

Automatic Monitoring by Sensor and Data Logger Unit for Water Level and pH Measurement

S & DL Water Level and pH Meter



<Abstract>

When a water environment is surveyed, pH is one of the fundamentally important factors, along with such other factors as conductivity. In the case of an underground water environment survey, useful information for a proper grasp of temporal change in water pollution can be obtained by the continuous measurement of pH and water level.

S&DL Water Level and pH Sensor is designed to conduct such surveys easily by continuously monitoring pH, water level and temperature. Also, it provides advantages on its easy installation and maintenance by putting together these sensors and a data logger into one probe, having a high degree of usability for users in field.

<Feature>

- It is possible to monitor pH, water level and temperature continuously.
- A glass electrode of a KCL non-refilling type is adopted in the pH sensor and, therefore, it is very easy to be maintained as inner solution refilling is not required.
- It can be easily installed in a borehole mouth.
- Digitalization is carried out in the inside of its probe, so it is little affected by temperature changes and external noises.
- Its data correction, battery replacement and maintenance can be done without any difficulty.

<Specification>

Measurement Item	: Water Level, pH (with temperature compensating function for glass electrode) and Temperature
Water Level Measurement Range	: 0 to 5 m, 0 to 10 m, 0 to 20 m, and 0 to 35 m
Water Level Measurement Resolution	: 1 mm
Water Level Measurement Accuracy	: ± 0.1 % F.S.
pH Measurement Principle	: KCL Non-refilling Type (NOS) Electrode (Sensing Part: Glass Film)
pH Measurement Range	: 2 to 12 pH *Recommended Range
pH Measurement Resolution	: 0.01 pH (This may vary depending on circumstances.)
pH Measurement Accuracy	: 0.2 % F.S (This may vary depending on circumstances.)
Temperature Measurement Range	: 0 to +50 °C
Temperature Measurement Resolution	: 0.1 °C
Temperature Measurement Accuracy	: ±1 °C
Measurement Interval	: 1 min to 10 days (Configurable on a minute time scale)
Memory Size	: 512 Kbyte (approx. 32,000 data)
Interface	: RS-232C (9600bps)
Operating Voltage Range	: 3 V to 9 V (Exclusive of a voltage drop by cable)
Consumption Current	: Standby: 50 μ A (typ.) @ 9 V Measurement: Less than 60 m A @ 9 V
Probe Outside Dimensions	: φ 34 × (L) 515 mm

<Note>

- ◎ Under the following conditions, there is a possibility that the sensor does not work properly or that its product lifetime would be significantly reduced.
 - Measurement solution is or becomes negative pressure.
 - Conductivity of measurement solution is less than 20 mS / m.
 - Reducing substances (e.g. hydrogen sulfide, hydrazine, hydroquinone, etc.) are included in measurement solution.
 - Measurement solution contains organic solvent or oil above a certain level.
 - Flow velocity of measurement solution is more than 2 m / sec.
- ◎ Its pH sensor part can be removed easily from the main unit. Maintenance for its sensor part, such as cleaning and calibration, is required once every few months. Also, although the product lifetime of a pH sensor varies depending on conditions and measurement frequency, it is recommended that it would be replaced every two years.
- ◎ This product is for general water. If used under high corrosive circumstances, please contact us.

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

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