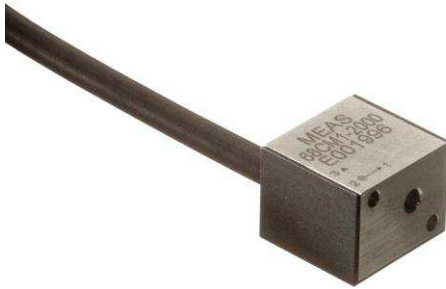
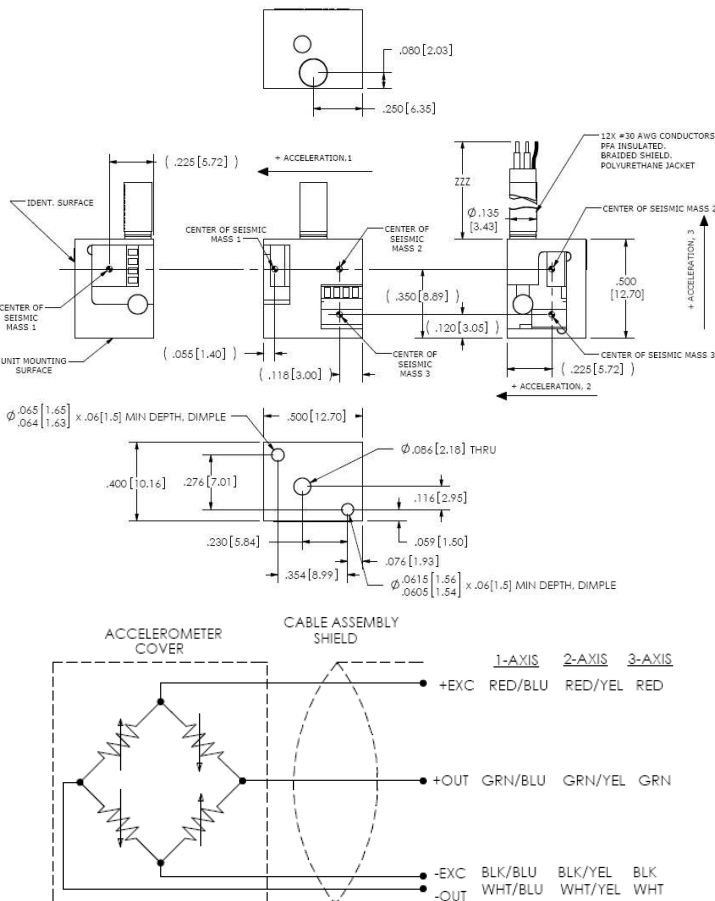


# MODEL 68C ACCELEROMETER



## DIMENSIONS



## SPECIFICATIONS

- ◆ Triaxial Accel, DC Response
- ◆ Durable Low Noise Cable
- ◆ Reliable Performance
- ◆ SAE J2570 Compliant

The Model 68C Accelerometer is a small, compact triaxial device designed for vehicle impact and road testing. The unit incorporates three replaceable sensing modules with mechanical overload stops that provide high shock protection in rugged applications. The model 68C accelerometer is compliant with SAE-J211 specifications for anthropomorphic dummy instrumentation. The model 68CM1 has a cover installed for additional protection.

## FEATURES

- ◆ ±100g to ±2000 g Ranges
- ◆ 2-10 Vdc Excitation
- ◆ Temperature Compensation
- ◆ Mechanical Overload Stops
- ◆ Replaceable Sensors
- ◆ Optional Cover
- ◆ WorldSID Approved

## APPLICATIONS

- ◆ Crash Testing
- ◆ Impact Testing
- ◆ Off-Road Testing
- ◆ Road Testing
- ◆ Dummy Instrumentation



**PERFORMANCE SPECIFICATIONS**

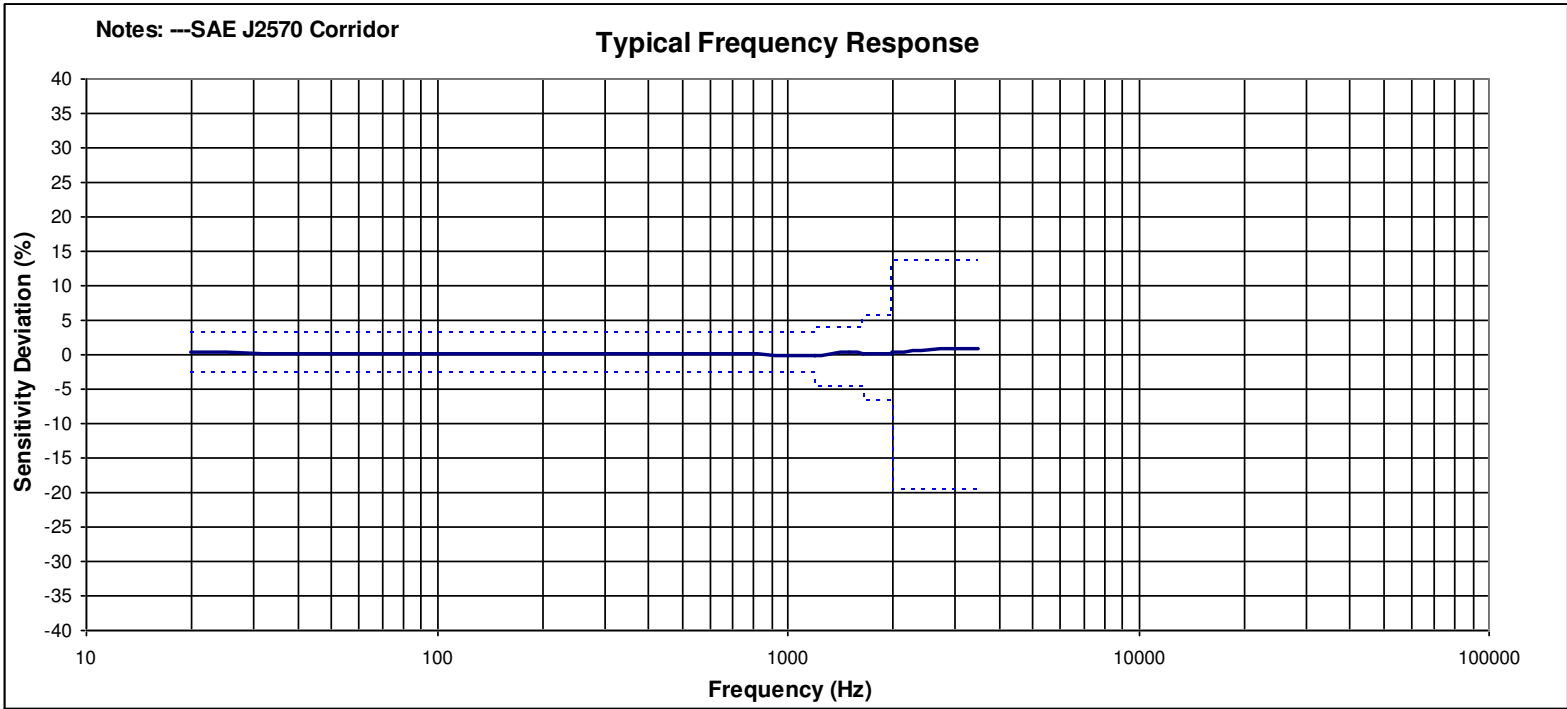
All values are typical at ±24°C, 80Hz and 10Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

| Parameters                          |   |        |        | Notes              |
|-------------------------------------|---|--------|--------|--------------------|
| <b>DYNAMIC</b>                      |   |        |        |                    |
| Range(g)                            | ±100  | ±500   | ±2000  |                    |
| Sensitivity (mV/g) <sup>1</sup>     | 2.0   | 0.45   | 0.15   |                    |
| Frequency Response, 3 Axis (Hz)     | 0-1000  | 0-2000 | 0-4000 | ±5%                |
| Frequency Response, 1 & 2 Axis (Hz) | 0-700   | 0-1400 | 0-3000 | ±5%                |
| Resonant Frequency (Hz)             | 4000  | 11,000 | 26,000 |                    |
| Damping Ratio                       | 0.5   | 0.3    | 0.05   | Typical            |
| Shock Limit (g)                     | 5000  | 5000   | 5000   |                    |
| Non-Linearity (% FSO)               | ±1  | ±1     | ±1     | Of Reading         |
| Transverse Sensitivity (%)          | <3  | <3     | <3     |                    |
| <b>ELECTRICAL</b>                   |   |        |        |                    |
| Zero Acceleration Output (mV)       | <±50  |        |        |                    |
| Excitation Voltage (Vdc)            | 2 to 10   |        |        |                    |
| Input Resistance                    | 2400-6000   |        |        |                    |
| Output Resistance (Ω)               | 2400-6000   |        |        |                    |
| Insulation Resistance (MΩ)          | >100  |        |        | @100Vdc            |
| Residual Noise (µV RMS)             | <10   |        |        |                    |
| 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)    | -0.20 ±0.05   |        |        | From 0 to +50°C    |
| Operating Temperature (°C)          | -20 to +85  |        |        |                    |
| Storage Temperature (°C)            | -40 to +90  |        |        |                    |
| Humidity                            | Epoxy Sealed, IP61 (M1 option)                                  |        |        |                    |
| <b>PHYSICAL</b>                     |   |        |        |                    |
| Case Material                       | Stainless Steel   |        |        |                    |
| Cable                               | 12x #30 AWG Conductors PFA Insulated, Braided Shield, PU Jacket |        |        |                    |
| Weight (grams)                      | 9.0   |        |        | Cable not included |
| Mounting (Screw)                    | M2 x 0.4, 16mm Length, Supplied                                 |        |        | Torque 3 lb-in     |

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

- Calibration supplied:** CS-FREQ-0100 NIST Traceable Amplitude Calibration from 20Hz to 3500Hz
- Supplied accessories:** AC-A02591 1x M2 x 0.4 (16mm length) Phillips Pan Head Screw & Washer
- Optional accessories:** 121 3-Channel Precision Low Noise DC Amplifier  
140A Auto-Zero Inline Amplifier

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## ORDERING INFORMATION

**PART NUMBERING** Model Number+Range+Cable Length+Options

68C-GGGG-CCC-ZZ

|     |     |     Options  
 |     |     |     Cable (360 is 360 inches)  
 |     |     |     Range (0500 is 500 g)

**Optional Dash Numbers**

-01     5Vdc Calibration  
 -03     3.3Vdc Calibration

Example: 68C-2000-360 (68CM1 includes cover at no extra cost)  
 Model 68C, Standard Configuration: 2000g, 360" (30ft) cable



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