

# Model 3700 Accelerometer



Shock & Impact Testing  
Piezoresistive MEMS  
mV Output  
DC Response



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.

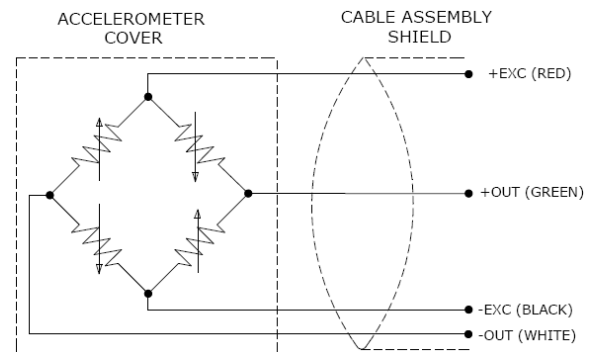
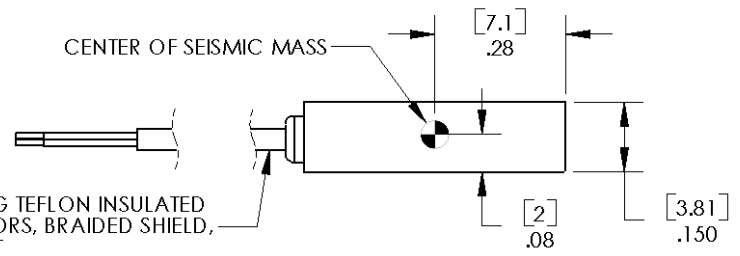
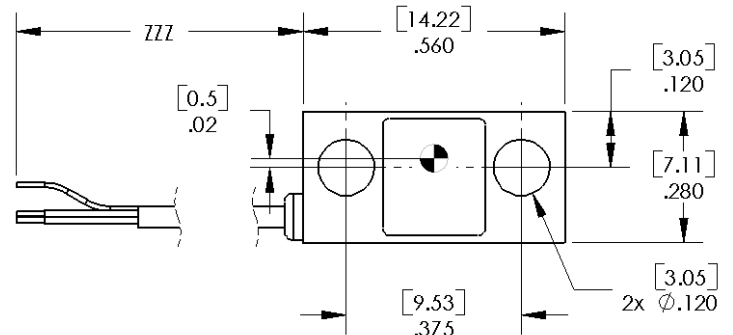
## FEATURES

- $\pm 50g$  to  $\pm 6000g$  Dynamic Range
- 20,000g Shock Protection
- Environmentally Sealed
- Gas Damping
- mV Output
- Stainless Steel Housing
- Bolt Mounted

## APPLICATIONS

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

## dimensions



# Model 3700 Accelerometer

## performance specifications

All values are typical at +24°C, 100Hz 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							Notes
<b>DYNAMIC</b>							
Range (g)	±50	±100	±200	±500	±2000	±6000	
Sensitivity (mV/g) <sup>1</sup>	1.5	0.7	0.7	0.3	0.15	0.08	@10Vdc Excitation ±5%
Frequency Response (Hz)	0-800	0-1500	0-2000	0-4000	0-5000	0-6000	
Natural Frequency (Hz)	4000	6000	8000	15000	24000	26000	
Non-Linearity (%FSO)	±0.5	±0.5	±0.5	±1.0	±1.0	±2.0	
Transverse Sensitivity (%)	<3	<3	<3	<3	<3	<3	
Damping Ratio	0.7	0.7	0.6	0.5	0.4	0.3	
Shock Limit (g)	10000	10000	10000	10000	10000	10000	

<b>ELECTRICAL</b>							
Zero Acceleration Output (mV)	±25	±25	±25	±25	±25	±25	Differential
Excitation Voltage (Vdc)	2 to 10	2 to 10	2 to 10	2 to 10	2 to 10	2 to 10	
Input Resistance (Ω)	4000	4000	4000	4000	4000	4000	Typical
Output Resistance (Ω)	4000	4000	4000	4000	4000	4000	Typical
Insulation Resistance (MΩ)	>100	>100	>100	>100	>100	>100	@50Vdc
Residual Noise (µV RMS)	10	10	10	10	10	10	Maximum
Ground Isolation	Isolated from Mounting Surface						

<b>ENVIRONMENTAL</b>							
Thermal Zero Shift (%FSO/°C)	-0.09	-0.09	-0.09	-0.09	-0.09	-0.09	Typical
Thermal Sensitivity Shift (%/°C)	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	Typical
Operating Temperature (°C)	-55 to +125						
Compensated Temperature (°C)	Uncompensated						
Storage Temperature (°C)	-55 to +125						

<b>PHYSICAL</b>	
Case Material	Stainless Steel
Cable	Teflon Insulated Leads, 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)
AWG	#36

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

**Wiring color code:** +Excitation = Red; -Excitation = Black; +Output = Green; -Output = White;

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

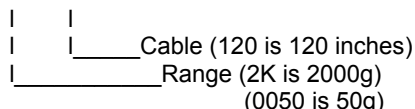
**Optional accessories:** AC-D03249      Triaxial Mounting Block  
101      Three Channel DC Signal Conditioner Amplifier

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## ordering info

PART NUMBERING    Model Number+Range+Cable Length

3700-XK-ZZZ


  
 Cable (120 is 120 inches)  
 Range (2K is 2000g)  
 (0050 is 50g)

Example: 3700-2K-120  
Model 3700, 2000g, 120" (10ft) Cable

### CONTATO

#### Endereço

Rua Sete de Setembro, 2671 - Centro  
13560-181 - São Carlos - SP - Brasil

#### Telefone

+ 55 (16) 3371-0112

#### Fax

+ 55 (16) 3372-7800

#### Internet

[www.metrolog.net](http://www.metrolog.net)  
[metrolog@metrolog.net](mailto:metrolog@metrolog.net)



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