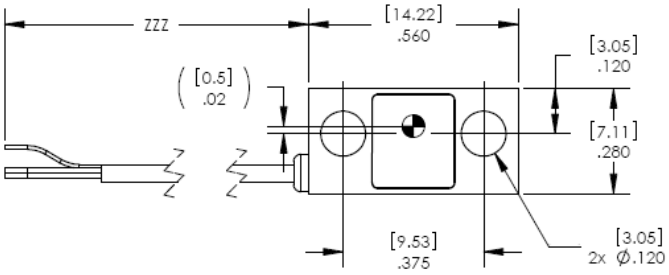
MODEL 3700 ACCELEROMETER

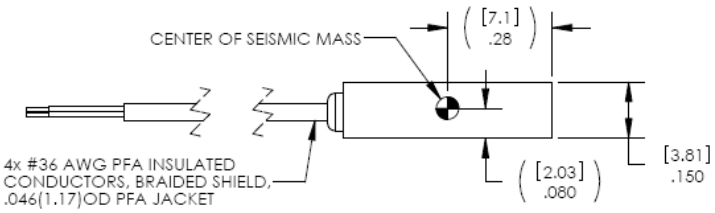
SPECIFICATIONS

- **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 ±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.

dimensions



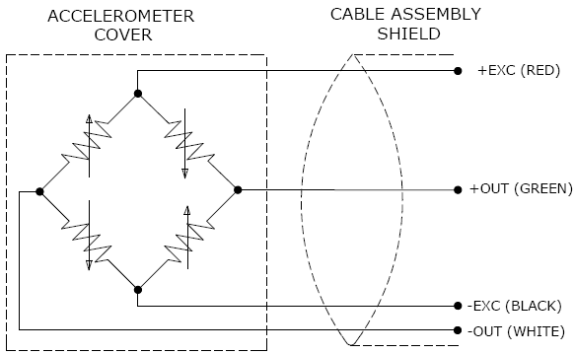


FEATURES

- **±50g to ±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							
DYNAMIC							**Notes**
Range (g)	±50	±100	±200	±500	±2000	±6000	
Sensitivity (mV/g)[1]	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	

ELECTRICAL		
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	
ENVIRONMENTAL		
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	
PHYSICAL		
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)	

[1] 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

ORDERING INFO

PART NUMBERING Model Number+Range+Cable Length+Options

3700-XK-CCCT-ZZ

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     |    |   |  |_____Options
     |    |   |_______1% Transverse Sensitivity when “T” is present
     |    |_________ Cable (360 is 360 inches)
     |______________Range (2K is 2000g)
                          (500 is 500g)
                          (050 is 50g)
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Example: 3700-2K-120
Model 3700, 2000g, 120” (10ft) Cable, No Options

Optional Dash Numbers

-01	5Vdc Calibration
-02	2Vdc Calibration

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