GEOLOGICAL, GEOPHYSICAL, GEOTECHNICAL SERVICES AND INSTRUMENTS

OYO

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

S&DL Water Level and Conductivity Meter

＜Summary＞

So far, both a water level gauge and a conductivity sensor have been usually installed in a borehole, in order to survey the condition of saline groundwater and environmental pollution. Therefore, in addition to cost problems, there have been several problems including the handling of data loggers, data correction and battery maintenance.

To solve such problems, S&DL Water Level and Conductivity Sensor is designed to provide advantages on its easy installation and maintenance by putting together a water level sensor, a conductivity sensor and a data logger into one probe, having a high degree of usability for users in field.

An electromagnetic induction method is adopted for its conductivity measurement, so that it can perform a stable measurement for a long time.

＜Features＞

● It is possible to monitor conductivity, water level and temperature continuously.
● Due to its electromagnetic induction method, it can make a long-term measurement stably because conductivity can be measured without any contact, which eliminates problems, such as electrode contamination and effects by polarization capacity, often seen in an electrode method.
● A high-performance titanium pressure sensor is adopted for water level measurement, and this, in combination with an electromagnetic induction conductivity sensor, contributes to enhancement in its durability and reliability.
● 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, Conductivity (with temperature compensating function) and Temperature
Water level measurement range	: 0〜5m、0〜10m、0〜20m、0〜35m
Water level measurement resolution	: 1mm
Water level measurement accuracy	: ± 0.1% F.S.
Conductivity measurement principle	: Electromagnetic induction method
Conductivity measurement range	: 2〜4000mS/m and 2〜400mS/m (Automatic switching) [Temperature 25□ conversion]
Conductivity measurement resolution	: 0.1 mS/m
Conductivity measurement accuracy	: ± 3% F.S. (at 25℃ water temperature)
Repeatability of conductivity	: ± 0.5% F.S. (When its sensing part receives resistance which is equal to sample solution in conductivity)
Temperature measurement range	: 0 〜 50℃
Temperature measurement resolution	: 0.1℃
Temperature measurement accuracy	: ±1℃
Measurement interval	: 1min〜10days (Configurable on a minute time scale)
Memory size	: 512 Kbyte (approx. 32,000 data)
Interface	: RS-232C (9600bps)
Operating voltage range	: 3V〜9V (Exclusive of a voltage drop by cable)
Consumption current	: Standby： 50μA (typ.) ＠9V Measurement： Less than 80mA ＠9V
Probe outside dimension	: φ 34 × 590mm

＜Notice＞
◎　This product is for general water. If used under high corrosive circumstances, please contact us.