TB-31

Handheld Turbidity Meter

Immersion-type Sensor Perfect for Simple Turbidity Measurements in the Field

High Reliability in Low Concentration Regions

Power Saving Design

120 hour continuous measurement with only two AA alkaline batteries

Waterproof Construction for Field Measurement

(IP67: The unit can be submerged at 1m depth for up to 30 min)

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Ideal for turbidity measurement of industrial wastewater, construction wastewater, and environmental water such as river and lake water

Features

■High accuracy in low concentration regions

Repeatability of ± 0.5 NTU in low measurement ranges.

■Power saving design

Requires only two AA alkaline batteries for approximately 120 hours of continuous measurements.

■Immersion measurement for one day monitoring (continuous measurement)

Directly immersing the sensor into sample water makes it possible to monitor turbidity for one day (24 hours or less).

∗1 This sensor is not equipped with a cleaning function. Depending on the water quality or service conditions, it may not be possible to measure continuously for up to 120 hours. Please contact us for details.

∗2 Maximum water depth is 10 m.

■1,000 data memory function

Auto-save for specified intervals*

∗Short interval memory function: 1 sec. to 99 min. 59 sec.
Long interval memory function: 2 min. to 99 hrs. 59 min.
(When using the long interval memory function, the power turns off (enters sleep mode) after measuring turbidity for 1 minute. It remains off until the next measurement starts.)

■Great extensibility

(Ability to connect the meter to a personal computer, an external printer and a recorder)

We provide optional special data acquisition software for loading measurement data in text format on a personal computer.

Specifications

Model		TB-31
Measurement method		Near infrared 90 degree light scattering measurements
Measurement range	Turbidity*1	0.0 to 80.0 NTU (mg/L) 0 to 800 NTU (mg/L) Range selection: Automatic/ Manual
	Temperature	0 to 50.0℃
Display range	Turbidity	0.0 to 88.0 NTU (mg/L) 0.0 to 880 NTU (mg/L)
	Temperature	−5.0 to 110.0℃
Repeatability	Turbidity	±0.5 NTU or less (0.0 to 80.0 NTU range) ±5 NTU or less (0 to 800 NTU range) Measurement conducted using a formazine standard solution under fixed conditions
	Temperature	±0.5℃ or less
Water depth		Up to 50 m (equal to 0.5 MPa)
External output port*2		・RS-232C (non-isolated): Personal computer or external printer EPS-P30 (optional) ・Analog output port (non-insulated): Three output ports for turbidity, temperature, and range
Waterproof construction (main body)		IP67 (enabled when the sensor is connected and the external I/O ports are masked) * The unit can be submerged at a depth of 1 m for up to 30 min.
Ambient temperature / humidity		0 to 45℃ , no more than 90% (no condensation)
Power source		Two AA alkaline batteries/nickel hydrogen batteries Dedicated AC adapter (6 VA, optional) also available
Power consumption (3V battery)		Approximately 0.05 W
External dimensions		Main body: Approx. 68 mm (W) x 35 mm (H) x 173 mm (D) Sensor: φ Approx. 30 mm x 240 mm
Weight		Main body: Approx. 280 g (includes batteries) Sensor (cable length 2 m): Approx. 400 g

∗1 "NTU" indicates turbidity calibrated using a formazine standard solution, and "mg/L" indicates turbidity calibrated using a kaolin standard solution.

∗2 Special cables are required to use the RS-232C interface and analog output port simultaneously. Please contact us for details.
If the sample is grounded, make sure to insulate the RS-232C and analog output port.

Standard accessories

Turbidity sensor ELL-011 (cable length: 2 m) (only included with the full set)
Protection cover (with shoulder belt), size AA alkaline battery (test use) (2)
Instruction manual

Optional sensor

(When you order the optional sensor, select "main body only" for TB-31.)

Product / Model	Cable length
Turbidity sensor ELL-011	11m
	30m
	50m

Other optional parts

Product	Model / Code No.
External printer (with connection cable)	EPS-P30
Analog output cable (1.5 m)	118N063
Data acquisition software	GP-LOG
RS-232C connection cable (2 m)	118N062
AC adapter	—

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⚠ **CAUTION** Do not operate producuts before consulting with the instruction manual.

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Information and specifications are for a typical system and are subject to change without notice.

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