

Model 68C Accelerometer

Triaxial Accel, DC Response
Durable 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.

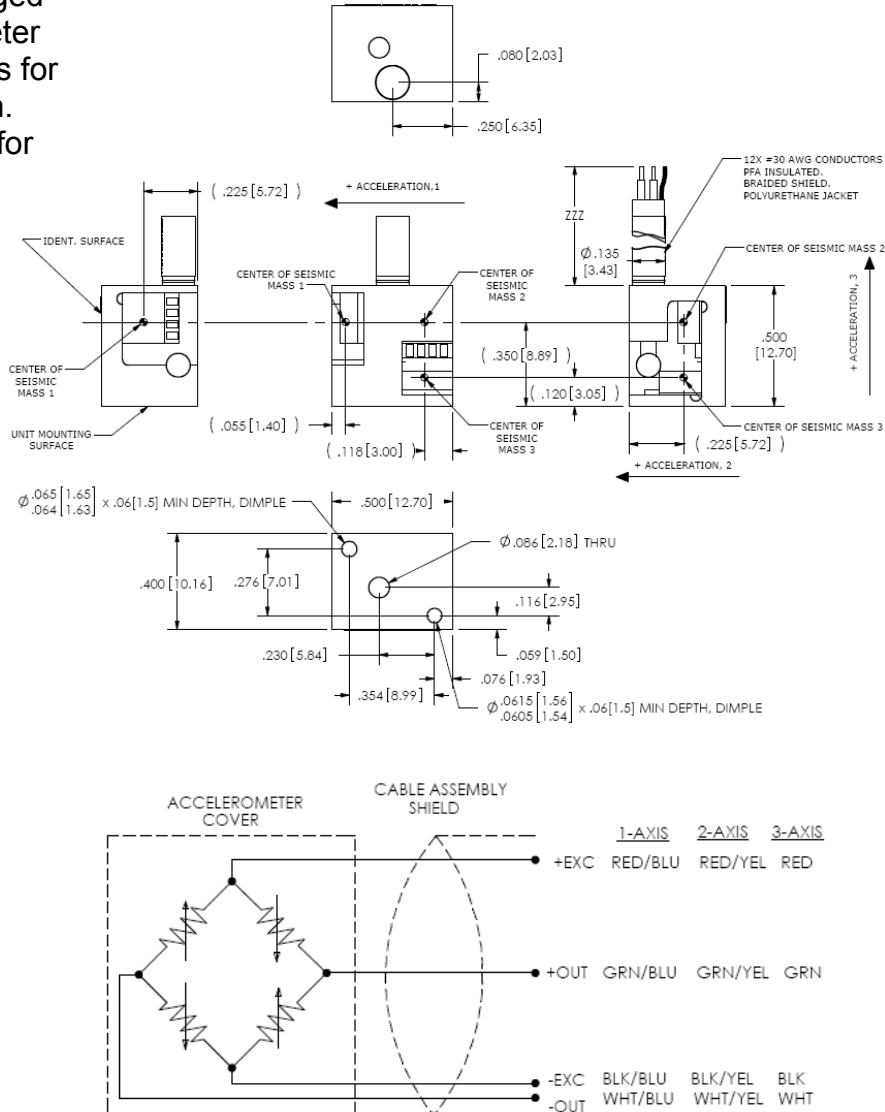
FEATURES

- ±500g & ±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

	± 500	± 2000	Notes
Range(g)	± 500	± 2000	
Sensitivity (mV/g)	0.45	0.15	Ratiometric to Excitation Voltage
Frequency Response, 3 Axis (Hz)	0-2000	0-4000	$\pm 5\%$
Frequency Response, 1 & 2 Axis (Hz)	0-1400	0-3000	$\pm 5\%$
Resonant Frequency (Hz)	11,000	26,000	
Damping Ratio	0.3	0.05	Typical
Shock Limit (g)	5000	5000	
Non-Linearity (% FSO)	± 1	± 1	Of Reading
Transverse Sensitivity (%)	<3	<3	

ELECTRICAL

	$< \pm 50$	$< \pm 50$	
Zero Acceleration Output (mV)	$< \pm 50$	$< \pm 50$	
Excitation Voltage (Vdc)	2 to 10	2 to 10	
Input Resistance	2400-6000	2400-6000	
Output Resistance (Ω)	2400-6000	2400-6000	
Insulation Resistance ($M\Omega$)	>100	>100	@50Vdc
Residual Noise ($\mu\text{V RMS}$)	<10	<10	
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 (%/ $^{\circ}\text{C}$)	± 0.1	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	#30 AWG Conductors, Braided Shield, PU Jacket	
Weight (grams)	9.0	Cable not included
Mounting (Screw)	M2 x 0.4, 16mm Length, Supplied	Torque 3 lb-in

Calibration supplied: CS-FREQ-0100 NIST Traceable Amplitude Calibration from 20Hz to 3500Hz

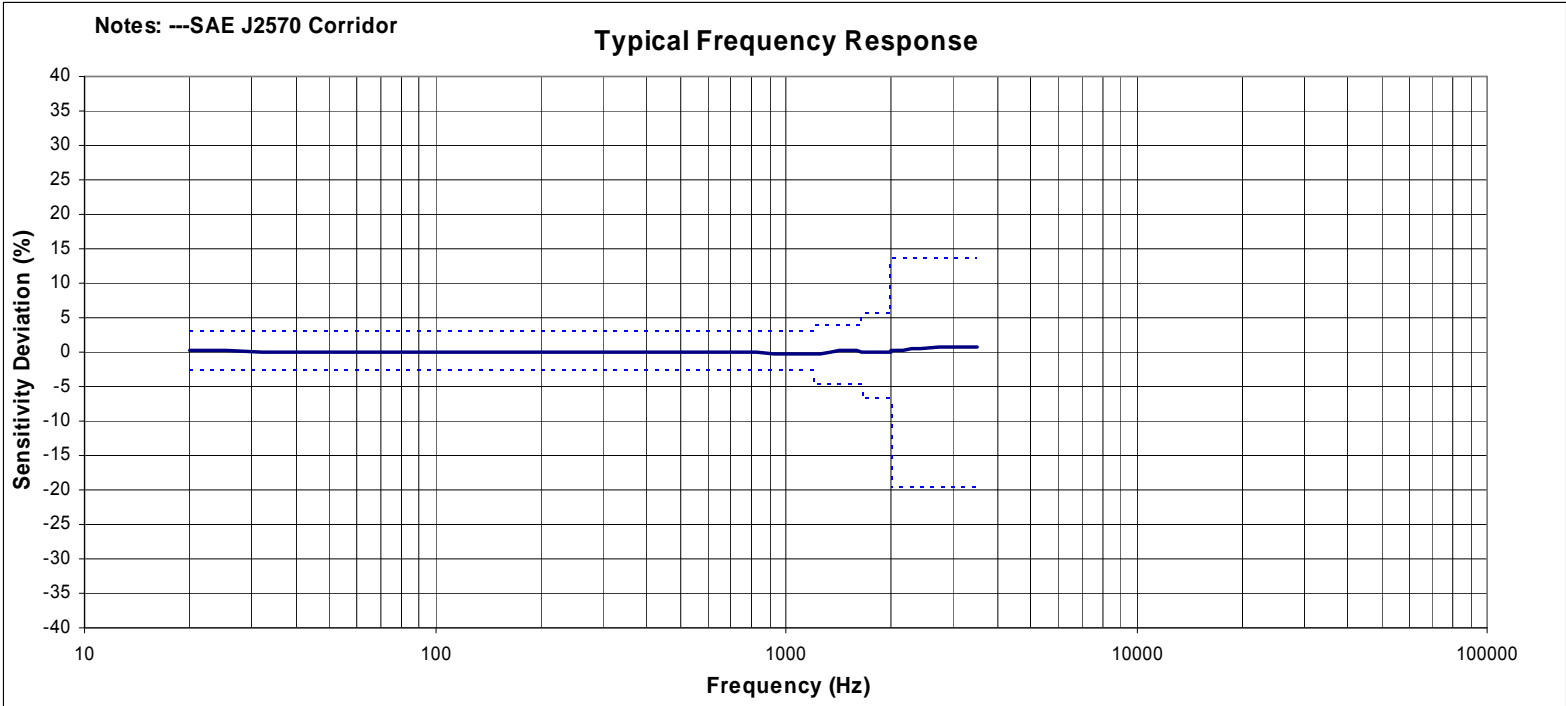
Supplied accessories: AC-A02591 1x M2 x 0.4 (16mm length) Phillips Pan Head Screw & Washer

Optional accessories: 101 Three Channel DC Signal Conditioner Amplifier

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performance specifications



ordering info

PART NUMBERING Model Number+Range+Cable Length

68C-GGGG-CCC

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

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