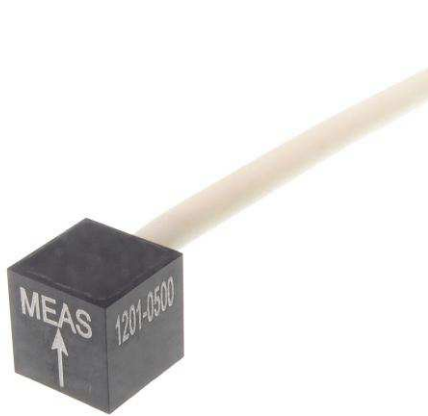


# MODEL 1201 ACCELEROMETER



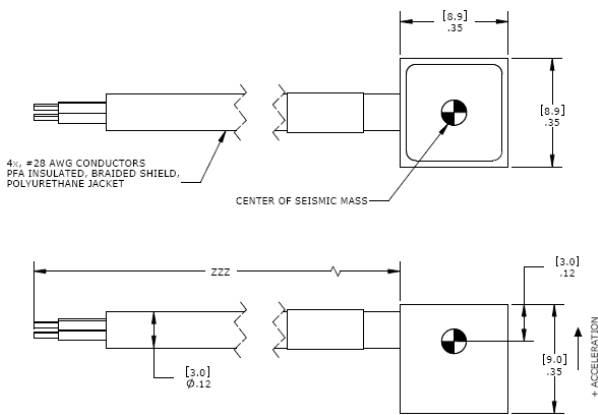
## SPECIFICATIONS

- 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  $\pm 50$  g to  $\pm 1000$ 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.

## DIMENSIONS

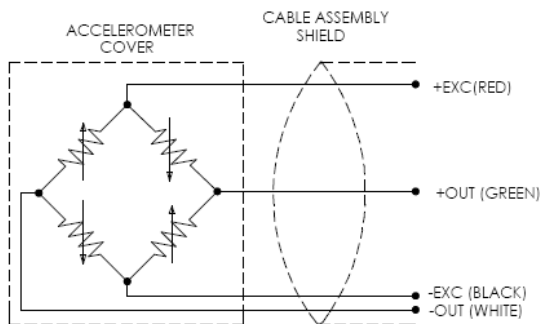


## FEATURES

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

## APPLICATIONS

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



**PERFORMANCE SPECIFICATIONS**

All values are typical at ±24°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)                         | ±50   | ±100   | ±200   | ±500   | ±1000  |                           |
| Sensitivity (mV/g) <sup>1</sup>  | 2.0   | 0.9    | 0.9    | 0.40   | 0.15   | @ 10Vdc excitation<br>±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   | 0.5    | 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)    | <±40  |        |        |        |        |                           |
| Excitation (Vdc)                 | 2 to 10   |        |        |        |        |                           |
| Input Resistance (Ω)             | 2400-6000   |        |        |        |        |                           |
| Output Resistance (Ω)            | 2400-6000   |        |        |        |        |                           |
| Insulation Resistance (MΩ)       | >100  |        |        |        |        | @50Vdc                    |
| Ground Isolation                 | Isolated from mounting surface.                                 |        |        |        |        |                           |
| <b>ENVIRONMENTAL</b>             |   |        |        |        |        |                           |
| Thermal Zero Shift (%FSO/°C)     | ±0.05   |        |        |        |        | From 0 to +50°C           |
| Thermal Sensitivity Shift (%/°C) | ±0.2  |        |        |        |        | From 0 to +50°C           |
| Operating Temperature (°C)       | -20 to +85  |        |        |        |        |                           |
| Humidity                         | Epoxy Sealed, IP65  |        |        |        |        |                           |
| <b>PHYSICAL</b>                  |   |        |        |        |        |                           |
| Case Material                    | Anodized Aluminum   |        |        |        |        |                           |
| Cable                            | 4x #28 AWG Conductors, PFA Insulated, Braided Shield, PU Jacket |        |        |        |        | Cable Not Included        |
| Weight (grams)                   | <2.5  |        |        |        |        |                           |
| Mounting                         | Adhesive  |        |        |        |        |                           |

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

**Calibration supplied:** CS-FREQ-0100 NIST Traceable Amplitude Calibration from 20Hz to ±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

1201-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  
-005 Lemo FGG.1B.307 and Dallas DS2401

Example: 1201-1000-360

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

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