

# Model 63 Accelerometer

Triaxial Accelerometer  
DC Response  
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.

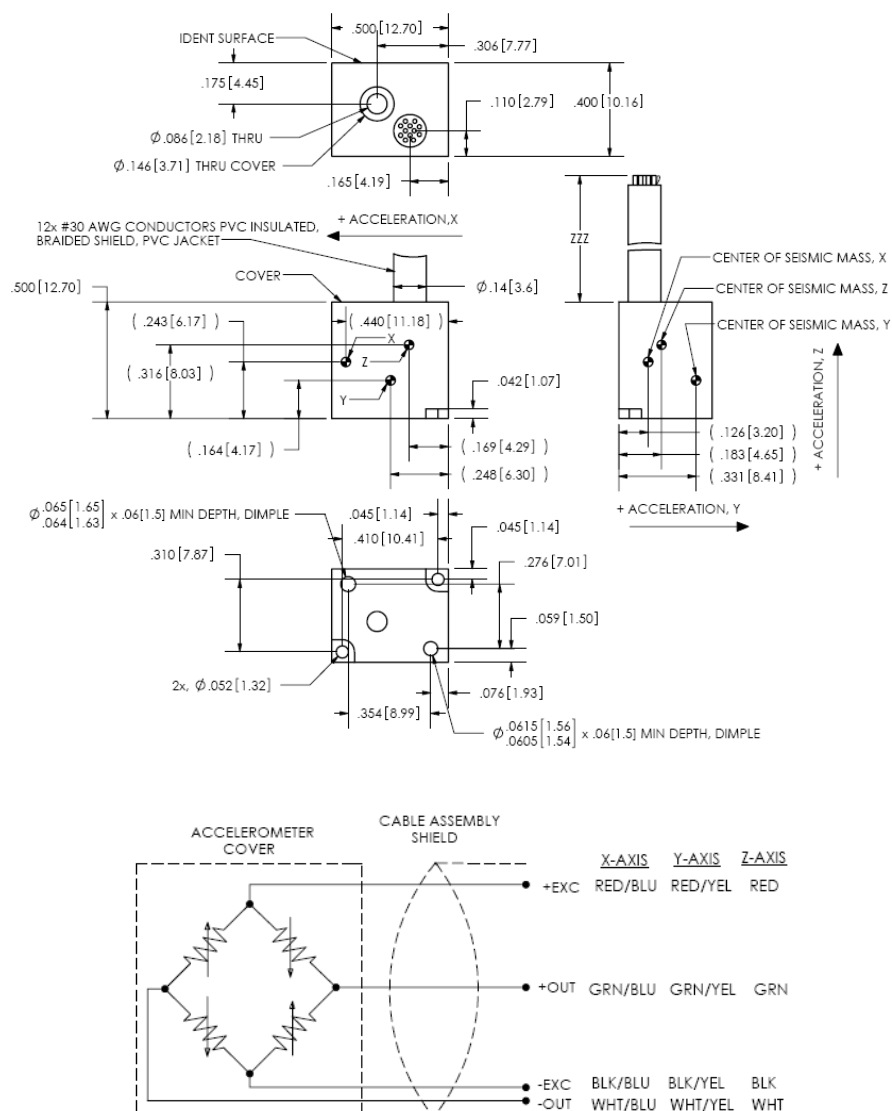
## FEATURES

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

## APPLICATIONS

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

	$\pm 50$	$\pm 100$	$\pm 200$	$\pm 500$	$\pm 1000$	$\pm 2000$	Notes
Range(g)	$\pm 50$	$\pm 100$	$\pm 200$	$\pm 500$	$\pm 1000$	$\pm 2000$	
Sensitivity (mV/g) <sup>1</sup>	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	0-2000	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	75000	10000	
Non-Linearity (% of reading)	$\pm 1$	$\pm 1$	$\pm 1$	$\pm 1$	$\pm 1$	$\pm 1$	
Transverse Sensitivity (%)	$<3$	$<3$	$<3$	$<3$	$<3$	$<3$	

#### ELECTRICAL

Zero Acceleration Output (mV)	$<\pm 50$	
Excitation (Vdc)	2 to 10	
Input Resistance ( $\Omega$ )	2400-6000	
Output Resistance ( $\Omega$ )	2400-6000	
Insulation Resistance ( $M\Omega$ )	$>100$	@50Vdc
Residual Noise ( $\mu\text{V RMS}$ )	$<10$	
Ground Isolation	Isolated from mounting surface	

#### ENVIRONMENTAL

Thermal Zero Shift (%FSO/ $^{\circ}\text{C}$ )	$\pm 0.05$	From 0 to $+50^{\circ}\text{C}$
Thermal Sensitivity Shift (%/ $^{\circ}\text{C}$ )	$\pm 0.10$	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 Teflon Insulated, Braided Shield, PU Jacket	
Weight (grams)	7.0	Cable Not Included
Mounting	1x M2x0.4, 16mm Length Screw	Torque 3 lb-in

<sup>1</sup> 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 I Cable (360 is 360 inches)  
I Range (0500 is 500 g)

Example: 63-2000-072

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

北京汇润科贸有限公司

电话: +86 010 5601 8989

+86 010 5601 7979

传真: +86 010 5885 7266

邮箱: [sales@aq315.com](mailto:sales@aq315.com)