

MBB-2

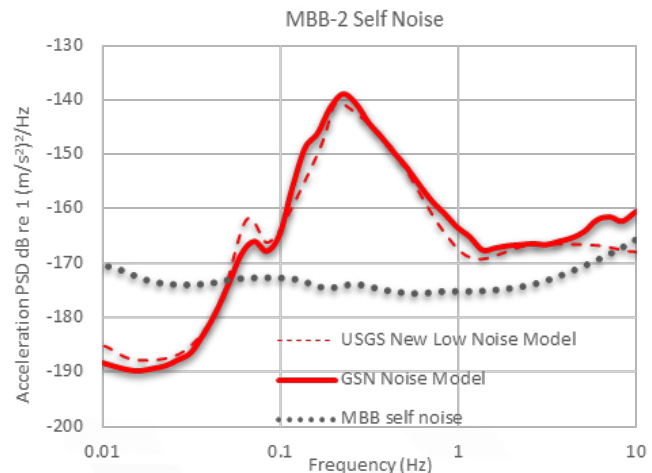
Miniature 120s BroadBand Seismometer

The Mini BroadBand Seismometer (MBB-2) is the latest sensor offering from Kinemetrix for vault or posthole installations. The MBB-2 offers high performance features in a small, rugged, low power and low cost system that is easy to install and deploy. Built with ease of installation in mind, the MBB-2 does not require mass lock, mass centering, and has a large operational tilt range which reduces installation time. The MBB-2 was engineered from the ground up to deliver best-in-class performance. An installation at 600m depth was tested in a dry borehole.



FEATURES

- No mass lock required
- No mass centering required
- Small, portable, 120 second broadband sensor
- Large operational tilt range
- Stainless steel housing rated IP68 with oceanographic-grade connector for immersed operation up to 100m depth
- Noise floor as in the plot below





SPECIFICATIONS

Sensor Technology	Triaxial orthogonal, XYZ oriented feedback sensor elements with capacitive displacement transducer
Sensitivity	750 V/(m/s), optionally 1500 V/(m/s), trimmed to $\pm 0.5\%$ precision
Bandwidth	-3 dB points at 120 seconds and 160 Hz
Operable Tilt Range	± 2.5 Degrees
Dynamic Range:	155 dB at 1 Hz
Clipping Level:	26 mm/s peak from 0.0083 Hz to 40 Hz; proportional to 1/f above 40 Hz, reaching 10 mm/s at 100 Hz; proportional to $1/f^2$ below 0.0083 Hz
Velocity Output	Industry standard 40 V peak-to-peak differential output
Mass Position Output	Independent mass position output for each of the XYZ axes
Calibration	Calibration input for XYZ components; single digital control line to activate calibration on all three axes
Short Period Mode	1sec mode used for deployment; digital control line enables short period mode on all three axes
Voltage Input	9-36 V DC input (internally isolated)
Electrical Protection	Over-voltage, reverse-voltage, and current overload protection
Galvanic Isolation	Power input and High-Logic digital control lines (setup mode and calibration enable lines have independent galvanic isolation)
Operational Temperature	-40 to +60 °C
Power Consumption	Typically 260 mW
Posthole Orientation	Yoke adapter and orientation poles available
Physical	Height: Sensor Body and Connector: 5.44 inches (13.8 cm) Including Fixed Feet: 5.67 inches (14.4 cm) Diameter: 3.875 inches (9.8 cm) Weight: 6.5 pounds (2.95 kg) Rating: IP68 (Glenair connector rated 3,500 psi mated)

Specifications subject to change without notice