

Logger type CTD with fast optical DO sensor

RINKO-Profiler

ASTD100/101/102/
103/150/151/152/153

ISO9001



JQA0950

Multi parameter handy CTD



- Fast-response DO sensor (90%: less than 1 s in air)
- Built-in memory
- Built-in rechargeable lithium-ion batteries
- Vertical data sampling at 10 cm pitch
- Continuous vertical data sampling at 0.5 m s⁻¹
- Corrosion prevention (titanium case)
- Light weight design (approx. 2.0 kg in air and 1.0 kg in water)



JFE Advantech Co., Ltd.

RINKO-Profiler

ASTD100/101/102/103/
150/151/152/153



■ Description

The RINKO-Profiler is a CTD with a fast-responding DO sensor as standard. The fast response time (0.4 s) reduces observation time, while achieving a detailed DO vertical distribution. You can measure water temperature, salinity and DO vertical profile measurement easily without a cable due to light weight (approx. 1.0 kg in water) and built-in recording design (The ASTD 152 model can also measure chlorophyll and turbidity as well). The high-capacity internal memory (1 GB) allows for recording up to 1,000 profiles (of 100 m depth at 0.1 s of sampling rate). Each profile is dated using the instrument internal clock. The power source is a rechargeable lithium battery that allows continuous use up to 10 h and 3 h of charge time. The RINKO-Profiler communicates between the interface and

the PC recharging the battery without opening the pressure case. The RINKO-Profiler series have two types of interfaces: a PC communication model and a model that comes with a printer.

■ Model and observation parameters

| | DO | Depth | Temperature | Conductivity | Fresh water EC | Salinity | Chlorophyll | Turbidity |
|---------------|----|-------|-------------|--------------|----------------|----------|-------------|-----------|
| ASTD100 / 150 | | ● | ● | ● | ● | ● | | |
| ASTD101 / 151 | | ● | ● | ● | ● | ● | ● | ● |
| ASTD102 / 152 | ● | ● | ● | ● | ● | ● | ● | ● |
| ASTD103 / 153 | ● | ● | ● | ● | ● | ● | | |

* ASTD10X and ASTD15X correspond to depth rating of 600 m and 1,000 m respectively.

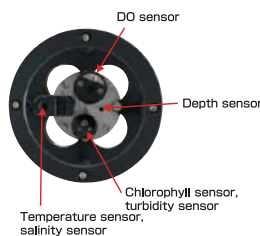
■ Sensor specification

| Parameter | Depth | Temperature | Conductivity | Salinity | DO | Chlorophyll | Turbidity |
|---------------|--|--------------------------|-------------------------------|--------------------|---|-------------------------------------|--|
| Principal | Semiconductor pressure sensor | Thermistor | Electrode | Practical salinity | Phosphorescence | Fluorimeter | Backscattering |
| Range | 0 to 600 m ⁻¹ 0 to 1,000 m | -3 to 45 °C | 0.5 to 70 mS cm ⁻¹ | 2 to 42 | 0 to 20 mg L ⁻¹ (0 to 200)% | 0 to 400 ppb (Uranine reference) | 0 to 1,000 FTU (Formazin reference) |
| Resolution | 0 to 600 m range: 0.02 m 0 to 1,000 m range: 0.03 m | 0.001 °C | 0.001 mS cm ⁻¹ | 0.001 | 0.01% (0.01 mg L ⁻¹) | 0.01 ppb | 0.03 FTU |
| Accuracy | ±0.3% FS | ±0.01 °C (0 to 35 °C) | ±0.01 mS cm ⁻¹ 2 | — | ±2% FS | ±1% FS Zero drift ±0.1 ppb | ±0.3 FTU or measured value ±2% |
| Time constant | 0.2 s | 0.2 s | 0.2 s | 0.2 s | 0.4 s ⁻³ | 0.2 s | 0.2 s |

*1. Selected by the customer *2. Calibration using sea water (range: 28 to 65 ms cm⁻¹) *3. 63% response time as standard (25 °C at 1 atm in air)

■ Instrument specification

| Measurement mode | Depth trigger mode | Time trigger mode |
|----------------------|--|-------------------|
| Measurement interval | 0.1/0.2/0.5/1 m | 0.1 to 600 s |
| Memory medium | 1 GB built-in memory | |
| Power source | Rechargeable lithium ion battery (approx. 10 h of continual use possible) | |
| Material | Titanium (grade 2) | |
| Dimensions | Φ136 × 491 mm | |
| Weight | Approx. 2.0 kg in air, 1.0 kg in water | |
| Date rating | 1,000 m depth equivalent | |

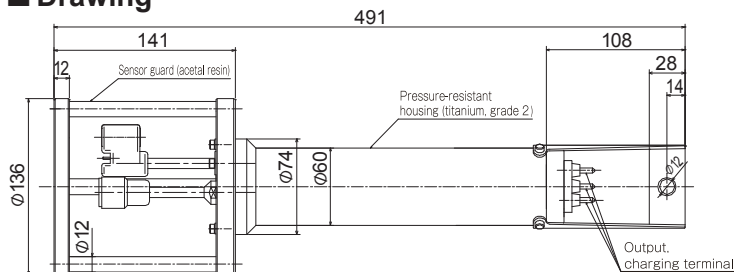


■ Interface (ASTD-IF)

| | |
|--------------|---|
| Power source | 100 to 240 V AC or AA alkaline battery (maximum 4 batteries, approx. 40 h) |
| Dimensions | W170 × D169 × H66 mm |
| Weight | Approx. 1.0 kg |
| Remark | Incl. a signal cable, a power source cable, a communication cable |



■ Drawing



※ Dimensions are in mm. ※ All specifications on this leaflet are subject to change without notice.

■ Printer (P-601)

| | |
|----------------------------|--|
| Printed items | Depth, temperature, salinity, DO, chlorophyll, turbidity |
| Functions | Data printing, observation setting, data communication, sensor charging |
| Dimensions | W330 × D200 × H220 mm |
| Weight | Approx. 3.8 kg |
| Waterproof characteristics | Simple splash-proof structure |
| Remark | Incl. a signal cable, a power source cable, a communication cable |



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