

# Model 606M1 Accelerometer



Seat Pad Accelerometer  
MEMS, Triaxial  
DC Response  
Accurate Temp Compensation  
Signal Conditioned Output



The **Model 606M1** is a low noise triaxial accelerometer with both static and dynamic responses designed specially as a seat pad for characterizing the motion of the driver and occupants. The DC response of the silicon MEMS sensors is the key to providing accurate velocity and displacement results after integration. The 606M1 incorporates integral temperature compensation that provides a stable output over a wide operating range. The on-board voltage regulation circuit works with power supply from 8 to 32Vdc.

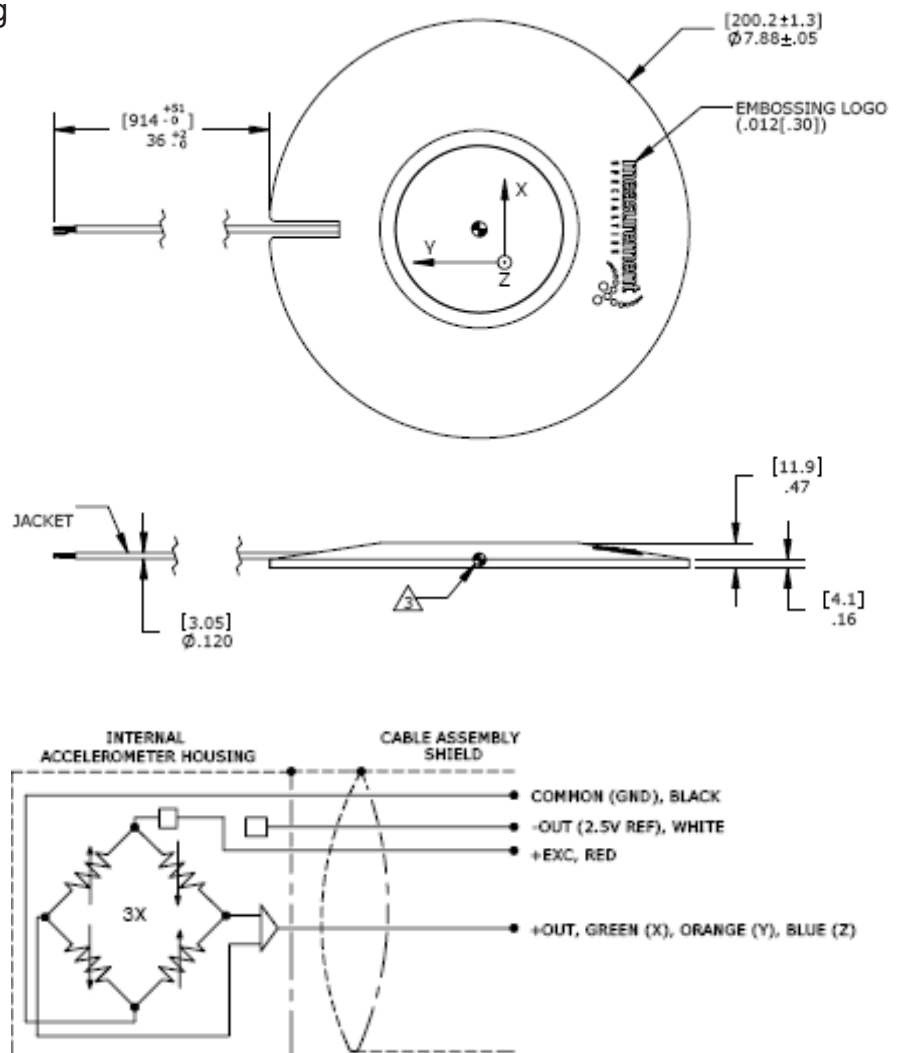
## FEATURES

- Three Independent Circuits
- Low Current Consumption
- Ranges:  $\pm 25g$
- Gas Damped, DC Response
- High Over-Range Protection
- Temperature Compensation
- Low Transverse Sensitivity

## APPLICATIONS

- Vehicle Occupant Study
- Vibration/Shock Monitoring
- Helicopter Flight Testing
- Heavy Equipment Testing
- Biodynamic Study

## dimensions



# Model 606M1 Accelerometer

## performance specifications

All values are typical at +24°C, 100Hz and 12Vdc excitation unless otherwise stated.  
Measurement Specialties reserves the right to update and change these specifications without notice.

### Parameters

#### DYNAMIC

Parameters		Notes
Range (g)	±25	
Sensitivity (mV/g)	80	
Frequency Response (Hz)	0-800	±5%
Frequency Response (Hz)	0-1000	±1dB
Natural Frequency (Hz)	4000	
Non-Linearity (%FSO)	±1.0	
Transverse Sensitivity (%)	<3	<1 Typical
Damping Ratio	0.7	
Shock Limit (g)	5000	

#### ELECTRICAL

Zero Acceleration Output (mV)	±50	Differential
Excitation Voltage (Vdc)	8 to 36	
Excitation Current (mA)	<15	
Bias Voltage (Vdc)	2.5	
Output Resistance (Ω)	<100	
Insulation Resistance (MΩ)	>100	@100Vdc
Turn On Time (msec)	<100	
Residual Noise (μV RMS)	800	Passband
Ground Isolation	Isolated from Mounting Surface	

#### ENVIRONMENTAL

Thermal Zero Shift (%FSO)	±3	Typical
Thermal Sensitivity Shift (%)	±3.5	Typical
Operating Temperature (°C)	-20 to 85	
Compensated Temperature (°C)	-20 to 85	
Storage Temperature (°C)	-20 to 85	

#### PHYSICAL

Case Material (Seat Pad)	Nitrile Rubber
Cable	Teflon Insulated Leads, Braided Shield, TPE Jacket
Weight (grams)	380
Mounting	2x #4 or M3 Screws
Mounting	Adhesive Tape
AWG	#28, 6X

<b>Wiring color code:</b>	X-axis:	+Excitation = Red; +Output = Green; -Output (-2.5V Ref) = White; Common (Ground) = Black
	Y-axis:	+Excitation = Red; +Output = Orange; -Output (-2.5V Ref) = White; Common (Ground) = Black
	Z-axis:	+Excitation = Red; +Output = Blue; -Output (-2.5V Ref) = White; Common (Ground) = Black

**Calibration supplied:** CS-FREQ-0100 NIST Traceable Amplitude Calibration from 20Hz to ±5% Frequency Response Limit

**Optional accessories:** 101 Three Channel DC Signal Conditioner Amplifier

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