

## MODEL 4332 ACCELEROMETER



### SPECIFICATIONS

- ◆ 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  $\pm 50g$  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  $+85^{\circ}\text{C}$ .

### FEATURES

- ◆ Micro-g Resolution
- ◆ Three Independent Circuits
- ◆ Low Current Consumption
- ◆  $\pm 2g$  to  $\pm 50g$  Dynamic Range
- ◆ DC Response
- ◆ Temperature Compensation

### APPLICATIONS

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

**PERFORMANCE SPECIFICATIONS**

All values are typical at +24°C, 10Hz and 12Vdc excitation unless otherwise stated. TE Connectivity reserves the right to update and change these specifications without notice.

Parameters						Notes
<b>DYNAMIC</b>						
Model Number	4332-002	4332-005	4332M1-010	4332M1-020	4332M1-050	
Range (g)	±2	±5	±10	±20	±50	
Sensitivity (mV/g)	1000	400	200	100	40	±10%
Frequency Response (Hz)	0-20	0-20	0-200	0-200	0-200	±5%
-3dB Cutoff Frequency (Hz)	50 +20/-0	50 +20/-0	800 ±50	800 ±50	800 ±50	
Rolloff Above Cutoff Frequency (dB/dec)	-40	-40	-40	-40	-40	
Natural Frequency (Hz)	700	800	1000	1500	4000	
Non-Linearity & Hysteresis (%FSO)	±0.5	±0.5	±0.5	±0.5	±0.5	
Transverse Sensitivity (%)	<3	<3	<3	<3	<3	<2 Typical
Damping Ratio	0.7	0.7	0.7	0.7	0.6	
Shock Limit (g)	5000	5000	5000	5000	5000	
Residual Noise (µV RMS)	80	50	200	200	200	0.1 to 100Hz
Residual Noise (µg/√Hz RMS)	8	13	71	141	354	Spectral

<b>ELECTRICAL</b>						
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					

<b>ENVIRONMENTAL</b>						
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					

<b>PHYSICAL</b>						
Case Material	316 Stainless Steel					
Cable	PVC Insulated Leads (6x 0.14 mm <sup>2</sup> ), Braided Shield, PVC Jacket					
Weight (without cable)	185 grams					
Mounting	4x #4 or M3 Screws					
Mounting Torque	6 lb-in (0.7 N-m)					

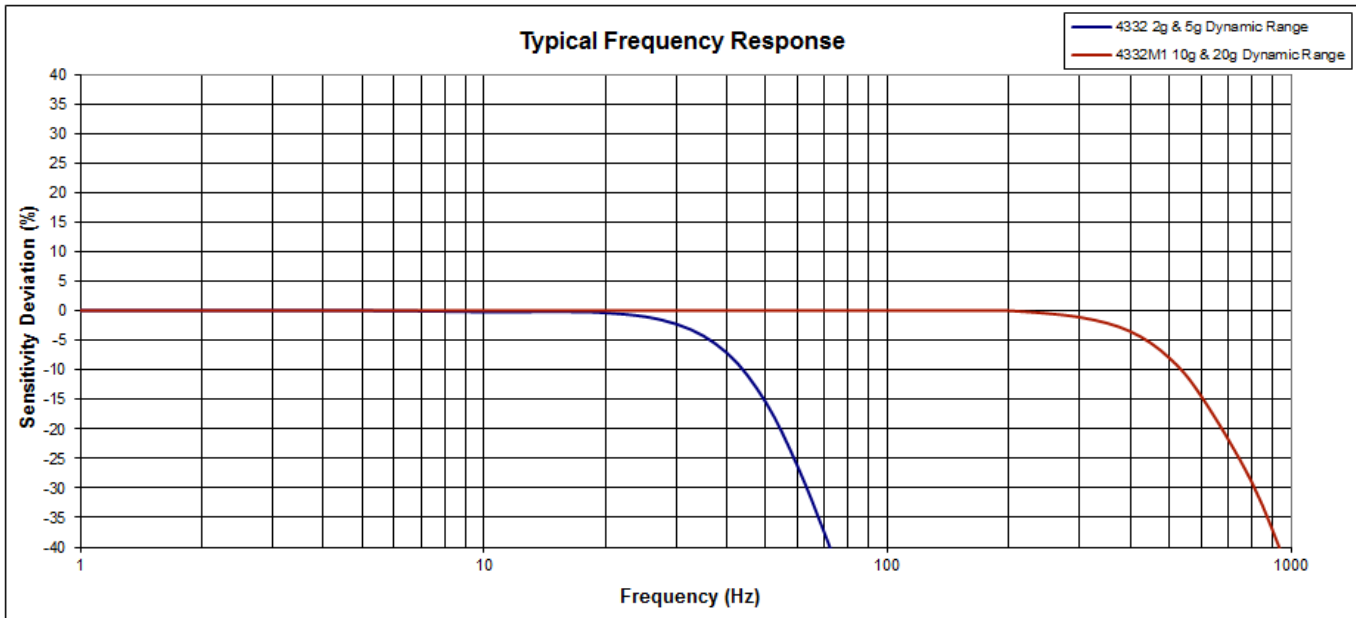
**Calibration supplied:** CS-FREQ-0100 NIST Traceable Amplitude Calibration from 1Hz to 100Hz

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

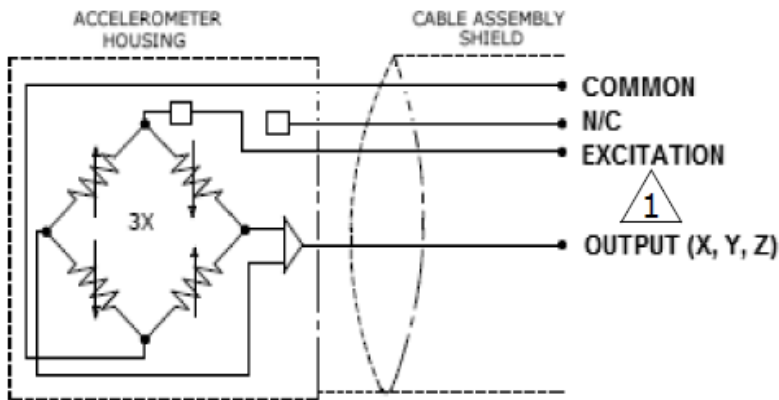
**Optional accessories:** AC-A05172 Adhesive Mounting Adaptor  
121 3-Channel Precision Low Noise DC Amplifier

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**TYPICAL FREQUENCY RESPONSE**



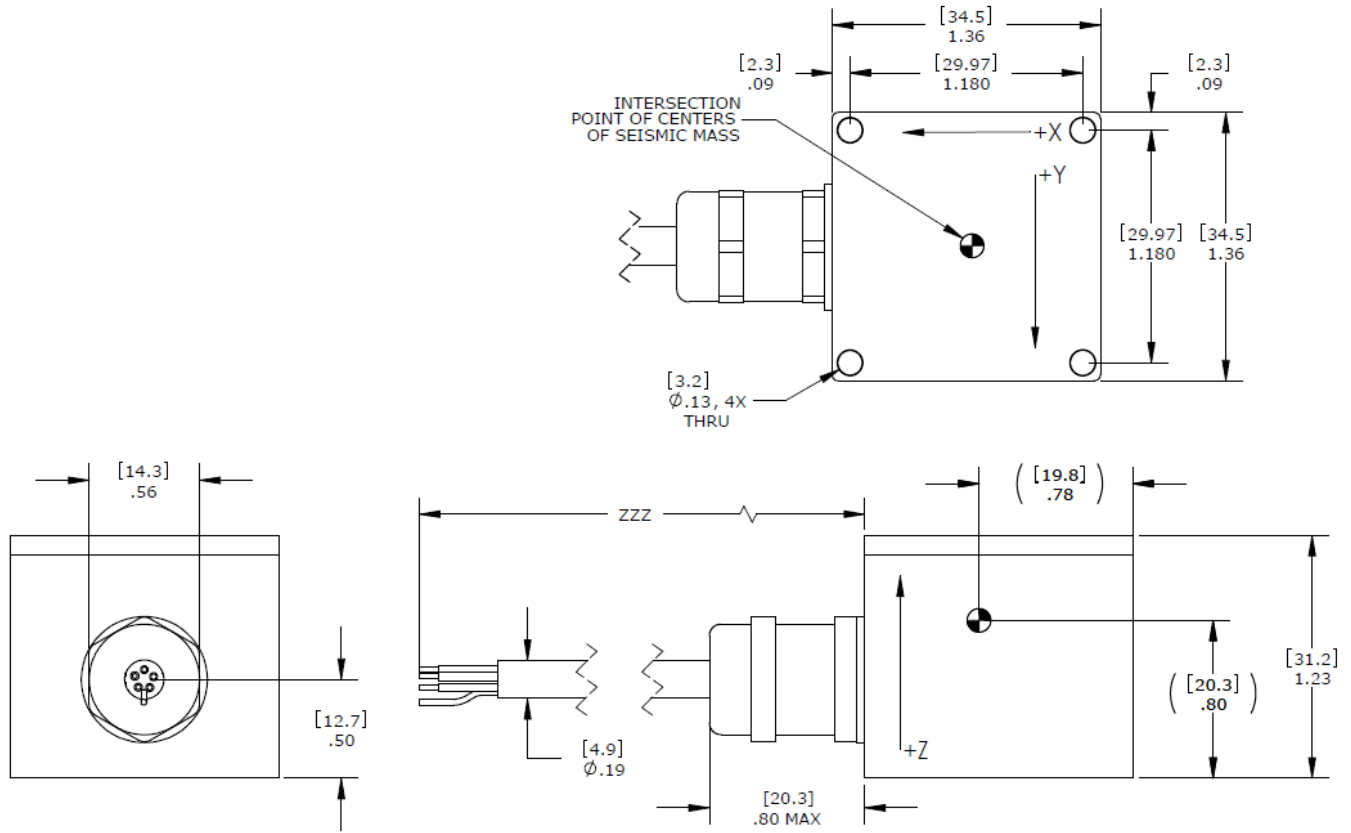
**SCHEMATIC**



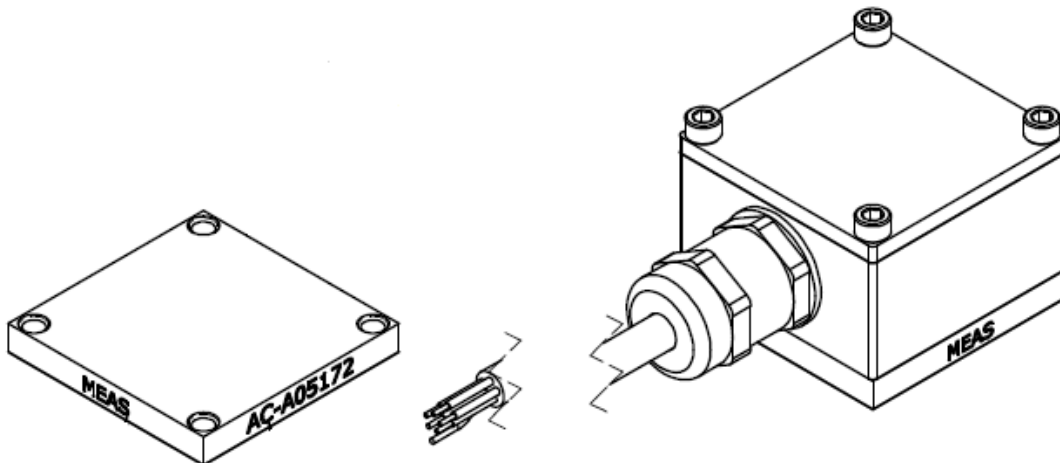
1. 6 X 0.14 mm<sup>2</sup> CONDUCTORS, PVC INSULATED, BRAIDED SHIELD, PVC JACKET  
 WIRE DESIGNATIONS:  
 WHITE = INPUT (EXCITATION)  
 BROWN = OUTPUT X AXIS  
 GREEN = OUTPUT Y AXIS  
 PINK = OUTPUT Z AXIS  
 YELLOW = COMMON (CIRCUIT GROUND)  
 GRAY = NO CONNECTION

# MODEL 4332 ACCELEROMETER

## DIMENSIONS



## ADHESIVE MOUNTING ADAPTOR (sold separately)



## ORDERING INFORMATION

4332 (2g-5g) or 4332M1 (10g-50g)

GGG

ZZZ

### Range

002=2g  
005=5g  
010=10g  
020=20g  
050=50g

### Cable length

120=120 inches  
240=240 inches  
360=360 inches  
480=480 inches  
600=600 inches  
  
197=197 inches, 5 meters  
394=394 inches, 10 meters

Contact factory for custom cable lengths

Example: 4332-002-120

Model 4332, 2g range, 120inch cable length

Example: 4332M1-100-120

Model 4332M1, 10g range, 120inch cable length

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