

Water quality profiler with fast optical DO sensor

AAQ-RINKO

AAQ170/171/172/
175/176/177

ISO9001



JQA0950

For realtime profiling



- Fast-response DO sensor (90%: less than 1 s in air)
- Continuous vertical data sampling at 0.5 m s⁻¹
- Corrosion prevention (titanium case)
- Light weight (approx. 2.4 kg in air and 1.1 kg in water)



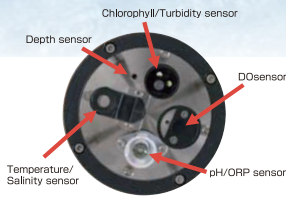
JFE Advantech Co., Ltd.

AAQ-RINKO

AAQ170/171/172/175/176/177

■ Description

The AAQ-RINKO has a fast optical DO sensor (response time of 0.4 s), which allows for nonstop vertical profiling at 0.5 m s⁻¹, shortening the required observation time while measuring a more detailed vertical distribution of dissolved oxygen when compared with the previous model. The AAQ-RINKO can measure 8 parameters (depth, temperature, conductivity, salinity, turbidity, chlorophyll, DO and pH). Light quantum and ORP sensors are available upon request. The instrument can be handled by 3 different processing units.



■ Model and observation parameters

	Depth	Temperature	Conductivity	Fresh water EC	Salinity	Chlorophyll	Turbidity	DO	pH	Quantum	ORP
AAQ170	●	●	●	●	●	●	●	●	●		
AAQ171	●	●	●	●	●	●	●	●	●		
AAQ172	●	●	●	●	●	●	●	●	●		●
AAQ175	●	●	●	●	●	●	●	●	●	●	
AAQ176	●	●	●	●	●	●	●	●	●	●	●
AAQ177	●	●	●	●	●	●	●	●	●	●	●

■ Probe specifications

Communication method	RS-485
A/D conversion	16 bit digital conversion
Dimensions	Φ108 x 293 mm
Weight	Approx. 2.4 kg in air, 1.1 kg in water
Housing material	Titanium (grade 2)
Cable	Please select a 50 m cable or a 100 m cable by usage.

■ Sensor specifications

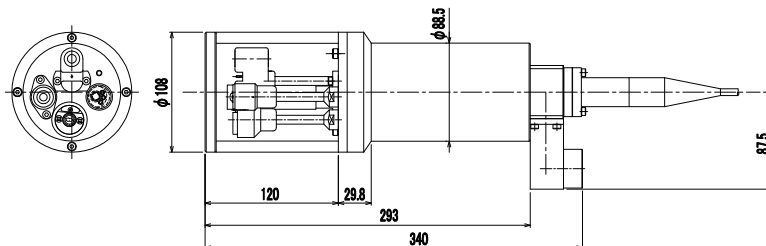
Parameter	Principle	Measurement range	Resolution	Accuracy	Time constant
Depth	Semiconductor pressure sensor	0 to 100 m	0.002 m	±0.3% FS	0.2 s
Temperature	Thermistor	-3 to 45 °C	0.001 °C	±0.01 °C (0 to 35 °C)	0.2 s
Conductivity	Electrode	0.5 to 70 mS cm ⁻¹	0.001 mS cm ⁻¹	±0.01 mS cm ⁻¹ *1	0.2 s
Salinity	Practical salinity	2 to 42	0.001	—	0.2 s
Turbidity	Backscattering	0 to 1,000 FTU (Formazin reference)	0.03 FTU	±0.3 FTU or ±2%	0.2 s
Chlorophyll	Fluorimeter	0 to 400 ppb (Uranin reference)	0.01 ppb	±1% FS	0.2 s
DO	Phosphorescence	0 to 200% (0 to 20 mg L ⁻¹)	0.001 to 0.004 mg L ⁻¹ (0.01 to 0.04%)	±2% FS (±0.4 mg L ⁻¹)	0.4 s *2
Quantum	Photodiode	0 to 5,000 μmol m ⁻² s ⁻¹	0.1 μmol m ⁻² s ⁻¹	4% FS	0.2 s
pH	Glass electrode	0 to 14 pH	0.01 pH	±0.2 pH	10 s
ORP	Glass electrode	0 to ±1,000 mV	0.1 mV	—	10 s

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

■ Interface specifications

Model name	Printer Unit (PC-12)	Hand-Held Unit (H-11)	Splash-Proof interface (AAQ-IF)
Screen	Color 7-inch TFT liquid crystal	4 × 20-line LCD	3 LEDs
Operation method	Screen touch panel, external pushbuttons	Touch buttons	—
Displayed information	GPS information, measured data, vertical graph	Measured data	Voltage level
Memory type	4 GB built-in memory	512 MB CF card	—
Measurement method Memory method	1. Automatic vertical measurement by selected depth pitch (selectable values: 0.1, 0.2, 0.5, 1 m) 2. Measured data recording at any depth on-the-spot	Continuous measurement at each selected interval (0.1, 0.2, 0.5, 1, 2, 5, 10 s)	Measurement at selected interval based on the PC application software setting
Print function	1. Automatic onsite printing of measured data after automatic profiling 2. On site printing of on-the-spot measured data	—	—
Calendar information	Built-in (automatic correction by GPS)	Built-in	—
Power source	100 to 240 V AC or 12 V DC	8 AA alkaline batteries, 100 to 240 V AC, 12 V DC	8 AA alkaline batteries, 12 V DC
Dimensions	470 × 357 × 176 mm (not including protrusion)	85 × 115 × 255 mm	199 × 83 × 46 mm
Weight	Approx. 8.0 kg	Approx. 1.0 kg (no batteries included)	Approx. 0.5 kg (no batteries included)
Other functions	Built-in GPS as standard, data extractable using USB memory	Including interface functions	—

■ Drawing



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

JFE Advantech Co., Ltd.

JFE

Ocean & River Instruments Division

URL: <http://www.jfe-advantech.co.jp/>

Head Office

3-48 Takahata cho, Nishinomiya, Hyogo 663-8202

TEL. +81-798-66-1783

FAX. +81-798-66-1654

Tokyo Head Office

JFE Kuramae Bldg. 2F, 2-17-4 Kuramae, Taito ku, Tokyo 111-0051

TEL. +81-3-5825-5589

FAX. +81-3-5825-5591

Tohoku Sales Office

TM Bldg. 2F, 1-3-1, Ichiban cho, Aoba ku, Sendai, Miyagi 980-0811

TEL. +81-22-711-7535

FAX. +81-22-711-7534