

Automatic Monitoring for Water Quality Measurement with Multi-parameter

Multi Water Quality Meter



<Summary>

There has been a growing concern about environment-related issues in recent years and, especially, our water resources have become an increasingly serious problem due to various factors.

Water quality surveys are essential for improvement in water environment. Multi-parameter Water Quality Meter is a portable and multifunctional sensor which can be applicable to a wide range of water quality surveys.

It is a very high-performance and cost-effective sensor which can continuously measure standard 8 items, including pH, DO, EC and turbidity, at the same time. In addition to a water quality monitoring function, it has a periodical measuring function which can be used, for example, in a periodic single-point observation.

<Features>

- It contains five sensors (pH or ORP, and DO, EC, Temperature and Turbidity) as standard, and it is also possible to display salinity, seawater specific gravity and total dissolved solids as measurement values. If optional sensors are integrated, up to 10 items can be measured.
- Its pH sensor has a pressure compensating function, and a robust 'Strong-pH electrode' is used in it. Also, a stir-less DO electrode is adopted in its DO sensor which allows it to function even under non-flowing conditions.
- It is so compact ($\phi 45\text{mm} \times 410\text{mm}$: Standard type) that it can be used for a single-point observation in a VP-50 borehole.
- It uses three readily-available AA size alkaline batteries as power sources, and it can continuously measure data for about one month.
- When used with an i-SENSOR communication unit, it is possible to transmit data by E-mail.

<Specification>

Basic Specification

Display		Digital : Switching display for each item
Waterproof structure	Terminal	JIS C 0920 IP67 Immersion proof (assuming a cable is not connected and option external I/O is not used)
	Sensor module	Pressure resistant 1.0MPa waterproof
RS-232C		Standard feature (non-isolated when using with a printer or GPS unit)
Analog output (common)		DC 0~1V 2ch (output selected 2 parameters) Conductivity range output 1ch non-isolated
Open Collector output (common)		Alarm output 1 point DC 36V, Less than 100mA Measurement timing output 1point DC 36V, Less than 100mA
Memory		Memory is included in its sensor module. All items are measured for about 35 days in the case of 15 minutes measurement interval.
Power	Terminal	2 x AA size alkaline batteries or an AC adapter (option)
	Sensor module	3 x AA size alkaline batteries
Dimensions (excluding projections)	Terminal	Approx. 187.5(L)×37.5(H)×75(W)mm
	Standard sensor module	Approx. φ45 × 412(L)mm
Weight (excluding batteries and cables)	Terminal	Approx. 320g
	Standard sensor module	Approx. 1.35kg
Operating temperature range		0~50°C

Measurement item

Module	Item	Display range	Repeatability (Main unit)	Measurement method	Calibration
Standard sensor module	pH/ORP ※1	0.00~14.00 / -2,000~2,000mV	±0.05pH / ±5mV	Glass electrode method / Platinum electrode method	2 points of 4,7,9 or 3 points calibration (pH)
	DO (Dissolved Oxygen)	0.00~20.00mg/L	±0.1mg/L	Calvanic membrane electrode method	Span calibration
	Conductivity	0.00~10.00S/m (display range)	±1%FS	AC 4-electrodes method	Calibration is available
		0.00~100.0mS/m			
		0.000~1.000S/m			
		0.00~10.00S/m Auto range			
	Salinity	0.00~4.00%	±0.1%	Converted from conductivity value	
	TDS	0.0~100.0g/L	±2g/L		
	Ocean water gravity	0.0~50.0σt	±0.1σt		
	Temperature	-5.00~55.00°C	±0.25°C	Thin film platinum resistance	
Turbidity	0.00~800.0NTU / 0.0~800.0mg/L	±3%FS	90 degree scattered light method	Zero, Span calibration	
Water depth※2	0.0~100.0m	±0.1m	Diaphragm method	Calibration is available	

※1 pH can be used as ORP by replacing an electrode chip. (Option)

※2 A water depth sensor can be added to this product at the time of order. (Option)

※3 The standard length of its cable is 2m. It is possible to provide a 10, 30 or 100m cable. (Option)



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Please note specifications are subject to change without notice for the improvement.

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