



Groundwater Monitoring
OTT ecoLog 500
Cost-effective complete system
incorporating datalogger and modem

OTT ecoLog 500

Groundwater datalogger with built-in remote data transmission unit

Measuring, storing, and sending – OTT ecoLog 500 is the all-rounder among the groundwater dataloggers. Completely installed in observation wells or wellhead shafts, the system is used for long-term measurement and remote transmission. High-quality components at affordable prices ensure that the investment will pay off even in the long run.

Beyond the rugged ceramic pressure cell, the pressure probe also accommodates a precise temperature sensor as well as the datalogger. A compensating capillary in the Kevlar reinforced cable provides barometric pressure compensation. In addition to the batteries, everything needed for external data transfer is located in the communication unit in the upper part of the system: the modem (GSM/GPRS or UMTS/HSPA+) and the antenna for remote data transfer as well as the IR interface for local communication.

The rugged measuring system is easy to use and energy efficient. Depending on the time interval set, the batteries will last up to 10 years. Batteries are replaced with ease. Using the IR read head, local communication is very simple. The software provided supports intuitive configuration and data output.

Quantitative
Hydrology

OTT ecoLog 500 – cost effective measurements

Cost-effective, robust, and flexible

- Self-contained system incorporating all components that are necessary for measuring, storing, and remotely transmitting groundwater data
- Completely installed into observation well or wellhead shaft and well-protected from damage or vandalism
- Built-in remote transmission using Push operation – eliminates reading the memory on site
- Flexible remote transmission options (SMS, HTTP, FTP...), limit overshoot alarms may be established
- Optional external antenna connector – allows the system to be installed according to requirements, also underfloor

Less maintenance, lower costs

- Status information and warning messages (SMS/e-mail) for remote diagnostics – fast response in case of weak batteries or malfunction prevents loss of data
- Approximately 10 years of battery life with weekly data transmission – reduce costs by long service intervals at high data integrity
- Robust, precise ceramic capacitive pressure cell with long-term stability – in field use clearly superior to piezo-resistive standard measuring cells using metallic membranes
- Probe body made of saltwater resistant stainless steel, hermetically encapsulated and reliably protected from water or dirt ingress

Easy operation at the station

- Quick installation using adapter plates or suspension brackets
- Easy battery, dryer unit, or SIM card replacement on site without using tools
- IR interface (IrDA) for easy and secure communication on site
- One operating program for two features: Configuration and reading data
- Intuitive program operation supported by the clearly structured, context-sensitive online help



Technical data

Pressure measuring ranges

0 ... 4 m, 0 ... 10 m, 0 ... 20 m, 0 ... 40 m,
0... 100 m WC

Pressure resolution

0.001 m/0.1 cm/0.01 ft/0.1 inch/
0.0001 bar/0.001 psi

Pressure accuracy

±0.05 % FS

Long-term stability

±0.1 % / year FS

Temperature measuring range

-25 °C ... +70 °C

Temperature resolution

0.1 °C

Temperature accuracy

±0.5 °C; higher accuracy option available

Power supply

- lithium cells, 3.6 V/13 Ah
- or lithium cells, 3.6 V/26 Ah

Battery Life

Hourly measurement,
one transmission per day

- Lithium batteries (26 Ah): >10 years

Modem

- GSM/GPRS 900/1800, 850/1900 MHz
- GSM/GPRS; UMTS/HSPA+
900/1800, 850/1900 MHz; 800/850,
900, AWS 1700, 1900, 2100 MHz

Antenna

Built-in, robust and weather-proof,
external antenna option available (SMA-m)

Communication Interface

Infrared (IrDA)

Measurement memory

4 MB, approx. 500,000 measured values

Sampling/storage interval

5 seconds ... 24 hours

Installation

- In observation wells from 2" on,
(multi-purpose suspension bracket
available as an accessory)
- Incl. adapter plates for
OTT top caps: 3", 4", 6"

Operating temperature

-30 °C ... +85 °C

Storage temperature

-40 °C ... +85 °C

Dimensions L x Ø

- Probe: 195 mm x 22 mm
- Communication unit: 520 mm x 50 mm

System length

(Cable length incl. communication unit and
pressure probe)

2.0 ... 200 m ±1% ±5 cm

Weight

- Probe: approx. 0.300 kg
- Communication unit (w batteries)
approx. 0.92 kg

Housing material

- Probe: Stainless steel (DIN 1.4539, 904 L)
- Communication unit: Aluminum, PA-GF

Type of protection

- Probe: IP68
- Communication unit: IP68



(DoC: www.ott.com)