

# Model 64C Accelerometer



- DC Response**
- Durable Cable**
- Small Package**
- Reliable Performance**

## DESCRIPTION

The **Model 64C** accelerometer is based on an advanced piezoresistive MEMS sensing element which offers exceptional dynamic range and stability. This unit features a full bridge output configuration with a temperature range from 0 to +50° C. A slight amount of internal gas damping provides outstanding shock survivability and a flat amplitude/phase response up to 8kHz. The Model 64C is compliant with SAE J211 standards for anthropomorphic dummy instrumentation.



## FEATURES

- ◆ 2<sup>nd</sup> GEN MEMS Sensing Element
- ◆ ± 50 to ±6,000 g Ranges
- ◆ 2-10 Vdc Excitation
- ◆ 0-50°C Temperature Range
- ◆ High Impact Cable
- ◆ 1% Transverse Sensitivity Available
- ◆ <± 25 mV Zero Offset

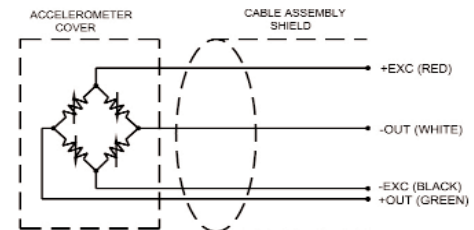
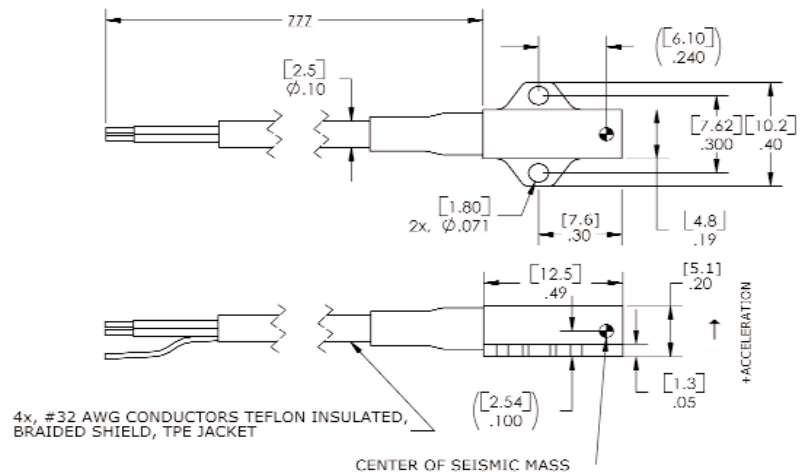
## APPLICATIONS

- ◆ Safety Crash Testing
  - Auto
  - Truck
  - Recreational Vehicles
- ◆ Shock Testing

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## dimensions

(Dimensions in inches)



# Model 64C Accelerometer

## performance specifications

All values are typical at +24°C, 100 Hz and 10 Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

Parameters							Notes
<b>DYNAMIC</b>							
Range(g)	±50	±100	±200	±500	±2000	±6000	
Sensitivity (mV/g)	2	0.9	0.9	0.4	0.15	0.1	
Frequency Response (Hz)	0-400	0-500	0-800	0-1200	0-3000	0-3000	±2%
	0-1000	0-1200	0-2000	0-3000	0-6000	0-6000	±5%
	0-1400	0-1500	0-2800	0-4200	0-8000	0-8000	±1dB
Resonance (Hz)	4000	6000	8000	15000	26000	26000	
Shock Limit	10000	10000	10000	10000	10000	10000	g
Non-Linearity			±1		% Reading		±2% Reading for ±6,000 g
Transverse Sensitivity			<3		%		1% available
Zero Acceleration Output			<±25		mV		
Thermal Zero Shift			±0.04 (±0.02)		%FSO/°C(%FSO/°F)		0°C to +50°C (32 to -122°F)
Thermal Sensitivity Shift			±0.1 (±0.06)		%/°C(%/°F)		0°C to +50°C (32 to -122°F)
Damping Ratio	0.5	0.5	0.5	0.3	0.05	0.05	
<b>ELECTRICAL</b>							
Voltage Excitation		2 to 10			Vdc		Output ratiometric to excitation. Do not reverse polarity.
Input Resistance		3500-4800			Ω		Measured between +EXC and - EXC
Output Resistance (Varies with current)		2700-4800			Ω		Measured between +OUT and - OUT
Insulation Resistance		>100			MΩ		At 50 Vdc, leads to case and shield
Ground Isolation							Shield is not connected to cover
<b>ELECTRICAL</b>							
Cable Output Connections		+EXC			RED		32 AWG Teflon® Insulated
		-EXC			BLACK		32 AWG Teflon® Insulated
		+OUT			GREEN		32 AWG Teflon® Insulated
		-OUT			WHITE		32 AWG Teflon® Insulated
		CABLE SHIELD			N/A		Braided Wires
		CABLE JACKET			WHITE		TPE
<b>PHYSICAL</b>							
Case Material							Anodized aluminum
Cover Material							Anodized aluminum
Cable Connections							Integral 30 foot cable
Weight		1			gram		Without cable
Mounting							2x 0-80 x 3/16 socket head cap screws (Flat Washers and Allen Wrench included)
Mounting Torque		<3(<0.3)			lb-in (Nm)		
<b>ENVIRONMENTAL</b>							
Operating Temperature		-40 to +121			°C		
Humidity							Epoxy Sealed
<b>PART NUMBERING</b>							
Model Number + Range (g's) + Cable Length							(see sample below)

## ordering information

### MODEL NUMBER:

64C - ZZZZ - ZZZT  
 ↳ <1% Transverse Sensitivity, otherwise leave blank  
 ↳ CABLE LENGTH (INCHES) [e.g. 360 IS 360 INCHES OF CABLE]  
 ↳ RANGE (g) [e.g. 0200 IS 200g RANGE]

### Supplied Materials:

1. Calibration Certificate
2. Mounting Screws (P/N AC-D02009) x 2
3. Washers (P/N AC-D02008) x 2
4. Allen Wrench

Custom connector options are available.

Contact Measurement Specialties, Inc. for applicable model number.

