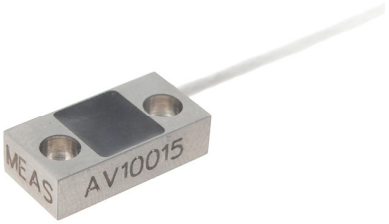
Model 3700 Accelerometer

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 ±50 to ±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.

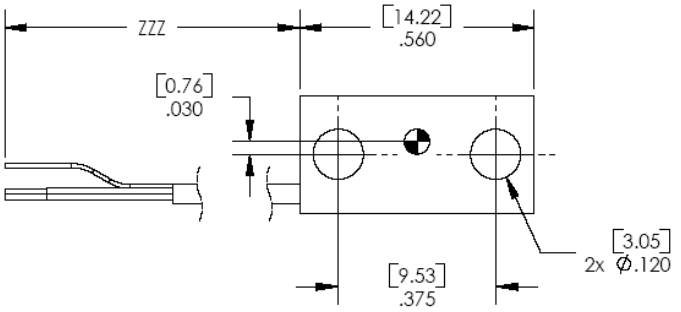
FEATURES

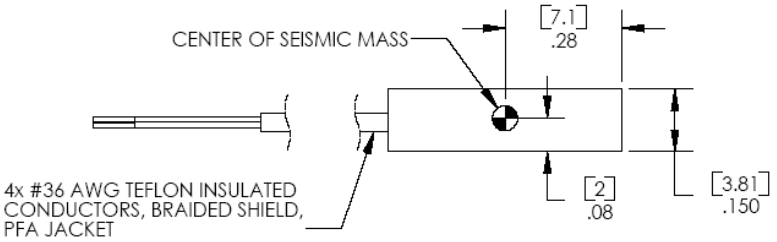
- ±50g to ±6000g Dynamic Range
- 20,000g Shock Protection
- Environmentally Sealed
- Gas Damping
- mV Output
- Stainless Steel Housing
- Bolt Mounted

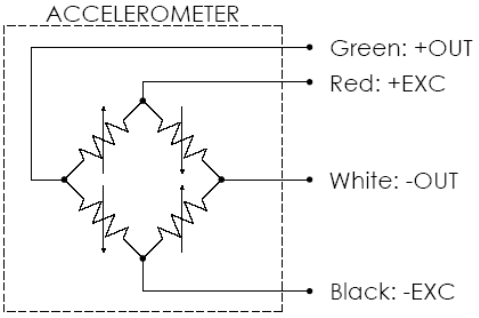
APPLICATIONS

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

dimensions







32 Journey Ste. 150 Aliso Viejo, CA 92656 949-716-5377 enduser@meas-spec.com

Model 3700 Accelerometer

performance specifications

All values are typical at +24℃, 100Hz and 10Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

Parameters							
DYNAMIC							**Notes**
Range (g)	±50	±100	±200	±500	±2000	±6000	
Sensitivity (mV/g)[1]	1.5	0.7	0.7	0.3	0.15	0.08	@10Vdc Excitation
Frequency Response (Hz)	0-800	0-1500	0-2000	0-4000	0-5000	0-6000	±5%
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	
ELECTRICAL							
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						
ENVIRONMENTAL							
Thermal Zero Shift (%FSO/℃)	-0.09	-0.09	-0.09	-0.09	-0.09	-0.09	Typical
Thermal Sensitivity Shift (%/℃)	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	Typical
Operating Temperature (℃)	-55 to +125						
Compensated Temperature (℃)	Uncompensated						
Storage Temperature (℃)	-55 to +125						
PHYSICAL							
Case Material	Stainless Steel						
Cable	Teflon Insulated Leads, Braided Shield, PFA Jacket						
Weight (grams)	1.5						
Mounting	2x #4-40 or M3 Mounting Screws						
Mounting Torque	8 lb-in (0.9 N-m)						
AWG	#36						

[1] 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: 101 Three Channel DC Signal Conditioner Amplifier

ordering info

PART NUMBERING Model Number+Range+Cable Length

3700-XKG-CCC
| |
| |_____Cable (120 is 120 inches)
|_____Range (2KG is 2000g)

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

32 Journey Ste. 150 Aliso Viejo, CA 92656 949-716-5377 enduser@meas-spec.com