

Model 4332M3 Accelerometer

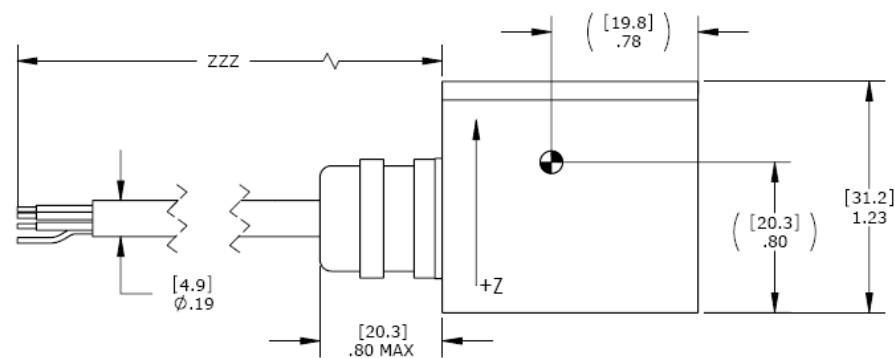
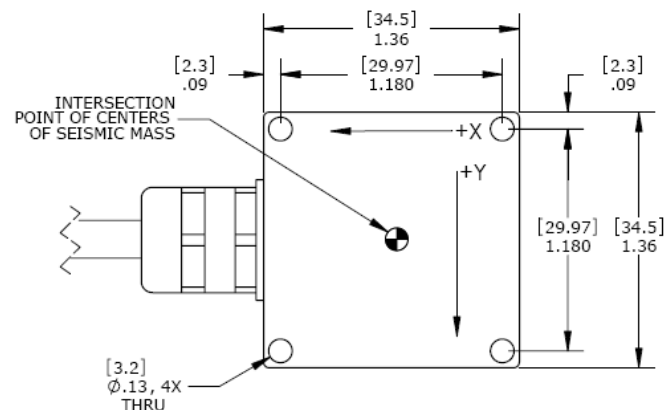


4-20mA Signal Output
MEMS Triaxial Accelerometer
IP68 Protection, 40m Depth
Low Noise, High Resolution

The **Model 4332M3** is 4-20mA output MEMS triaxial accelerometer offering both static and dynamic response. The accelerometer is packaged in a corrosion resistant stainless steel housing and is offered in $\pm 2g$ to $\pm 20g$ range. The model 4332M3 features an integral cable and is certified to IP68 protection up to 40m depth with an operating temperature range of -40°C to $+85^{\circ}\text{C}$.



dimensions



FEATURES

- Stainless Steel Housing
- Corrosion Resistant
- Three Independent Circuits
- $\pm 2g$ to $\pm 20g$ Dynamic Range
- DC Response
- Temperature Compensation

APPLICATIONS

- Transportation Measurements
- Structural Monitoring
- Bridge Monitoring
- Low Frequency Applications
- Submersible Measurements

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 4332M3 Accelerometer

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

| | 4332M3-002 | 4332M3-005 | 4332M3-010 | 4332M3-020 | Notes |
|---|------------|------------|------------|------------|------------|
| Model Number | 4332M3-002 | 4332M3-005 | 4332M3-010 | 4332M3-020 | |
| Range (g) | ±2 | ±5 | ±10 | ±20 | |
| Sensitivity (mA/g) | 4.0 | 1.6 | 0.8 | 0.4 | ±10% |
| Frequency Response (Hz) | 0-200 | 0-300 | 0-300 | 0-300 | ±5% |
| -3dB Cutoff Frequency (Hz) | 1000 | 1000 | 1000 | 1000 | |
| 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 (µg RMS) | 25 | 50 | 100 | 200 | Passband |

ELECTRICAL

| | | | | | |
|-------------------------------|--|--|--|--|---------|
| Zero Acceleration Output (mA) | 12.0 ±0.25 | | | | |
| Excitation Voltage (Vdc) | 7 to 24 | | | | |
| Quiescent Current (mA) | <15 | | | | |
| Full Scale Span (mA) | 4 to 20 | | | | |
| Output Impedance (Ω) | <100 | | | | |
| Insulation Resistance (MΩ) | >100 | | | | @100Vdc |
| Turn On Time (msec) | <100 | | | | |
| Grounding | Case Grounded, Internally Isolated Circuit | | | | |

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 | 316 Stainless Steel |
| Cable | PVC Insulated Leads (6x 0.14 mm ²), 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-LFREQ-0010 NIST Traceable Amplitude Calibration from 1Hz to 100Hz

Supplied accessories: 4x #4-40 (1 1/2" 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

4332M3-GGG-CCC

I I Cable Length (-120 is 120 inches)
 I Range (002 is 2g)

Example: 4332M3-002-120

Model 4332M3, 2g, 120" Cable