



## AMB/50HR.40 Biaxial High Resolution MEMS DC Response Accelerometer

±50g range, 40mV/g sensitivity

The AMB range of accelerometers are Biaxial MEMS (micro electro mechanical system) DC response voltage output devices for testing at low frequency vibration measurement from DC (0Hz) and above. They are Biaxial (measuring in 2 directions simultaneously) variable capacitance design and are available with a 2m integral cable fitted with a 7pin connector to suit the DJB DCM-03 MEMS signal conditioning unit or alternatively as bare wires.

Ideally suited to low frequency vibration applications including low level vibration where high sensitivity is required.

Due to their ability to measure DC response they can also be used to measure constant gravity application.

The AMB/50HR.40 is a high resolution version and has a range of ±50g and a sensitivity of 40mV/g, we recommend using with DJB's MEMS signal conditioner the DCM-03

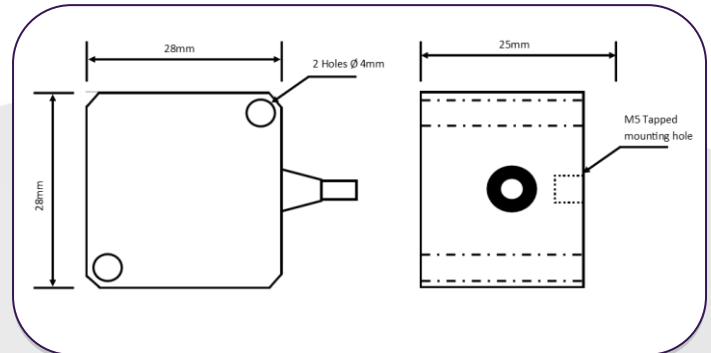
### Features:

- Operational frequency range DC to 800Hz
- Integral cable with 7 pin connector or pigtails.
- DJB signal conditioner model DCM-03 available as an option
- Differential Capacitance operation
- Compact form and low mass
- Constant gravity measurement

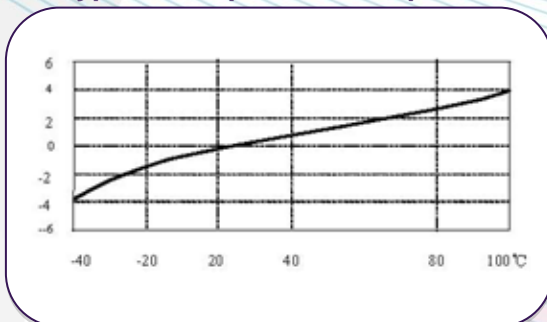
### Applications:

- Auto/Aero structural body surveys
- Constant gravity measurements
- General vibration measurement
- Seismic vibration measurement
- Crash testing

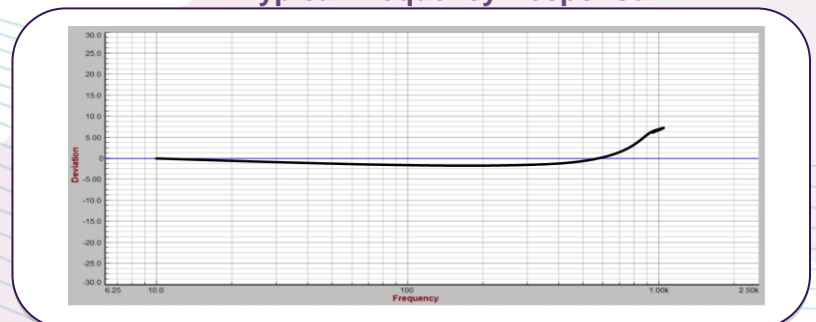
### AMB/50HR.40



### Typical Temperature Response



### Typical Frequency Response



Please note: For information and reference only. Data should not be used as pass / fail criteria for calibration purposes.

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A UK company with UK-based manufacturing, assembly and calibration in-house.

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## AMB/50HR.40 Biaxial MEMS DC Response Accelerometer

±50g range, 40mV/g sensitivity

|                             | Metric                              | Imperial                              |
|-----------------------------|-------------------------------------|---------------------------------------|
| Sensitivity (20°C)          | 4.08mV/(m/s <sup>2</sup> )±10%      | 40mV/g±10%                            |
| Measurement Range           | ±490m/s <sup>2</sup> pk             | ±50g pk                               |
| Transverse sensitivity      | ≤5%                                 |                                       |
| Frequency Range (±5%)       | DC to 800 Hz                        |                                       |
| Frequency Range (±10%)      | DC to 900Hz                         |                                       |
| Mounted Resonance Frequency | 5,000 Hz                            |                                       |
| Temperature Range           | -40 to +85°C                        | -40 to +185°F                         |
| Temperature Sensitivity     | 0.1 mV/°C                           |                                       |
| Shock limit (No Supply)     | 34323m/s <sup>2</sup>               | ±3,500g                               |
| Power Supply                | +6 to +15 VDC                       |                                       |
| Operating Current           | ≤5mA                                |                                       |
| Offset Voltage              | 2.5±0.1VDC                          |                                       |
| Noise(100Hz)                | < 0.14mVrms                         |                                       |
| Resolution                  | 3.5mg (rms)                         |                                       |
| Output impedance            | < 100 Ω                             |                                       |
| Weight (no cable)           | 40grams                             | 1.41oz                                |
| Case material               | Hard Anodized Aluminum              |                                       |
| Case sealing                | Epoxy Resin                         |                                       |
| Mounting                    | 2 x Ø4mm holes or M5 tapped base    | 2 x Ø0.16inch holes or M5 tapped base |
| Integral Output Cable       | 2m                                  | 6.5ft                                 |
| Cable Exit                  | Side                                |                                       |
| Cable connector             | 7 pin connector (optional pigtails) |                                       |
| Size                        | 28 x 28 x 25mm                      | 1.1 x 1.1 x 0.98 inches               |
| IP rating                   | IP65                                |                                       |

### Options:

- DCM-03 – 3 channel MEMS signal conditioning unit.
- Pigtail cable terminations

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