

# Model 61 Accelerometer

DC Response  
Durable Cable  
Small Package  
Reliable Performance



**The Model 61 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 -20°C to 85°C. This unit exhibits superior shock survivability and a flat amplitude/phase response up to 5kHz.

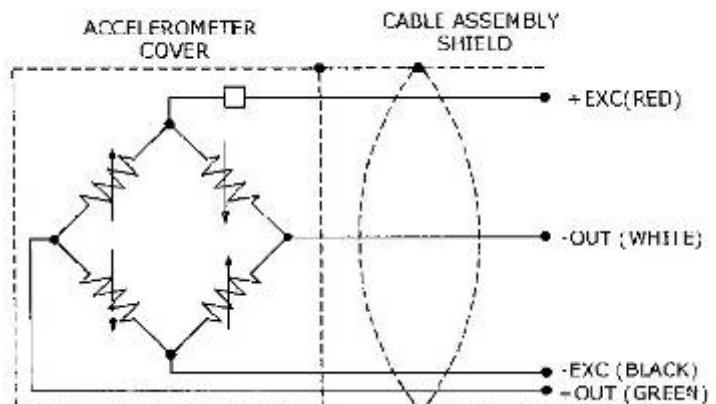
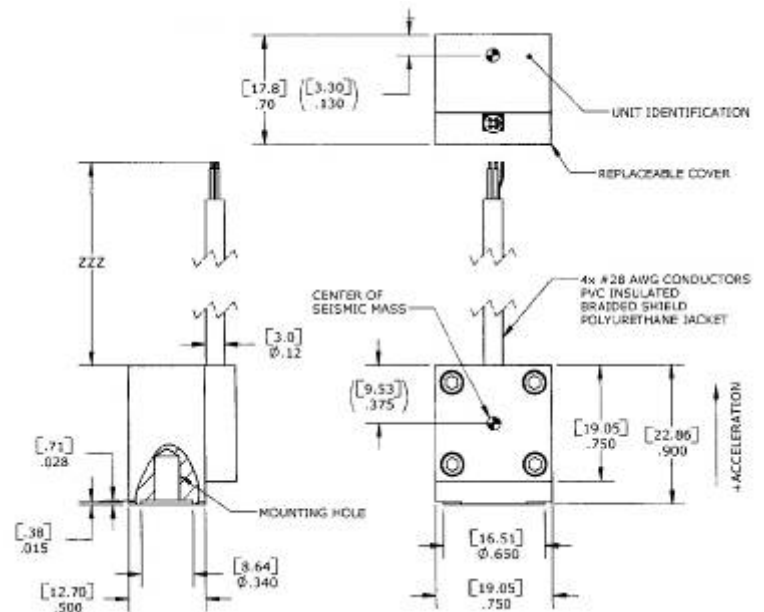
## FEATURES

- 2<sup>nd</sup> GEN MEMS Sensing Element
- 2000 g Full Scale Range
- 2-10 Vdc Excitation
- <± 25 mV Zero Offset
- 1% Transverse Sensitivity Available

## APPLICATIONS

- In-Dummy
  - Head
  - Thorax
  - Pelvic

## dimensions



# Model 61 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

<b>DYNAMIC</b>			<b>Notes</b>
Range(g)	$\pm 750$	$\pm 2000$	
Sensitivity (mV/g)	.35	.15	
Frequency Response (Hz)	0-2000	0-3000	$\pm 5\%$
	0-3000	0-5000	$\pm 1\text{ dB}$
Natural Frequency (Hz)	$>20,000$	$>26,000$	
Non-Linearity (% FSO)	$\pm 1$	$\pm 1$	Of Reading
Transverse Sensitivity (%)	$<3$	$<3$	
Thermal Zero Shift (%FSO/ $^{\circ}\text{C}$ )	$\pm 0.4$	$\pm 0.4$	From 0 to $+50^{\circ}\text{C}$
Thermal Sensitivity Shift (%/ $^{\circ}\text{C}$ )	$\pm 0.4$	$\pm 0.4$	From 0 to $+50^{\circ}\text{C}$
<b>ELECTRICAL</b>			
Zero Acceleration Output (mV)	$<\pm 25$	$<\pm 25$	
Transverse Sensitivity	$<3$	$<3$	
Non-Linearity	$\pm 1$	$\pm 1$	
Excitation (Vdc)	2 to 10	2 to 10	
Input Resistance	6500-7800	6500-7800	
Output Resistance ( $\Omega$ )	2400-4800	2400-4800	
Insulation Resistance (M $\Omega$ )	$>100$	$>100$	@50Vdc
Ground Isolation			Shield attached to cover.
<b>ENVIRONMENTAL</b>			
Shock Limit (g)	5000	5000	
Operating Temperature ( $^{\circ}\text{C}$ )	-23 to +85	-23 to +85	
<b>PHYSICAL</b>			
Case Material			Aluminum
Cable (Integral 30 Foot Cable)			4 x 28 AWG Conductors
Cable (Insulation Material)			Polyurethane
Weight (grams)	18	18	Cable Not Included
Mounting		10-32 UNF or M5 x 0.8	Torque 18 lb-in

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## ordering info

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

61Z GGGG- CCCT - ZZZ

|           |    |    |    |    | Options  
 |           |    |    |    |    | 1% Transverse Sensitivity when "T" is present.  
 |           |    |    |    |    | Cable (360 is 360 inches)  
 |           |    |    |    |    | Range (0750 is 750 g)  
 |           |    |    |    |    | A is 10-32 UNF and B is M5x0.8 Metric

Example: 61A-750-10-360-XY

Model 61A, 10-32 UNF Mounting Hole, 750g, 10V Excitation, 360" (30ft) cable, No Options