS Gas Damped
Small Package, Compact
Durable Shielded Cable



The **Model 63** accelerometer is a small, compact triaxial device designed for vehicle impact and road testing. Its mechanical overload stops provide high shock protection in rugged applications. Featuring ranges from $\pm 50g$ to $\pm 2000g$ and frequency response to 3000Hz, this sensor is easily mounted in hard to reach places.

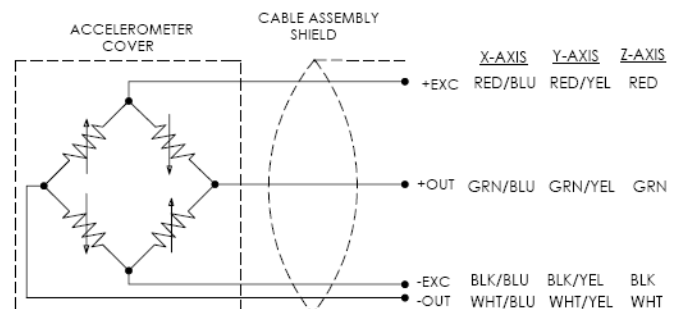
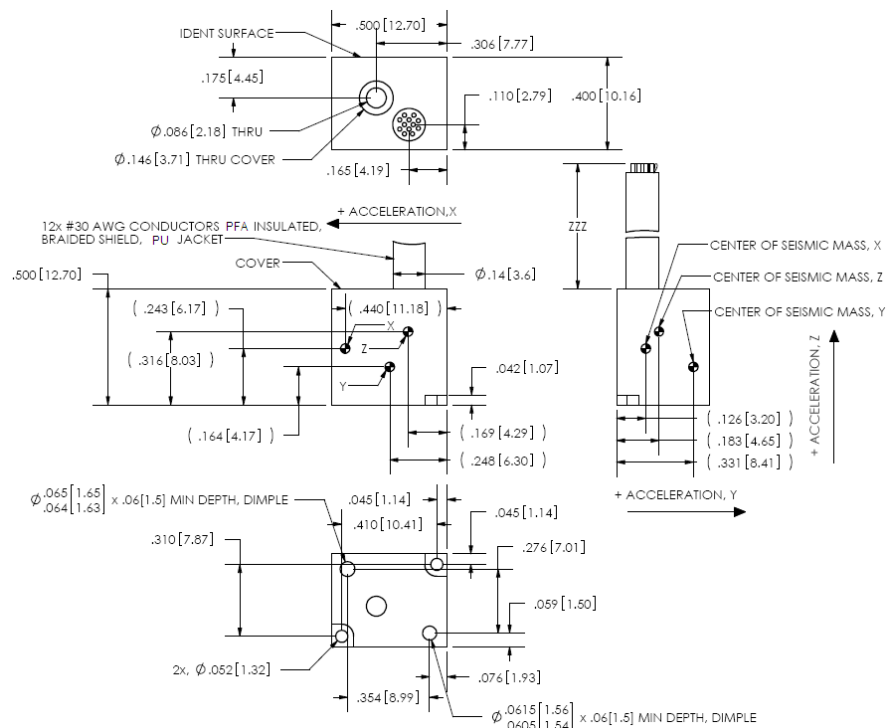
FEATURES

- Piezo-resistive MEMS Sensor
- 2-10 Vdc Excitation
- $\pm 50g$ to $\pm 2000 g$ Full Scale Range
- -20 to $+85^{\circ}C$ Operating Range
- $<\pm 50$ mV Zero Measurand Output
- Mechanical Overload Stops
- Replaceable Sensors

APPLICATIONS

- Auto Safety Testing
- Shock & Impact Testing
- Vehicle Testing
- Drop Testing

dimensions



Model 63 Accelerometer

performance specifications

All values are typical at $\pm 24^{\circ}\text{C}$, 100 Hz and 10 Vdc 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	± 1000	± 2000	Notes
Range(g)	± 50	± 100	± 200	± 500	± 1000	± 2000	
Sensitivity (mV/g) ¹	2.0	1.5	0.9	0.45	0.15	0.15	
Frequency Response (Hz), Z-Axis	0-1000	0-1000	0-1200	0-2000	0-3000	0-3000	$\pm 5\%$
Frequency Response (Hz), X&Y Axis	0-700	0-800	0-900	0-1500	0-1500	0-1500	$\pm 5\%$
Resonant Frequency (Hz)	5000	6000	7000	12000	22000	26000	
Damping Ratio	0.5	0.5	0.5	0.3	0.05	0.05	Typical
Shock Limit (g)	5000	5000	5000	5000	7500	10000	
Non-Linearity (% of reading)	± 1	± 1	± 1	± 1	± 1	± 1	
Transverse Sensitivity (%)	<3	<3	<3	<3	<3	<3	

ELECTRICAL

Zero Acceleration Output (mV)	$\leq \pm 50$	
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/ $^{\circ}\text{C}$)	± 0.05	From 0 to $+50^{\circ}\text{C}$
Thermal Sensitivity Shift (%/ $^{\circ}\text{C}$)	± 0.10	From 0 to $+50^{\circ}\text{C}$
Operating Temperature ($^{\circ}\text{C}$)	-20 to +85	
Storage Temperature ($^{\circ}\text{C}$)	-20 to +85	
Humidity	Epoxy Sealed, IP61	

PHYSICAL

Case & Cover Material	Stainless Steel	
Cable (Integral 30 Foot Cable)	12x #30 AWG Conductors PFA Insulated, Braided Shield, PU Jacket	Cable Not Included
Weight (grams)	7.0	Torque 3 lb-in
Mounting	1x M2x0.4, 16mm Length Screw	

¹ Output is ratiometric to excitation voltage

Calibration supplied: CS-FREQ-0100 NIST Traceable Amplitude Calibration from 20Hz to $\pm 5\%$ Frequency Limit

Supplied accessories: AC-A02591 1x M2 x 0.4 (16mm length) Phillips Pan Head Screw & Washer

Optional accessories: 101 Three Channel DC Signal Conditioner Amplifier
140 Auto-Zero Inline Amplifier

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ordering info

PART NUMBERING Model Number+Range+Cable Length

63-GGGG-CCC

I Cable (360 is 360 inches)
I Range (0500 is 500 g)

Example: 63-2000-072

Model 63, Standard Configuration: 2000g, 072" (6ft) cable