



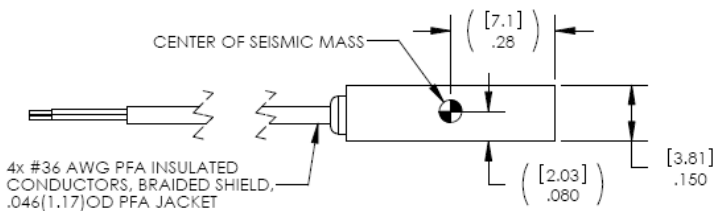
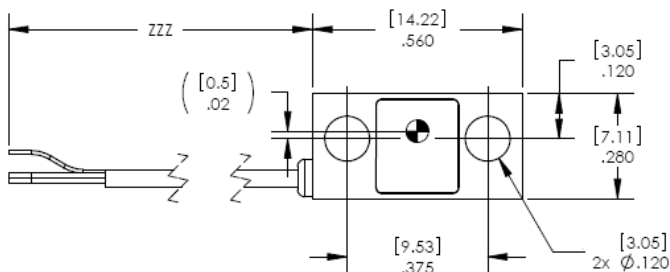
# MODEL 3700 ACCELEROMETER

## SPECIFICATIONS

- Shock & Impact Testing
- Piezoresistive MEMS
- mV Output, DC Response
- Low Noise, Shielded Cable

The Model 3700 is a MEMS piezoresistive shock accelerometer in a rugged stainless steel package. The accelerometer is available in ranges from is offered in ranges from  $\pm 50$  to  $\pm 6000g$  and is ideal for long duration shock transient measurements. The accelerometer incorporates mechanical over-range stops and is packaged in an industry standard footprint.

## dimensions

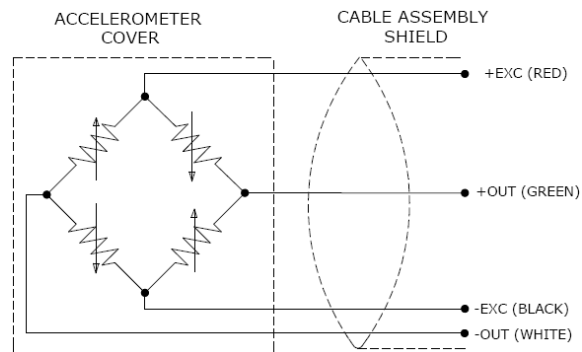


## FEATURES

- $\pm 50g$  to  $\pm 6000g$  Dynamic Range
- 10,000g Shock Protection
- Environmentally Sealed
- Gas Damping
- mV Output
- Stainless Steel Housing
- Bolt Mounted

## APPLICATIONS

- Impact Testing
- Structural Testing
- Transient Shock Testing
- Auto Safety Applications



**PERFORMANCE SPECIFICATIONS**

All values are typical at +24°C, 80Hz and 10Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

Parameters							Notes
<b>DYNAMIC</b>							
Range (g)	±50	±100	±200	±500	±2000	±6000	
Sensitivity (mV/g) <sup>1</sup>	2.0	0.9	0.7	0.4	0.15	0.08	@10Vdc Excitation
Frequency Response (Hz)	0-1000	0-1400	0-1500	0-2000	0-5000	0-5000	±1/2dB
	0-1400	0-1800	0-1900	0-2800	0-7000	0-7000	±1dB
Natural Frequency (Hz)	4000	6000	8000	15000	24000	26000	
Non-Linearity (%FSO)	±1.0	±1.0	±1.0	±1.0	±1.0	±2.0	
Transverse Sensitivity (%)	<3	<3	<3	<3	<3	<3	<1% Option
Damping Ratio	0.6	0.5	0.5	0.3	0.15	0.1	
Shock Limit (g)	10000	10000	10000	10000	10000	10000	
<b>ELECTRICAL</b>							
Zero Acceleration Output (mV)	<±25						Differential
Excitation Voltage (Vdc)	2 to 10						
Input Resistance (Ω)	2400-6000						
Output Resistance (Ω)	2400-6000						
Insulation Resistance (MΩ)	>100						@100Vdc
Residual Noise (µV RMS)	<10						
Ground Isolation	Isolated from mounting surface						
<b>ENVIRONMENTAL</b>							
Thermal Zero Shift (%FSO/°C)	±0.04						Typical
Thermal Sensitivity Shift (%/°C)	-0.15						Typical
Operating Temperature (°C)	-55 to +125						
Storage Temperature (°C)	-55 to +125						
Humidity	Epoxy Sealed, IP65						
<b>PHYSICAL</b>							
Case Material	Stainless Steel						
Cable	4x #36 AWG Leads, PFA Insulated, Braided Shield, PFA Jacket						
Weight (grams)	2.1						
Mounting	2x #4-40 or M3 Mounting Screws						
Mounting Torque	8 lb-in (0.9 N-m)						

<sup>1</sup> Output is ratiometric to excitation voltage

**Calibration supplied:** CS-FREQ-0100 NIST Traceable Amplitude Calibration from 20Hz to ±5% Frequency Limit

**Supplied accessories:** 2x #4-40 Mounting Screws (1/4 inch length)

**Optional accessories:** AC-D03249 Triaxial Mounting Block  
 121 3-Channel Precision Low Noise DC Amplifier  
 140A Auto-Zero Inline Amplifier

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## ORDERING INFO

PART NUMBERING Model Number+Range+Cable Length+Options

3700-XK-CCCT-ZZ

| | | | Options  
| | | | 1% Transverse Sensitivity when "T" is present  
| | | | Cable (360 is 360 inches)  
| | | | Range (2K is 2000g)  
          (500 is 500g)  
          (050 is 50g)

Optional Dash Numbers

-01 5Vdc Calibration  
-02 2Vdc Calibration

Example: 3700-2K-120

Model 3700, 2000g, 120" (10ft) Cable, No Options

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