

# MODEL 1203 ACCELEROMETER

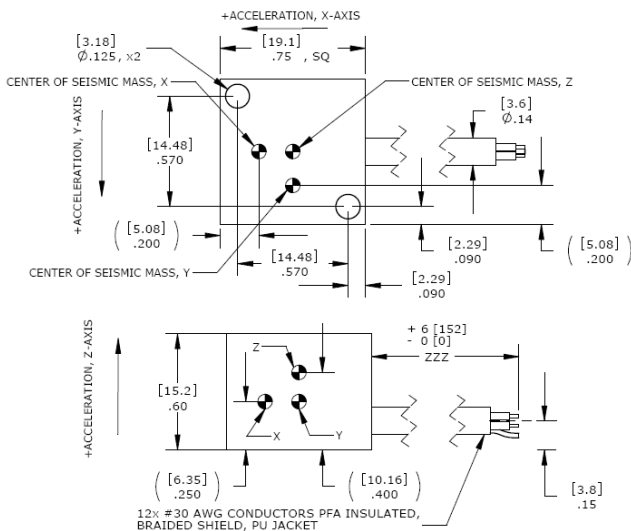


## SPECIFICATIONS

- 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.

## DIMENSIONS

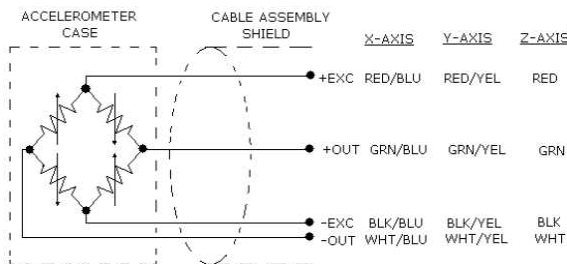


## FEATURES

- Advanced MEMS Sensing Element
- $\pm 50g$  to  $\pm 1000g$  Dynamic Range
- 2-10 Vdc Excitation
- 0-50 °C Temperature Range
- $\pm 40$  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



**PERFORMANCE SPECIFICATIONS**

All values are typical at  $\pm 24^{\circ}\text{C}$ , 80 Hz and 10 Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

Parameters	-0050	-0100	-0200	-0500	-1000	Notes
<b>DYNAMIC</b>						
Range(g)	$\pm 50$	$\pm 100$	$\pm 200$	$\pm 500$	$\pm 1000$	
Sensitivity (mV/g) <sup>1</sup>	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)	$\pm 1$	$\pm 1$	$\pm 1$	$\pm 1$	$\pm 1$	
Damping Ratio	0.7	0.5	0.5	0.3	0.1	Typical
Transverse Sensitivity (%)	<3	<3	<3	<3	<3	
Shock Limit (g)	3000	3000	4000	5000	5000	
<b>ELECTRICAL</b>						
Zero Acceleration Output (mV)	< $\pm 40$					
Excitation (Vdc)	2 to 10					
Input Resistance ( $\Omega$ )	2400-6000					
Output Resistance ( $\Omega$ )	2400-6000					
Insulation Resistance (M $\Omega$ )	>100					@50Vdc
Ground Isolation	Isolated from mounting surface.					
<b>ENVIRONMENTAL</b>						
Thermal Zero Shift (%FSO/ $^{\circ}\text{C}$ )	$\pm 0.05$					From 0 to $+50^{\circ}\text{C}$
Thermal Sensitivity Shift (%/ $^{\circ}\text{C}$ )	$\pm 0.2$					From 0 to $+50^{\circ}\text{C}$
Operating Temperature ( $^{\circ}\text{C}$ )	-20 to +85					
Humidity	Epoxy Sealed, IP65					
<b>PHYSICAL</b>						
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)

<sup>1</sup> Output is ratiometric to excitation voltage

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

**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+Options

1203-GGGG-ZZZ-XXX

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

Installed

Optional Dash Numbers

-001 5Vdc Calibration  
-002 2Vdc Calibration  
-007 Lemo FGG.1B.307 and Dallas DS2401

Example: 1203-1000-072

Standard Configuration: 1000g, 72" (30ft) cable, No Options

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