

# Model 4332 Accelerometer

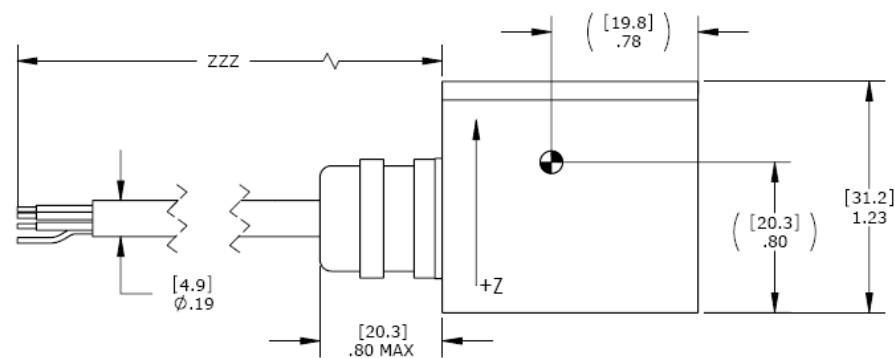
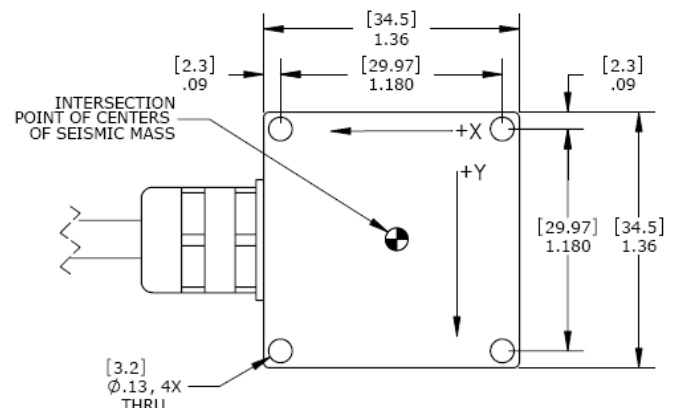


MEMS Triaxial Accelerometer  
Temperature Calibrated  
IP68 Protection  
Low Noise, High Resolution

The **Model 4332** is a low noise triaxial accelerometer offering both static and dynamic response. The accelerometer is packaged in an anodized aluminum housing and is offered in  $\pm 2g$  to  $\pm 20g$  range. The model 4332 features an integral cable and is certified to IP68 protection. The accelerometer incorporates a 50Hz LP filter and an operating temperature range of  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ .



## dimensions



## FEATURES

- Micro-g Resolution
- Three Independent Circuits
- Low Current Consumption
- $\pm 2g$  to  $\pm 20g$  Dynamic Range
- DC Response
- Temperature Compensation

## APPLICATIONS

- Transportation Measurements
- Structural Monitoring
- Bridge Monitoring
- Low Frequency Applications
- Motion Analysis

WIRE DESIGNATIONS: WHITE = INPUT (EXCITATION)  
BROWN = OUTPUT X AXIS  
GREEN = OUTPUT Y AXIS  
PINK = OUTPUT Z AXIS  
YELLOW = COMMON (CIRCUIT GROUND)  
GRAY = NO CONNECTION

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## performance specifications

All values are typical at +24°C, 10Hz 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

#### DYNAMIC

	4332-002	4332-005	4332M1-010	4332M1-020	Notes
Model Number	4332-002	4332-005	4332M1-010	4332M1-020	
Range (g)	±2	±5	±10	±20	
Sensitivity (mV/g)	1000	400	200	100	±10%
Frequency Response (Hz)	0-20	0-20	0-200	0-200	±5%
-3dB Cutoff Frequency (Hz)	50 +20/-0	50 +20/-0	800 ±50	800 ±50	
Rolloff Above Cutoff Frequency (dB/dec)	-40	-40	-40	-40	
Natural Frequency (Hz)	700	800	1000	1500	
Non-Linearity & Hysteresis (%FSO)	±0.5	±0.5	±0.5	±0.5	
Transverse Sensitivity (%)	<3	<3	<3	<3	<2 Typical
Damping Ratio	0.7	0.7	0.7	0.7	
Shock Limit (g)	5000	5000	5000	5000	
Residual Noise (µV RMS)	80	50	200	200	0.1 to 100Hz
Residual Noise (µg/√Hz RMS)	8	13	71	141	Spectral

#### ELECTRICAL

Zero Acceleration Output (V)	2.5 ±0.1				
Excitation Voltage (Vdc)	5 to 30				
Excitation Current (mA)	<15				
Full Scale Output Voltage Swing (Vdc)	0.5 to 4.5				
Output Impedance (Ω)	<100				
Insulation Resistance (MΩ)	>100				@100Vdc
Turn On Time (msec)	<100				
Ground Isolation	Isolated from Mounting Surface				

#### ENVIRONMENTAL

Thermal Zero Shift (%FSO/°C)	±0.04				0 to +65°C
Thermal Sensitivity Shift (%/°C)	±0.04				0 to +65°C
Operating Temperature (°C)	-40 to 85				
Compensated Temperature (°C)	0 to 65				
Storage Temperature (°C)	-40 to 85				
Humidity	IP68, 40m Depth				

#### PHYSICAL

Case Material	Anodized Aluminum
Cable	PVC Insulated Leads, Braided Shield, PVC Jacket
Weight (grams)	<100
Mounting	4x #4 or M3 Screws
Mounting Torque	6 lb-in (0.7 N-m)
AWG (model 4332)	6x 0.14 mm <sup>2</sup>

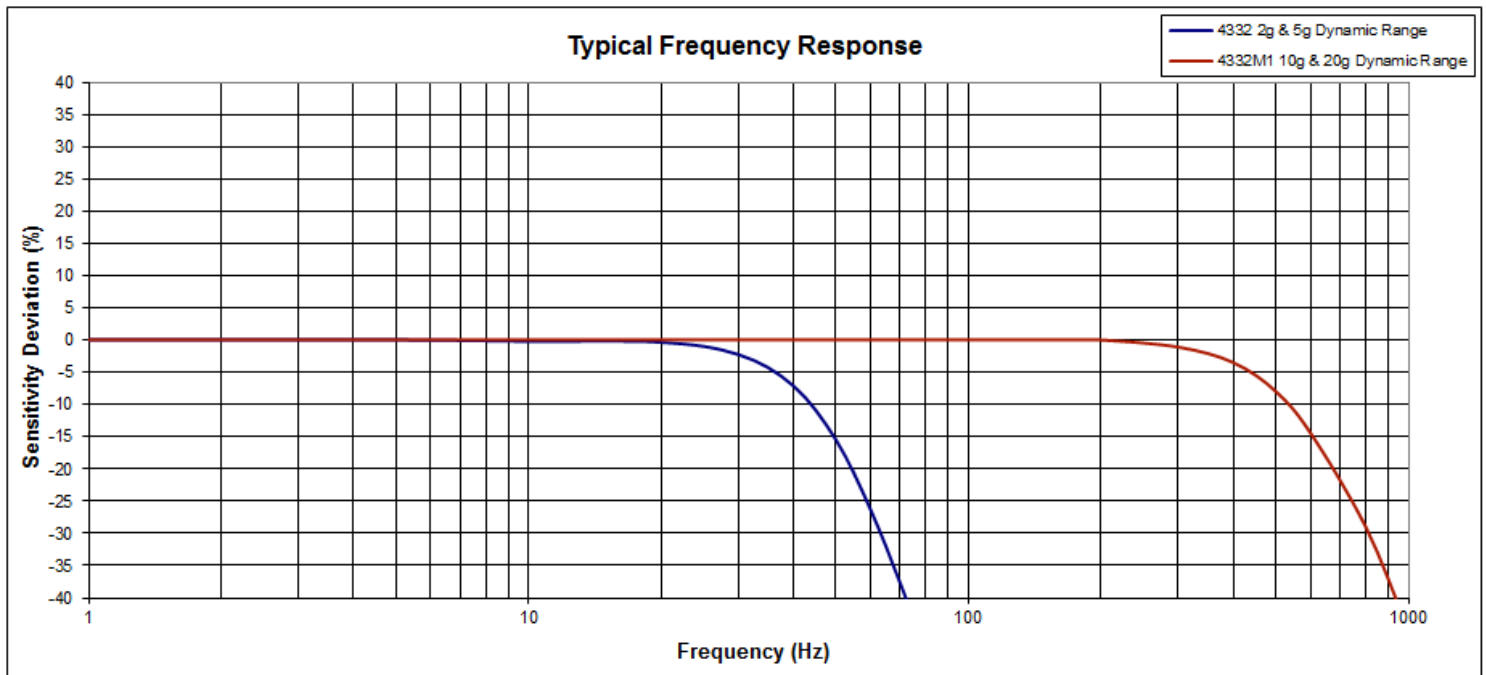
**Calibration supplied:** CS-FREQ-0100 NIST Traceable Amplitude Calibration from 1Hz to 100Hz

**Supplied accessories:** 4x #4-40 (1 ½" length) Socket Head Cap Screw and Washer

**Optional accessories:** 121 3-Channel Precision Low Noise DC Amplifier

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## ordering info

PART NUMBERING Model Number+Range+ Cable Length

4332-GGG-CCC

| | | Cable Length (-120 is 120 inches)

| | Range (002 is 2g)

| Model (4332 for 2g & 5g range, 4332M1 for 10g & 20g range)

Example: 4332-002-120

Model 4332, 2g, 120" Cable