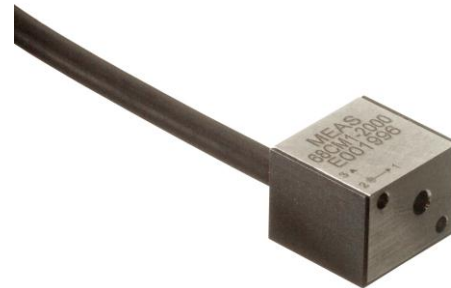


# Model 68C Accelerometer



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.

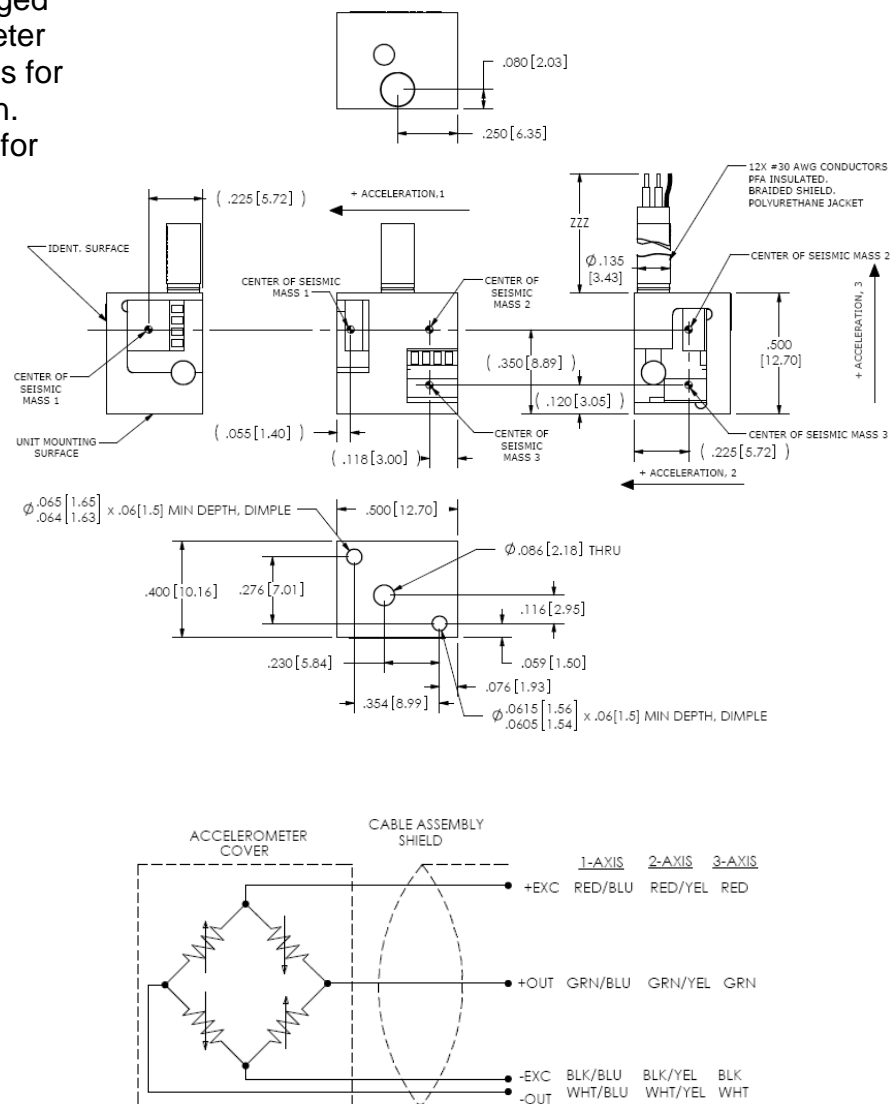
## FEATURES

- ±100g & ±2000 g Ranges
- 2-10 Vdc Excitation
- Temperature Compensation
- Mechanical Overload Stops
- Replaceable Sensors
- Optional Cover

## APPLICATIONS

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

## dimensions



# Model 68C 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

#### DYNAMIC

	$\pm 100$	$\pm 500$	$\pm 2000$	Notes
Range(g)				
Sensitivity (mV/g) <sup>1</sup>	2.0	0.45	0.15	
Frequency Response, 3 Axis (Hz)	0-1000	0-2000	0-4000	$\pm 5\%$
Frequency Response, 1 & 2 Axis (Hz)	0-700	0-1400	0-3000	$\pm 5\%$
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)	$\pm 1$	$\pm 1$	$\pm 1$	Of Reading
Transverse Sensitivity (%)	<3	<3	<3	

#### ELECTRICAL

Zero Acceleration Output (mV)	< $\pm 50$			
Excitation Voltage (Vdc)	2 to 10			
Input Resistance	2400-6000			
Output Resistance ( $\Omega$ )	2400-6000			
Insulation Resistance (M $\Omega$ )	>100			@100Vdc
Residual Noise ( $\mu\text{V RMS}$ )	<10			
Ground Isolation	Isolated from Mounting Surface			

#### ENVIRONMENTAL

Thermal Zero Shift (%FSO/ $^{\circ}\text{C}$ )	$\pm 0.05$			From 0 to $+50^{\circ}\text{C}$
Thermal Sensitivity Shift (%/ $^{\circ}\text{C}$ )	$-0.20 \pm 0.05$			From 0 to $+50^{\circ}\text{C}$
Operating Temperature ( $^{\circ}\text{C}$ )	-20 to +85			
Storage Temperature ( $^{\circ}\text{C}$ )	-40 to +90			
Humidity	Epoxy Sealed, IP61 (M1 option)			

#### PHYSICAL

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

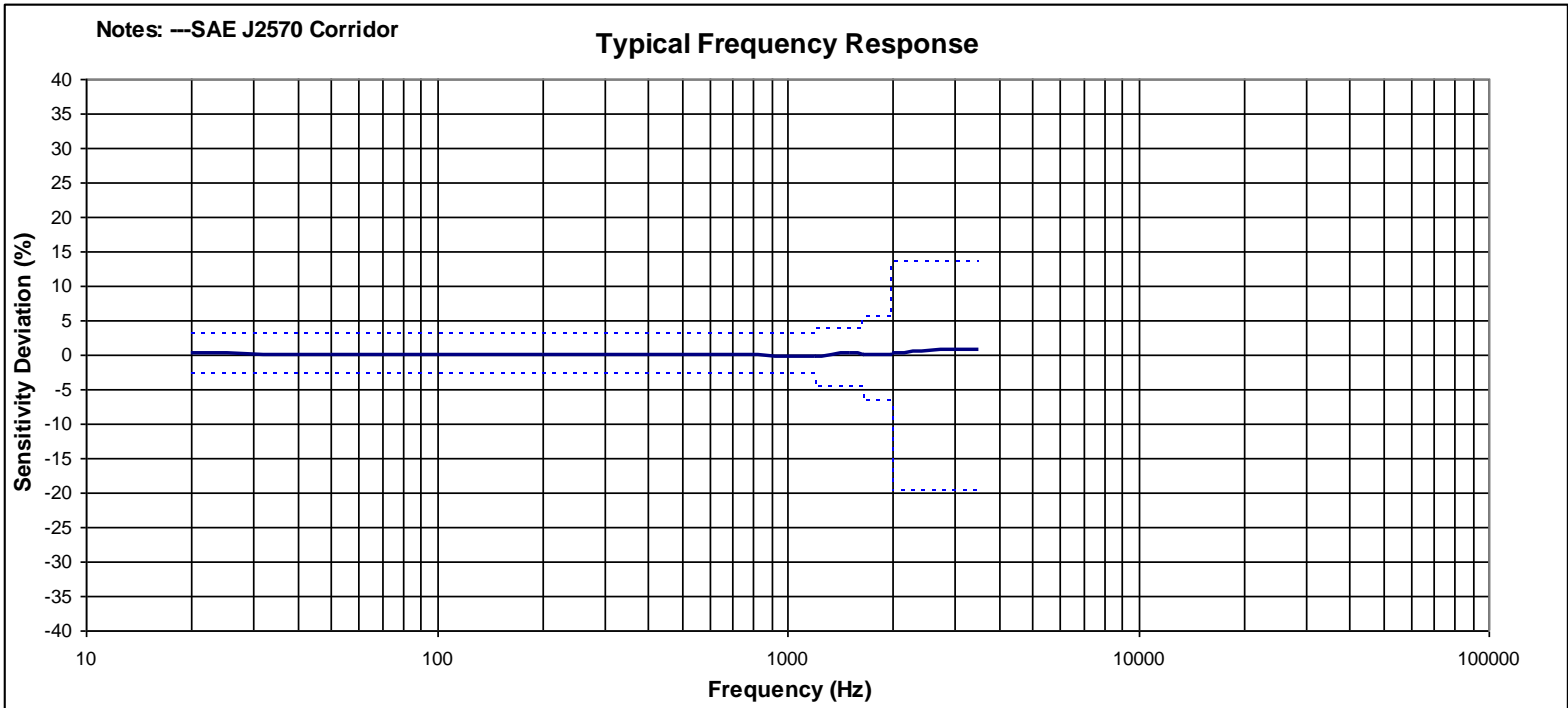
**Supplied accessories:** AC-A02591 1x M2 x 0.4 (16mm length) Phillips Pan Head Screw & Washer

**Optional accessories:** 121 3-Channel Precision Low Noise DC Amplifier  
140 Auto-Zero Inline Amplifier

The information in this sheet has been carefully reviewed and is believed to be accurate; however, no responsibility is assumed for inaccuracies. Furthermore, this information does not convey to the purchaser of such devices any license under the patent rights to the manufacturer. Measurement Specialties, Inc. reserves the right to make changes without further notice to any product herein. Measurement Specialties, Inc. makes no warranty, representation or guarantee regarding the suitability of its product for any particular purpose, nor does Measurement Specialties, Inc. assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Typical parameters can and do vary in different applications. All operating parameters must be validated for each customer application by customer's technical experts. Measurement Specialties, Inc. does not convey any license under its patent rights nor the rights of others.

# Model 68C Accelerometer

## performance specifications



## ordering info

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

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