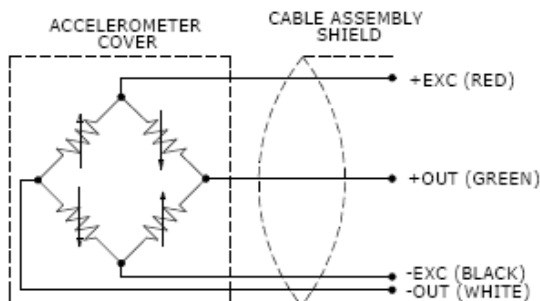
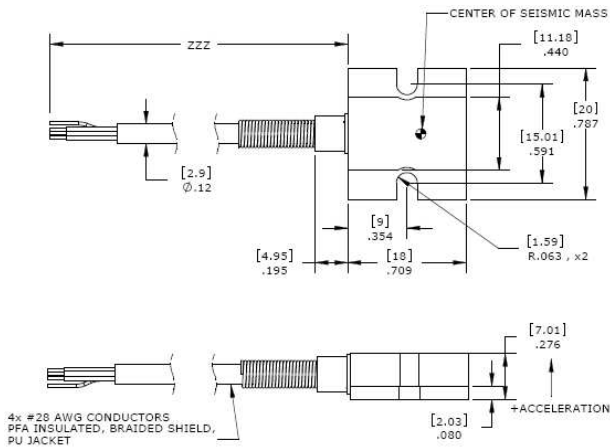


MODEL 1210F ACCELEROMETER



DIMENSIONS



SPECIFICATIONS

- MEMS DC Response
- Durable Cable
- Temperature Compensation
- Reliable Performance

The Model 1210F accelerometer is a small, compact uniaxial MEMS accelerometer designed for vehicle impact and road testing. Its mechanical overload stops provide high shock protection in rugged applications. Featuring ranges from 2g to 200g and frequency response to 2000 Hz, this sensor is easily mounted in hard to get places on vehicles under test.

FEATURES

- ±2g to ±200g Dynamic Range
- Environmentally Sealed
- -40°C to +100°C Operating Range
- Rugged Strain Relief
- Mechanical Overload Stops
- Gas Damping
- mV Output
- Bolt Mounted

APPLICATIONS

- Crash Testing
- Impact Testing
- Off-Road Testing
- Vehicle Testing

MODEL 1210F ACCELEROMETER

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
DYNAMIC								
Range (g)	±2	±5	±10	±20	±50	±100	±200	
Sensitivity (mV/g) ¹	27	16	9	4.5	2	0.9	0.7	@10Vdc Excitation
Frequency Response (Hz)	0-100	0-200	0-300	0-400	0-800	0-1300	0-1500	±5%
Frequency Response (Hz)	0-200	0-300	0-400	0-500	0-1000	0-1500	0-1800	±1dB
Phase Response	0-50	0-60	0-70	0-100	0-300	0-500	0-500	<±5°
Natural Frequency (Hz)	700	800	1000	1500	4000	6000	7000	
Non-Linearity (%FSO)	±1	±1	±1	±1	±1	±1	±1	
Transverse Sensitivity (%)	<3	<3	<3	<3	<3	<3	<3	
Damping Ratio	0.7	0.7	0.7	0.7	0.6	0.6	0.5	
Shock Limit (g)	2000	2000	5000	5000	5000	5000	5000	
ELECTRICAL								
Zero Acceleration Output (mV)	±40							Differential
Excitation Voltage (Vdc)	2 to 10							
Input Resistance (Ω)	2400-5000							
Output Resistance (Ω)	2400-5000							
Insulation Resistance (MΩ)	>100							@50Vdc
Residual Noise (µV RMS)	10							Maximum
Ground Isolation	Isolated from Mounting Surface							
ENVIRONMENTAL								
Thermal Zero Shift (%FSO/°C)	±0.05							
Thermal Sensitivity Shift (%/°C)	-0.20 ±0.05							
Operating Temperature (°C)	-40 to +100							
Compensated Temperature (°C)	-20 to +85							
Storage Temperature (°C)	-40 to +100							
Humidity	Epoxy Sealed, IP65							
PHYSICAL								
Case Material	Anodized Aluminum							
Cable	PFA Insulated Leads, Braided Shield, Polyurethane Jacket							
Weight (grams)	3.5							
Mounting	2x #4 or M3 Screws							
Mounting Torque	4.0 lb-in (0.5 N-m)							

¹ Output is ratiometric to excitation voltage

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

Supplied accessories: 2x #4-40 (1/4" length) Socket Head Cap Screw and Washer

Optional accessories: 121 Three Channel DC Differential Amplifier
140A Auto-zero Inline Amplifier

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ORDERING INFORMATION

PART NUMBERING Model Number+Range+Cable Length

1210F-XXXX-ZZZ

| | Cable (360 is 360 inches)
| Range (0050 is 50g)

Example: 1210F-0050-360

Model 1210F, 50g, 360" (30ft) Cable

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