

# Model 201 Accelerometer

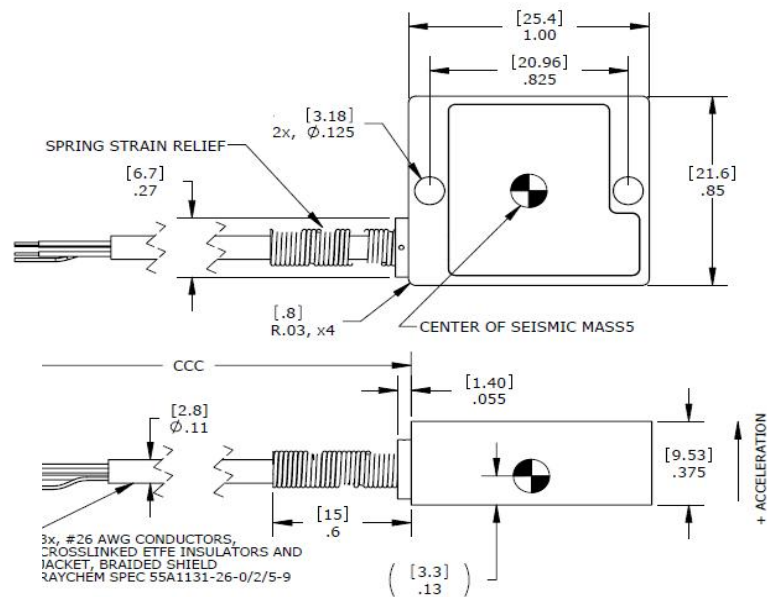


MEMS Accelerometer  
Temperature Calibrated  
Signal Conditioned Output  
Low Cost, Low Noise



The **Model 201** is a low noise accelerometer offering both static and dynamic response. The accelerometer is packaged in an anodized aluminum housing with an integral cable. It is offered in ranges from  $\pm 2g$  to  $\pm 50g$ . Featuring gas damped MEMS sensing elements, the model 201 provides a flat frequency response over an operating temperature range of  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ .

## dimensions

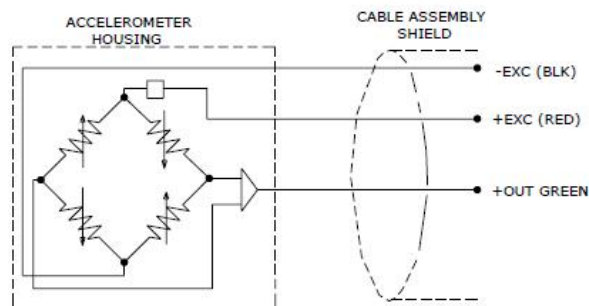


## FEATURES

- Low Noise
- Low Current Consumption
- Ranges:  $\pm 2g$  to  $\pm 50g$
- High Over-Range Protection
- Temperature Compensation
- 2 Pole Electronic Filtering

## APPLICATIONS

- Motorsports
- Vibration & Shock Monitoring
- Road Vehicle Testing
- Low Frequency Applications
- Seismic



# Model 201 Accelerometer

## performance specifications

All values are typical at +24°C and 12Vdc 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							Notes
<b>DYNAMIC</b>							
Range (g)	±2	±5	±10	±20	±30	±50	
Sensitivity (mV/g)	1000	400	200	100	67	40	
-3dB Cutoff Frequency (Hz)	100 ±15	100 ±15	100 ±15	100 ±15	100 ±15	100 ±15	
Rolloff Above Cutoff Frequency (dB/dec)	-40	-40	-40	-40	-40	-40	
Natural Frequency (Hz)	700	800	1000	1500	1500	4000	
Non-Linearity (%FSO)				±1.0			
Transverse Sensitivity (%)				<3			<2 Typical
Damping Ratio				0.7			
Shock Limit (g)				5000			
<b>ELECTRICAL</b>							
Zero Acceleration Output (V)				2.5 ±0.1			
Excitation Voltage (Vdc)				5 to 30			
Excitation Current (mA)				<5			
Full Scale Output Voltage Swing (Vp-p)				0.5 to 4.5			
Output Resistance (Ω)				<100			
Insulation Resistance (MΩ)				>100			@100Vdc
Residual Noise (μV RMS)	80	50	50	60	50	60	0.1 to 100 Hz
Ground Isolation				Isolated from Mounting Surface			
<b>ENVIRONMENTAL</b>							
Thermal Zero Shift (%FSO/°C)				±0.012			Typical
Thermal Sensitivity Shift (%/°C)				±0.020			Typical
Operating Temperature (°C)				-40 to 125			
Compensated Temperature (°C)				0 to 85			
Storage Temperature (°C)				-40 to 125			
<b>PHYSICAL</b>							
Case Material				Anodized Aluminum			
Cable				Teflon Insulated Leads, Braided Shield, Raychem Jacket			
Weight (grams)				14			
Mounting				2x #4-40 or M3 Socket Head Screw			
Mounting Torque				6 lb-in (0.7 N-m)			
Cable AWG				3 x #26			
<b>Wiring color code:</b>	+Excitation = Red; -Excitation = Blk; +Output = Grn						
<b>Supplied accessories:</b>	AC-D02286 (#4 WASHER) AC-D02995 (SCREW 4-40 7/8" SOCKET HD)						
<b>Optional accessories:</b>	101 Three Channel DC Signal Conditioner 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.

## ordering info

PART NUMBERING Model Number+Range+Cable Length

201-XX-CCC

|     |  
 |     | \_\_\_\_\_ Cable (060 is 60 inches)  
 | \_\_\_\_\_ Range (05 = ±5g range, X axis)

Example: 201-05-060  
Model 201, ±5g, 60" (5ft) Cable