

Inclinometer MATEMO

The Inclinometer MATEMO is designed for recording the tilt angle in two directions (X,Y).

A common problem in deep-sea research is that the horizontal position of the instrument at the seafloor is unknown. At various instrument (for example sampler or sediment traps) this can lead to measurement failure or misinterpretation. To solve this problem the Inclinometer MATEMO was designed.



The software MATUI (*Multi Axis Tiltmeter User Interface*) is used to program the Inclinometer. The measurement interval, actual time and a starting time delay can be determined. After the survey data can be downloaded and displayed in a graph or exported to external analysis.

You can determine the tilt prior to the survey (for example when the inclinometer needs to be attached sloped) and automatically subtract this value from the measurements. Latter tilt variations are stored in absolute values in that case.

The data as well as the settings are saved in a nonvolatile memory and are still saved when the batteries are exhausted or become replaced.

Technical Data

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|-----------------------|--|
| Deployment depth: | max. 200m in POM housing; max. 6000m in titanium housing |
| Operation: | max. 36 months with batteries of full capacity |
| Number measurements : | max. 65500 measurements per axis (X,Y) |
| Measurement interval: | 1sec – 23h:59min:59sec |
| Measurement range: | $\pm 80^\circ$ per axis |
| Resolution: | 0.1° |
| Absolute fault | (within ± 60): $\pm 0.1^\circ$ (outside of ± 60): $\pm 0.5^\circ$ |
| Energy supply: | 3.6V DC Lithium battery (qty. 1); ex. Saft 33600 with soldering tag |
| Back-up battery: | 3.0V DC Lithium battery (CR123A, qty. 1) |
| Total height: | 169mm |
| Diameter: | 64mm |
| Material: | POM (shallow water); titanium (deep sea) |
| Housing: | tube |
| Temperature: | -20° to $+85^\circ$ (operation; storage and transport) |



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