# OTT-PLS-C
# PRESSURE PROBE WITH CONDUCTIVITY MEASUREMENT CELL

The OTT-PLS-C measures water conductivity, level, and temperature in both surface and groundwater applications with a robust ceramic pressure cell and 4-electrode conductivity cell. Its extremely low power consumption makes it ideal for long-term deployment, particularly at solar powered measuring stations for ground-and surface waters.

- Application - Surface water, Groundwater
- Measurement technology - Vented pressure cell & 4-electrode graphite conductivity cell
- Product Highlights - Water level, temperature, & conductivity measurement - for use with external data logger
- Internal data logger - No
- Interface - SDI-12 or RS-485 (using SDI-12).

**Example of Use**

Water level, temperature, and conductivity measurement of:

- Groundwater wells
- Streams, rivers, channels, and canals
- Reservoirs, lakes, and wetlands.

Ideal for monitoring:

- Continuous monitoring networks
- Short-term or long-term projects
- Salt water intrusion
- Aquifer storage and recovery
- Estuaries and wetlands.

**Advantages**

Outputs for conductivity include specific conductivity, salinity, and total dissolved solids

- The robust ceramic pressure cell offers industry-leading accuracy and does not deform over time like membrane technology, providing long-term measurement stability
- Rugged design: Ceramic pressure cell resistant to physical force (4 x burst pressure) and enclosure made of high-quality saltwater resistant steel for use in coastal environments
- Vented pressure probe, automatically compensates for changes in barometric pressure
- Robust cable with Kevlar core for length stabilization and capillary tube for venting
- Built-in microcontroller – compensates for temperature effects and applies correction values for gravitational acceleration or water density
- Simple setup and connection to external dataloggers using SDI-12.

# OTT-PLS-C

## Technical Specifications

| | |
|---|---|
| **WATER LEVEL MEASUREMENT (PRESSURE)** | |
| **Pressure sensor** | ceramic, temperature-compensated |
| **Measuring range** | 0 ... 4 m, 0 ... 10 m, 0 ... 20 m, 0 ... 40 m, 0 ... 100 m water col. |
| **Resolution** | 0.001 m; 0.1 cm; 0.01 ft; 0.1 mbar; 0.001 psi |
| **Accuracy (linearity + hysteresis)** | ≤ ± 0.05 % FS |
| **Long-term stability (linearity+hysteresis)** | ≤ ± 0.1 %/a FS |
| **Zerodrift** | ≤ ± 0.1 % FS |
| **Pressure sensor capability to withstand overloads without permanent mechanical damage** | ≥ 4 x measuring range |
| **Temp.-compensated operating range** | -5°C ... +45°C (ice free) |
| **Units** | m, cm, ft, mbar, psi |
| **TEMPERATURE MEASUREMENT** | |
| **Sensor** | NTC |
| **Measuring range** | -25°C ... +70°C (ice free) |
| **Calibrated range** | +5°C ... 45°C |
| **Resolution** | 0.01°C |
| **Accuracy** | ±0.1°C |
| **Units** | °C, °F |
| **CONDUCTIVITY MEASUREMENT** | |
| **Sensor** | 4 graphite electrodes |
| **Calibrated range** | +5°C ... 45°C |
| **MEASURING RANGE 5 ... 2.000 MS/CM** | |
| **Resolution** | 1µS/cm |
| **Accuracy** | ±1 µS/cm or ± 0.5 % of measured value (whichever is higher) |
| **Unit** | µS/cm |
| **MEASURING RANGE 0.1 ... 100 MS/CM** | |
| **Resolution** | 0.01 mS/cm |
| **Accuracy** | ± 0.01 mS/cm or ±1.5 % of measured value (whichever is higher) |
| **Unit** | mS/cm |
| **OPTIONS** | |
| **Temp. compensation, conductivity** | freshwater, saltwater, standard method 2510, ISO 7888/EN27888 |
| **Salinity calculation** | Standard method or USGS 2311 |
| **ELECTRICAL DATA** | |
| **Supply voltage** | 6 ... 27 V DC, typically 12/24 V DC |
| **POWER CONSUMPTION** | |
| **SDI-12 sleep-mode** | <30 µAV |
| **SDI-12 active-mode** | <32 mA |
| **Interfaces** | SDI-12, RS-485 (SDI-12 protocol) |
| **MECHANICAL DATA** | |
| **Dimensions: Probe (Ø x h)** | 317 mm x 22 mm |
| **Dimensions: Cable length** | SDI-12: 1 ... 100 m RS-485: 1 ... 1000 m |
| **Material: Housing material probe** | POM, stainless steel (DIN 1.4539, 904 L ), resistant to sea water |
| **Material: Cable jacket** | PUR |
| **Weight: Probe** | approx. 0.43 kg |
| **Weight: Probe cable** | approx. 82 g/m |
| **AMBIENT CONDITIONS** | |
| **Storage temperature** | - 40°C ... + 85°C |
| **Type of protection** | Probe: IP 68 |
| **EMC limits** | EG 2004/108/EG, EN 61326-1:2013 |