KINEMETRICS

Advancement through Innovation

Omnisensor

Record everything, everywhere

Meet the Omnisensor: the global reference force balance accelerometer Model Episensor and the rugged mini broadband seismometer Model MBB-2 – born to be together!

The Omnisensor covers more than 270 dB dynamic range in one watertight enclosure, with one marine connector, one cable, for posthole and borehole installations. No earthquake of interest will be too small to be lost or too large to be off scale.

All internal sensors are mutually aligned, and no mass lock or mass centering are necessary. The cable is Y-terminated at the surface to be used with a 6-channel digitizer: best matched with Q8, Q330S+ and Obsidian8X dataloggers. An installation at 600m depth was tested in a dry borehole.

FEATURES

Episensor Features

- Low noise
- Extended bandwidth - DC to 200Hz
- User-selectable full-scale range (at time of order)
- Calibration coil (standard)
- Double-stage transient protection

MBB-2 Features

- No mass lock required
- No mass centering required
- Small, portable, 120 second broadband sensor
- Large operational tilt range
- Noise that is below the NLNM from 20 seconds to 8 Hz

Continued

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OMNISENSOR

SPECIFICATIONS

Episensor Specifications

Dynamic range	155 dB+
Bandwidth	DC to 200Hz
Calibration coil	Standard
Full-scale range	User selectable at ± 0.25g, ± 0.5g, ± 1g, ± 2g or ± 4g
Outputs	User selectable at: ± 2.5V single-ended ± 10V single-ended ± 5V differential ± 20V differential
Linearity	< 1000 µg/g2
Hysteresis	< 0.1% of full scale
Cross-axis sensitivity	< 1% (including misalignment)
Zero point thermal drift	< 500 µg/°C (1g sensor)

Overall Specifications

Voltage Input	11-18 V DC input (internally isolated)
Electrical Protection	Over-voltage, reverse-voltage, and current overload protection
Galvanic Isolation	Power input and digital control lines (setup mode and calibration enable lines have independent galvanic isolation)
Operational Temperature	-20° to +60°C
Power Consumption	1.3W
Posthole Orientation	Yoke adapter and orientation poles available
Physical Dimensions	Height: Sensor Body and Connector: 13 inches (33.0cm) Diameter: 3.9 inches (9.8 cm) Weight: 12.6 pounds (5.7 kg) Stainless steel housing rated IP68 with oceanographic-grade connector

MBB-2 Specifications

Sensor Technology	Triaxial orthogonal, XYZ oriented feedback sensor elements with capacitive displacement transducer
Sensitivity	750/1500 V/(m/s) trimmed to ± 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
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 quick deployment; digital control line enables short period mode on all three axes

*Specifications subject to change without notice

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