JFE Advantech Co., Ltd.

Turbidity and Temperature Sensor for Deep Ocean

ATUD-USB

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ATUD-USB
ATUD-USB-S39

Overview

The ATUD-USB is a logger-type turbidity sensor developed for deep-sea observations. It uses a large-capacity SD card and commercially available batteries, enabling long-term observations. It can be utilized in various applications, such as vertical observations when attached to a deep-sea CTD, measuring marine snow with sediment traps, monitoring during seabed drilling, and observing hydrothermal deposits.

Sensor Specifications

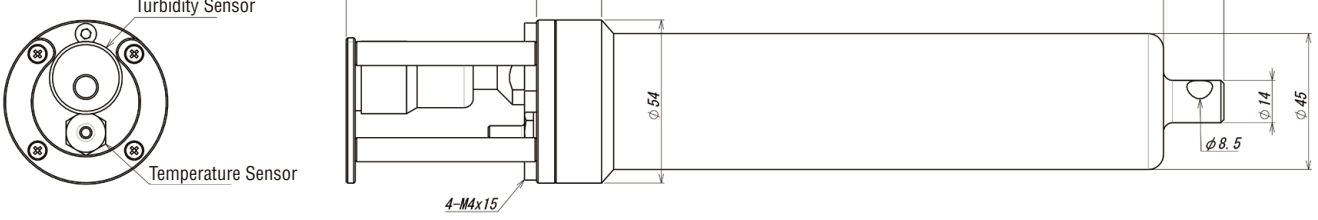
Model	ATUD-USB		ATUD-USB-S39	
Parameter	Temperature	Turbidity	Temperature	Turbidity
Sensor Type	Thermistor	Infrared Backscatter	Thermistor	Infrared Backscatter
Range	-3 to 45°C	0 to 1,000 FTU (Formazin reference)	-3 to 45°C	0 to 40 FTU (Formazin reference)
Resolution	0.001°C	0.03 FTU	0.001°C	0.0008 FTU
Accuracy	±0.02°C	±0.3 FTU or ±2%	±0.02°C	±0.3 FTU or ±2%

Logger Specifications

Model	ATUD-USB / ATUD-USB-S39
Memory Type	microSD card (waterproof high-speed type)
Memory Capacity	1GB
Mode	Continuous Mode / Burst Mode
Interval	0.1 to 600 sec
Burst	1 to 1,440 min
Number of Samples	1 to 18,000
Battery	CR-V3 Lithium Battery / 3.3 Ah (Up to 2) AA Alkaline Battery (Up to 4) - Requires AA adapter kit AA Lithium Battery (Up to 4) - Requires AA adapter kit
Communication Method	USB communication (compliant with Ver. 2.0, equivalent to Ver. 1.1)
Housing Material	Titanium Alloy (Ti-6Al-4V)
Dimensions	ϕ54 mm × 290.5 mm
Weight	Approx. 1.2 kg in air / Approx. 0.8 kg in water
Pressure Resistance	Equivalent to 6,000 m depth

Drawing

ATUD-USB/ATUD-USB-S39



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