

Model 1203 Accelerometer

DC Response Triaxial Accelerometer
Durable, Low Noise Cable
Reliable Performance
Low Cost, Rugged



The Model 1203 Accelerometer

is a small, compact triaxial device designed for vehicle impact and road testing. Its mechanical overload stops provide high shock protection in rugged applications. Featuring ranges from $\pm 50g$ to $\pm 1000g$ and frequency response to 3000 Hz, this sensor is easily mounted in hard to reach places on vehicles under test.

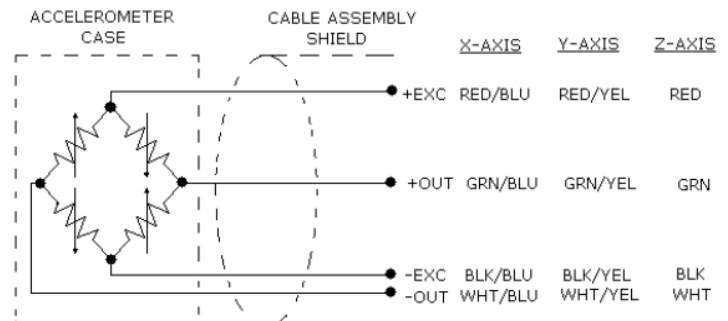
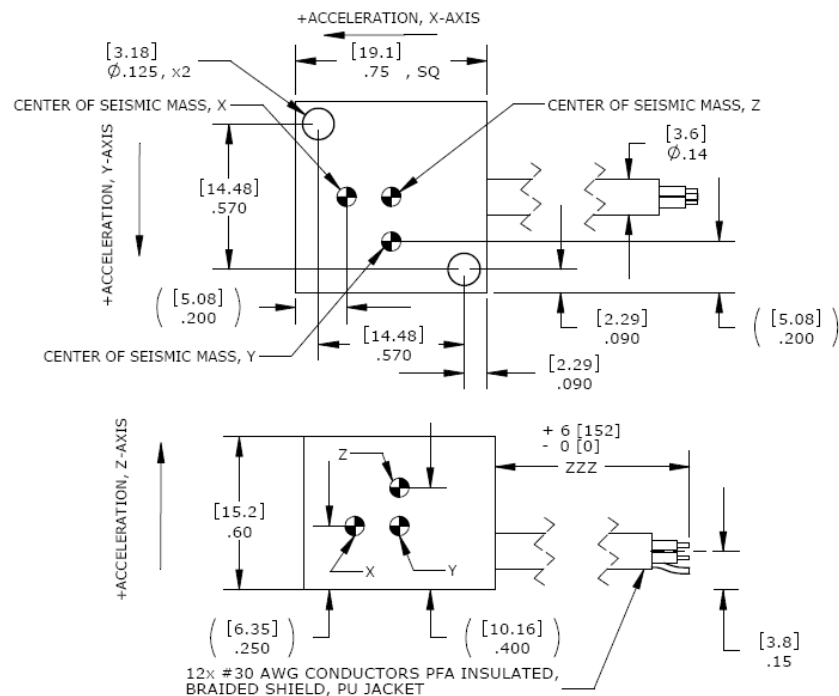
FEATURES

- Advanced MEMS Sensing Element
- $\pm 50g$ to $\pm 1000g$ Dynamic Range
- 2-10 Vdc Excitation
- 0-50 °C Temperature Range
- ± 40 mV Zero Measurand Output
- Gas Damping
- Mechanical Overload Stops
- Designed for Screw Mounting

APPLICATIONS

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

dimensions



Model 1203 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)	0-600	0-800	0-1000	0-1200	0-1500	
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 (%FSO/ $^{\circ}\text{C}$)	± 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	12x #30 AWG Conductors, PFA Insulated, Braided Shield, PU Jacket					
Weight (grams)	20					Cable Not Included
Mounting	2x #4 or M3 socket head cap screws					Torque 8 lb-in (1 N-m)

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

1203-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
 -007 Lemo FGG.1B.307 and Dallas DS2401 Installed

Example: 1203-1000-072
Standard Configuration: 1000g, 72" (30ft) cable, No Options