

**Level and conductivity  
measurement**

OTT CTD – groundwater datalogger  
with conductivity measuring cell



# OTT CTD

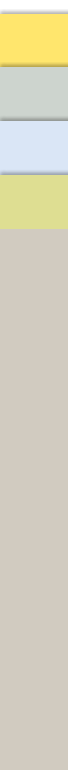
## Groundwater datalogger

The OTT CTD is a professional datalogger for the measurement of water level, temperature and conductivity. Furthermore, it can also output salinity and TDS (total dissolved solids). The CTD saves all measurements in the integrated, non-volatile 4 MB ring buffer (approx. 500,000 values).

In addition to the proven product characteristics of high-quality pressure probes from OTT, the OTT CTD provides a conductivity measuring cell that meets all the demands of hydrological data collection. Overall, the OTT CTD has proved to be reliable and indestructible. This is ensured by the robust and reliable measuring cells, the saltwater resistant stainless-steel housing, the kevlar-strengthened probe cable with integrated compensating capillary and an ingenious design.

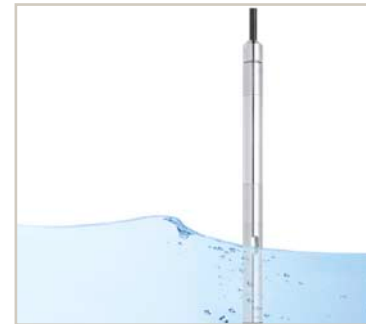
The infrared interface allows the data to be conveniently read out or transferred from the device with a notebook. A well structured, intuitive operating program with all the necessary functions for data output and export, configuration and calibration is supplied. And if remote data transmission is needed: with the OTT ITC, the CTD can easily be equipped for data transmission using GSM/SMS or GPRS.

Quantitative  
Hydrology



### Conductivity measurement

Thanks to the 4-electrode-design and the high-grade graphite electrodes, the conductivity measuring cell is insured to polarization effects and contamination. This guarantees reliable measuring data even in harsh environments.



### Technical data

|  |   |   |
|--|---|---|
| Parameters   | water level/pressure, temperature, specific conductivity, salinity, TDS |   |
| Water level measurement                                      |   |   |
| Range  | 0 ... 4 m, 0 ... 10 m, 0 ... 20 m, 0 ... 40 m, 0 ... 100 m              |   |
| Resolution   | 0.001 m, 0.1 cm, 0.01 ft, 0.1 in  |   |
| Accuracy (linearity + hysteresis)                            | ±0.05 % FS  |   |
| Units  | m, cm, ft, inch, bar, psi   |   |
| Pressure sensor  | ceramic; temperature compensated  |   |
| Overload protection* pressure sensor                         | >4 x measurement range  |   |
| *no lasting mechanical damage                                |   |   |
| Temperature compensated range                                | -5 °C ... +45 °C (ice-free)   |   |
| Temperature measurement                                      |   |   |
| Range  | -25 °C ... +70 °C   |   |
| Resolution   | 0.01 °C   |   |
| Accuracy   | ±0.1 °C   |   |
| Units  | °C, °F  |   |
| Conductivity measurement                                     |   |   |
| Range  | 0.001 ... 2.000 mS/cm   | 0.10 ... 100.00 mS/cm                       |
| Resolution   | 0.001 mS/cm   | 0.01 mS/cm                                  |
| Accuracy   | ±0.5 % of meas. value<br>(min. ±0.001 mS/cm)                            | ±1.5 % of meas. value<br>(min. ±0.01 mS/cm) |
| Units  | mS/cm, µS/cm  | mS/cm                                       |
| General data   |   |   |
| Power supply   | 3 x 1.5 V battery (LR6, AA, FR6 AA)<br>alkaline or lithium              |   |
| Operating life<br>(1 h polling interval, 50 m system length) | ≥5 years (lithium); ≥1.5 years (alkaline)                               |   |
| Interface  | Infrared (IrDA)   |   |
| Data memory  | 4 MB / approx. 500.000 values   |   |
| Polling- / storage interval                                  | 5 seconds ... 24 hours  |   |
| Dimensions communication unit                                | 400 mm x 22 mm (L x Ø)  |   |
| Dimensions pressure probe                                    | 317 mm x 22 mm (L x Ø)  |   |
| Material of pressure probe housing                           | stainless steel DIN 1.4539 (904 L)                                      |   |
| EMV limits   | complies with EN 61000/ EN 55011 Class B                                |   |



### Applications

- Control measurements in areas of potential pollution, e.g.
- Environmental checks of groundwater and surface waters
  - Monitoring of bank filtration wells
  - Monitoring of saltwater intrusion
  - Determination of geogenic groundwater salinization
  - Renaturation of former sand and gravel pits or of wetlands
  - Recultivation of contaminated sites and devastated open-cast mining areas
  - Aquifer storage and recovering
  - Areas used intensively for agriculture

### Benefits

- 4-electrode conductivity measuring cell minimizes polarization effects
- Robust, ceramic capacitive pressure cell with long-term stability
- Corrosion and saltwater resistant housing material
- Large memory capacity
- Operating software with simple user guidance
- Can be used immediately due to precalibration
- Simple battery changes: the probe remains in the water
- Minimal maintenance
- Easily equipped for data communication using GSM/GPRS