

INvestigation of SEdiments by Acoustics

Compact ergonomic acoustic velocimeter for geophysics and marine applications.



Description

INSEA is a compact ergonomic velocimeter for marine geoaoustic application able to operate down to 100 meters deep. Light and easy to use, INSEA can be fully manipulated by one person. Operating in wired and autonomous mode it is dedicated to both in-situ and laboratory applications.

The velocimeter is composed by 4 stakes placed at adjustable horizontal distances going from 5 to 40cm. Stakes are drivable from 5 to 15cm deep into the ground and are provided with retainer in order to limit penetration into soft ground. INSEA is equipped with two emitting and two receiving transducers located inside the stakes that determine acoustic impedance.

Acquisition is easily launched and stopped thanks to a push button switch lighting red when ON. In autonomous mode, data is stored into a database with ping, environmental and time parameters. In wired mode, data is stored then transferred via Ethernet.

The 4 transducers allow multistatic acquisition via differential impedance and wide frequency going from 40KHz to 400KHz with high accuracy.

Post analysis and configuration are permitted via an intuitive web interface.

Fields of application

- Scientific instrumentation
- Marine geophysics
- Tomography
- Geoacoustic studies

Key Characteristics

- Autonomous and wired mode
- Light and easy-to-use
- 100m depth
- Multistatic acquisition
- All marine sediments, including coarse sands

Dimensions: 600mm x 350mm x 250mm,
Weight: 8,6Kg in air, 5,3Kg in water

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RTsys activities

- Marine acoustics
- Embedded electronics
- Marine robotics
- Systems integration
- Customized R&D developments

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❖ Notes

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