

# MODEL 4835A ACCELEROMETER

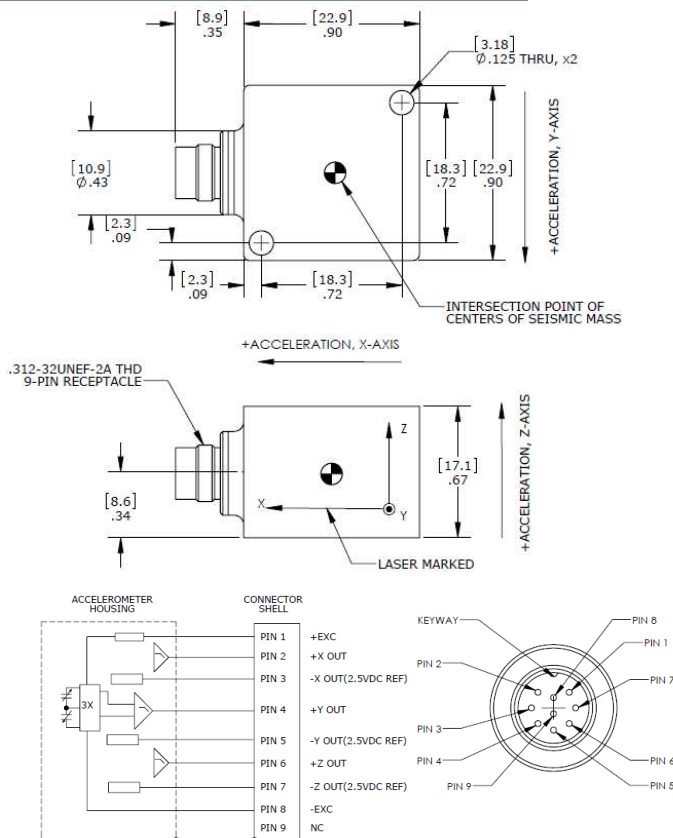


## SPECIFICATIONS

- ◆ MEMS Triaxial Accelerometer
- ◆ Ultra-Stable, DC Response
- ◆ Light Weight Welded Titanium
- ◆ <2% Total Error Band

The **Model 4835A** is an ultra-stable MEMS triaxial accelerometer in a rugged, welded Titanium package. The variable capacitance MEMS accelerometer incorporates integral temperature compensation that provides a stable output over a wide temperature range from -55°C to +125°C. Offered in ranges from  $\pm 2$  to  $\pm 200g$ , the **model 4835A** accelerometer also provides a wide bandwidth from DC to 1000Hz for both static and dynamic measurements.

## DIMENSIONS



## FEATURES

- ◆  $\pm 2g$  to  $\pm 200g$  Dynamic Range
- ◆ Amplified Output
- ◆ 8-36Vdc Excitation Voltage
- ◆ Hermetically Sealed, Detachable Cable
- ◆ Gas Damped MEMS Element
- ◆ Temperature Compensated
- ◆ Low Transverse Sensitivity

## APPLICATIONS

- ◆ Low Frequency Monitoring
- ◆ Transportation
- ◆ Flight Testing
- ◆ Machine Control
- ◆ Road Vehicle Testing
- ◆ Trains

**PERFORMANCE SPECIFICATIONS**

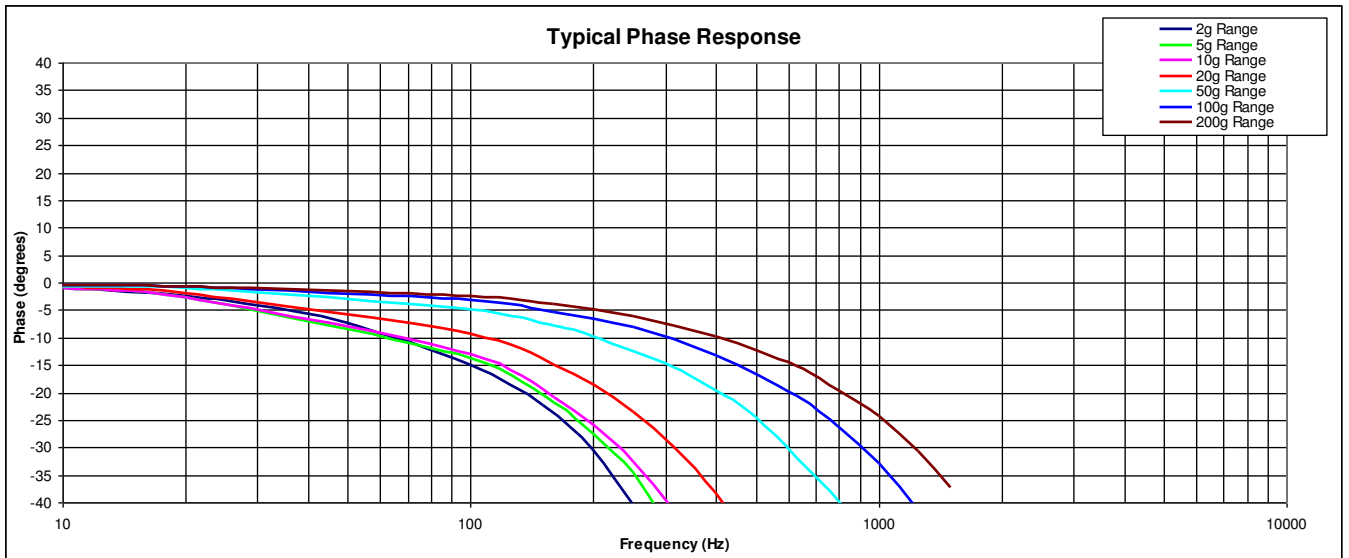
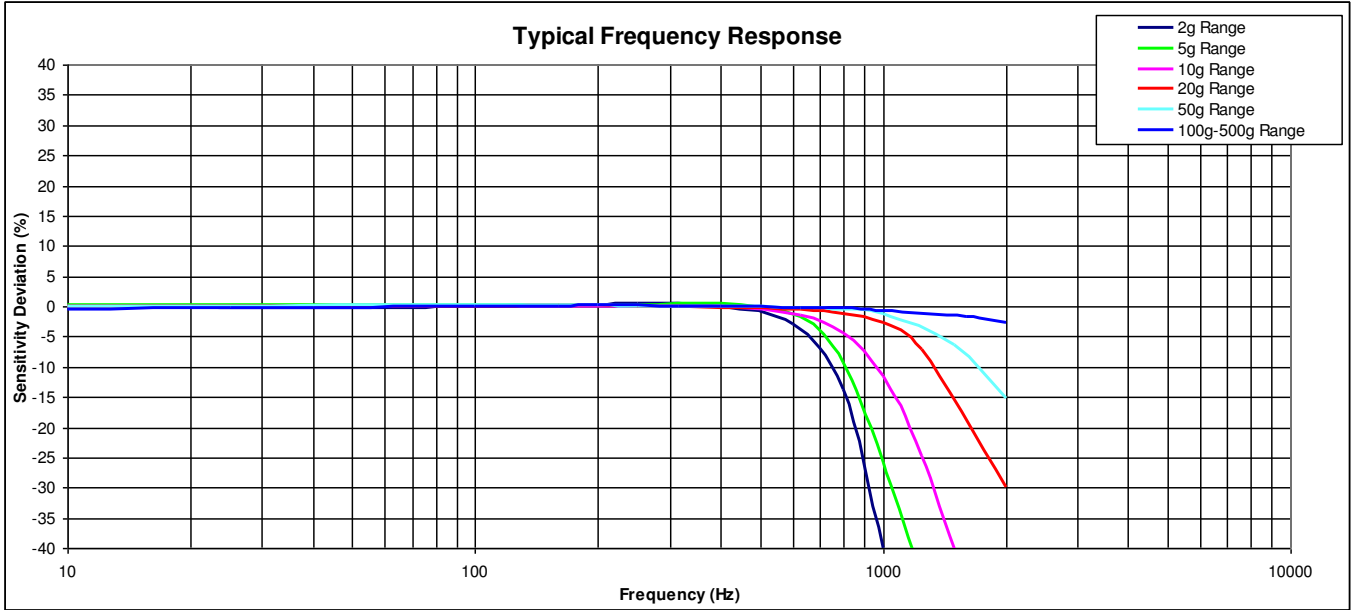
All values are typical at +24°C, 80Hz and 12Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

Parameters									Notes
<b>DYNAMIC</b>									
Range (g)	±2	±5	±10	±30	±50	±100	±200		
Sensitivity (mV/g)	1000	400	200	67	40	20	10		
Frequency Response (Hz)	0-200	0-600	0-800	0-800	0-800	0-1000	0-1000		±5%
Non-Linearity (%FSO)	±1.0	±1.0	±1.0	±1.0	±1.0	±1.0	±1.0		
Transverse Sensitivity (%)	<2	<2	<2	<2	<2	<2	<2		
Damping Ratio	0.7	0.7	0.7	0.7	0.7	0.7	0.6		
Shock Limit (g)	2000	5000	5000	5000	5000	5000	5000		
Residual Noise (µV RMS)	550	700	750	750	750	800	800		Passband
<b>ELECTRICAL</b>									
Zero Acceleration Output (mV)	±50								Differential
Excitation Voltage (Vdc)	8 to 36								
Excitation Current (mA)	<15								
Full Scale Output Voltage (V)	±2								
Output Impedance (Ω)	<100								
Insulation Resistance (MΩ)	>100								@100Vdc
Turn On Time (msec)	<100								
Ground Isolation	Isolated from Mounting Surface								
<b>ENVIRONMENTAL</b>									
Thermal Zero Shift (%FSO/°C)	±0.004								Typical
Thermal Sensitivity Shift (%/°C)	±0.010								Typical
Operating Temperature (°C)	-55 to 121								
Storage Temperature (°C)	-55 to 121								
Humidity	Hermetically Sealed, IP67 <sup>1</sup>								
Total Error Band (%)	<2 (RSS of Non-Linearity, Thermal Zero Shift, and Thermal Sensitivity Shift)								
<b>PHYSICAL</b>									
Case Material	Titanium								
Weight (grams)	22								
Mounting	2x #4 or M3 Screws								
Mounting Torque	6 lb-in (0.7 N-m)								

<sup>1</sup> Mating cable needs to also have minimum IP67 rating and be properly sealed to accelerometer connector in accordance with IEC 60529.

<b>Calibration supplied:</b>	CS-FREQ-0100	NIST Traceable Amplitude Calibration from 20Hz to ±5% Frequency Response Limit
<b>Supplied accessories:</b>	AC-D02995	2x #4-40 (7/8" length) Socket Head Cap Screw and Washer
<b>Optional accessories:</b>	371-120 121	Mating Cable Assembly, (XXX designates length in inches, 10ft standard) 3-Channel Precision Low Noise DC Amplifier

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## ORDERING INFORMATION

PART NUMBERING Model Number+Range

4835A-GGGG-C  
| \_\_\_\_\_ Range (0010 is 10g)

Example: 4835A-0010-C  
Model 4835A, 10g Range

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