

Model 1201 Accelerometer



DC Response Accelerometer
Durable, Low Noise Cable
Vehicle Crush Zone Testing
Low Cost, High Performance

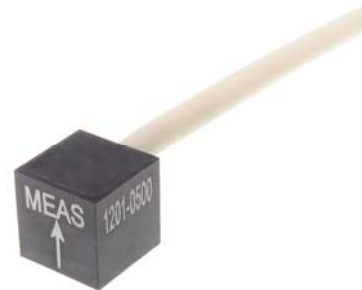
The **Model 1201 Accelerometer** is a small, compact uniaxial device designed for vehicle impact and road testing. Its mechanical overload stops provide high shock protection in rugged applications. Featuring ranges from ± 50 g to ± 1000 g and frequency response to 3000 Hz, this sensor is easily mounted in hard to get places on vehicles under test. For a similar accelerometer designed for bolt mounting, see the model 1201F.

FEATURES

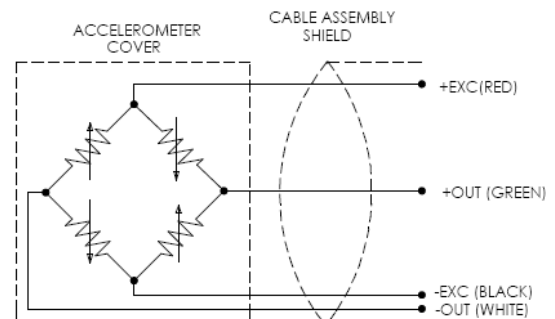
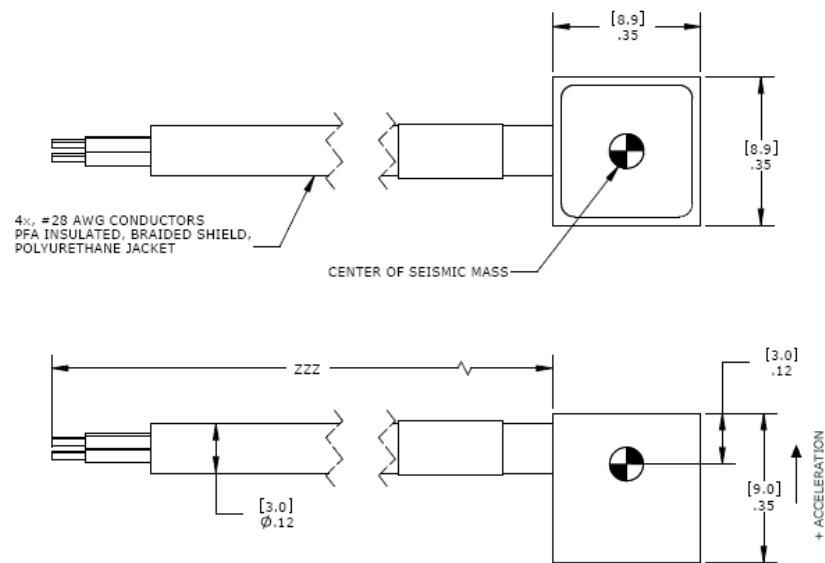
- Advanced MEMS Sensing Element
- ± 50 g to ± 1000 g Dynamic Range
- 2-10 Vdc Excitation
- 0-50 °C Temperature Range
- ± 40 mV Zero Measurand Output
- Gas Damping
- Connector Options
- Mechanical Overload Stops

APPLICATIONS

- Crash Testing
- Crush Zone Testing
- Impact Testing
- Off-Road Testing
- Transportation Testing



dimensions



Model 1201 Accelerometer

performance specifications

All values are typical at $\pm 24^{\circ}\text{C}$, 100 Hz and 10 Vdc 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	-0050	-0100	-0200	-0500	-1000	Notes
DYNAMIC						
Range(g)	± 50	± 100	± 200	± 500	± 1000	
Sensitivity (mV/g) ¹	2.0	0.9	0.9	0.40	0.15	@ 10Vdc excitation $\pm 5\%$
Frequency Response (Hz)	0-800	0-1000	0-1400	0-2000	0-3000	
Natural Frequency (Hz)	2000	3000	4000	6000	7000	
Non-Linearity (% FS)	± 1	± 1	± 1	± 1	± 1	
Damping Ratio	0.7	0.7	0.7	0.6	0.5	Typical
Transverse Sensitivity (%)	<3	<3	<3	<3	<3	
Shock Limit (g)	3000	3000	4000	5000	5000	
ELECTRICAL						
Zero Acceleration Output (mV)	< ± 40					
Excitation (Vdc)	2 to 10					
Input Resistance (Ω)	2400-6000					
Output Resistance (Ω)	2400-6000					
Insulation Resistance (M Ω)	>100					@50Vdc
Ground Isolation	Isolated from mounting surface.					
ENVIRONMENTAL						
Thermal Zero Shift (%FS/ $^{\circ}\text{C}$)	± 0.05					From 0 to $+50^{\circ}\text{C}$
Thermal Sensitivity Shift (%/ $^{\circ}\text{C}$)	± 0.2					From 0 to $+50^{\circ}\text{C}$
Operating Temperature ($^{\circ}\text{C}$)	-20 to +85					
Humidity	Epoxy Sealed, IP65					
PHYSICAL						
Case Material	Anodized Aluminum					
Cable	4x #28 AWG Conductors, PFA Insulated, Braided Shield, PU Jacket					
Weight (grams)	<2.5					Cable Not Included
Mounting	Adhesive					

¹ Output is ratiometric to excitation voltage

Calibration supplied: CS-FREQ-0100 NIST Traceable Amplitude Calibration from 20Hz to $\pm 5\%$ Frequency Limit

Optional accessories: 101 Three Channel DC Signal Conditioner Amplifier
140 Auto-zero Inline Amplifier

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ordering info

PART NUMBERING Model Number+Range+Cable Length+Options

1201-GGGG-ZZZ-XXX

| | | Options (otherwise leave blank)
| | Cable (360 is 360 inches)
| Range (0100 is 100 g)

Optional Dash Numbers

-001 5Vdc Calibration
-002 2Vdc Calibration
-005 Lemo FGG.1B.307 and Dallas DS2401 Installed

Example: 1201-1000-360
Standard Configuration: 1000g, 360" (30ft) cable, No Options