



## Self-contained groundwater level logger for measuring water level and temperature with integrated mobile communication

- **Application**  
Surface water, Groundwater
- **Measurement technology**  
Vented pressure cell
- **Parameters measured**  
Waterlevel/pressure, water temperature
- **Product Highlights**  
Integrated cellular modem (4G / 2G) EU-MEA or IoT LTE-M (CAT M1), Bluetooth Low Energy (BLE), operation via APP, Lithium Powerpack with plug, exact battery level indicator, service life > 10 years, IP data transmission, cable can be shortened on site
- **Measurement range**  
0 ... 4, 10, 20, 40, and 100 m
- **Accuracy**  
 $\pm 0.05$  % FS
- **Internal data logger**  
Yes

The OTT ecoLog 1000 is a self-contained, cellular groundwater level logger for measuring water level and temperature. It provides reliable system up-time and accurate

measurements while avoiding data gaps. It's simple to operate using just a smart phone or PC via integrated Bluetooth Low Energy (BLE) - no additional tools for maintenance or battery replacement. It supports mobile devices, smart phones, and tablets operating with Android, iOS or Windows 10. Configure and monitor your data remotely with integrated two-way mobile communication to avoid unnecessary, expensive trips to your measurement site and send encrypted data with automatic retries if transmission fails.

[Watch Webinar-Recording](#)

WATER LEVEL	
Measurement Range	0 ... 4 m (13 ft), 0 ... 10 m (33 ft), 0 ... 20 m (66 ft), 0 ... 40 m (131), 0 ... 100 m (328 ft) water column
Resolution	0.001 m / 0.1 cm / 0.01 ft / 0.1 inch / 0.0001 bar / 0.001 psi
Accuracy (linearity + hysteresis)	± 0.05 % full scale
Long-term stability (linearity + hysteresis)	± 0.1 %/a full scale
Units	Water level m/cm/bar/ ft, inch, psi
Pressure sensor	ceramic / temperature-compensated
Temperature-compensated operating range	(compensated) -5 °C (ice-free) ... +45 °C

TEMPERATURE	
Measuring range	-25 °C ... +70 °C
Resolution	0.01 °C / 0.02 °F
Accuracy	± 0.1 °C / 0.2 °F
Units	°C/°F

POWER	
Power supply	3.6 V / 26 Ah - Lithium power pack with connector
Battery life time - configuration depending	> 10 years @ average temperature of 20 °C/68 °F, 1 hour sampling and 1 transmission per day

RTC CLOCK	
Accuracy	± 26 s / month (at 25 °C / 77 °F) / < ± 3 s using SNTP

INTERFACE	
Networks / Cellular Modem Frequency / Bands	2G GSM, GPRS, EDGE; 900 MHz, 1800 MHz 4G LTE Cat-1 EU/MEA; B3 (1800 MHz), B8 (900 MHz), B20 (800 MHz) LTE-M / Cat M1; B1, B2, B3, B4, B5, B8, B9, B10, B12, B13, B17, B18, B19, B20, B25, B26, B27, B28, B66
Local communication	Bluetooth Low Energy (BLE) 5.0 - up to 10 m (free line of sight)

# Technical Data

OTT ecoLog 1000 Water Level Logger



Antennas	SMA connector with Penta Band Stubby Antenna / BLE built in Chip Antenna
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## MEASUREMENT

Measurement values	M1: Measurement of distance to water, water level or water pressure M2: Measurement of water temperature M3: Measurement of supply voltage M4: Measurement of power consumption M5: Measurement of signal strength (RSSI) M6: Additional measuring channel with processed value M7: Measurement of relative humidity inside the communication unit
Sample/storage interval	5 s ... 24 h

## DATA TRANSMISSION

Interval	1 min ... 1/week
IP COM	FTP / FTPS TLS 1.2 HTTP / HTTPS TLS 1.2 MQTT / MQTTS
SMS	SMS data transmission / commands

## DATA MEMORY

Measurement memory	28 MB (approx. 1,000,000 values)
Temperature range, operating	-30 °C ... +85 °C (-22 °F ... +185 °F)
Temperature range, storage	-40 °C ... +85 °C (-40 °F ... +185 °F)
Humidity	5% ... 95 % (non-condensing)
IP rating logger unit	Flood-proof up to 1 week / 1 m (3.3 ft) water column - similar IPx7
IP rating sensor	IP68

## DIMENSIONS

Logger unit	LxD: 525 x 50 mm (2") / LxD: 20.7 x 2.0 inch
Pressure probe	LxD: 195 x 22 mm (<1") / LxD: 7.7 x 0.9 inch
System length	0 ... 200 m (> 200 m on request) / 0 ... 656 ft (>656 ft on request)

## WEIGHT

Logger unit incl. battery pack	~ 900 g (~ 31.7 oz)
Pressure probe	~ 670 g (~ 23.6 oz)
Pressure probe cable	~ 42 g/m (~ 1.48 oz/m)

## MATERIAL

Pressure probe housing	Stainless steel 1.4539 (904L)
Logger housing	Aluminum / POM
Cable jacket	PUR

## REGULATORY

### 3-4

We reserve the right to make technical changes and improvements without notice. V-30/06/2022

OTT Hydromet GmbH, Germany



# Technical Data

OTT ecoLog 1000 Water Level Logger



EU directives compliance	CE
US directives compliance	FCC / IC
PTCRB	According to NAPRD03
Provider Certification	Verizon Open Development Certification, AT&T IoT Device Certification

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