



OTT Orpheus Mini =

The formula for success in groundwater monitoring

Groundwater data logger for measurement, storage and transmission of groundwater level and temperature



°C

$$p = \rho \times g \times h$$

Reliable & rugged – the crucial attributes for a groundwater data logger

The groundwater data logger **OTT Orpheus Mini** – based on a pressure probe – has been designed for the reliable monitoring and storage of water level and temperature for the water management. The main application of **OTT Orpheus Mini** is the installation in groundwater pipes and wells. In addition, the application in open waters and tanks is possible.

OTT Orpheus Mini is equipped with a rugged, ceramic-capacitive measuring cell and a precise temperature sensor. A data logger, which can be configured individually, stores and manages the monitored measured values in a 4 MB non-volatile memory (corresponds to approx. 500,000 measured values). The connexion for data retrieval and start-up and the power supply of the **OTT Orpheus Mini** are provided by the communication unit.

The kevlar-reinforced pressure probe cable with pressure compensation capillary in combination with a



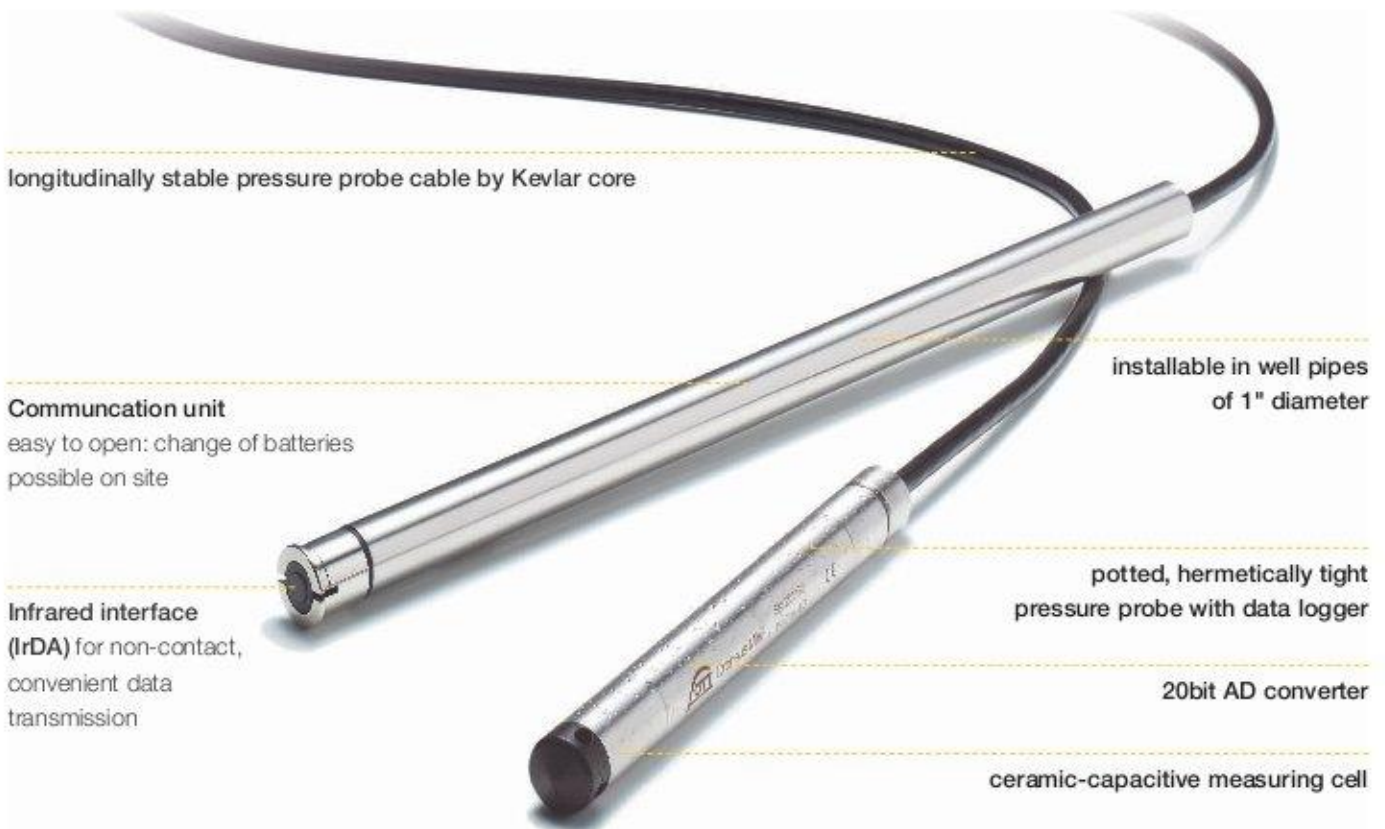
desiccant cartridge prevents reliably measuring errors by compensating barometric pressure fluctuations.

When downloading data the data logger transfers the measured values via a RS-485 connexion to the communication unit, which establishes a non-contact transmission of the data via infrared interface (IrDA) to the reading unit or notebook.

Power supply can optionally be provided by Lithium batteries (min. 5 years operating time/1 h measurement interval) or Alkaline batteries (min. 1.5 years operating time/1 h measurement interval). The batteries can easily be changed on site.

Various adapter plates and a suspension bracket allow a very easy and fast installation in well pipes of 1" to 6" diameter. From a pipe diameter of 2" control measurements via contact gauge are possible without removing the groundwater data logger.

The crucial advantages



longitudinally stable pressure probe cable by Kevlar core

Communication unit
easy to open: change of batteries possible on site

Infrared interface (IrDA) for non-contact, convenient data transmission

installable in well pipes of 1" diameter

potted, hermetically tight pressure probe with data logger

20bit AD converter

ceramic-capacitive measuring cell

OTT Orpheus Mini – Innovation with no compromises

Installation options: 1" and larger

Easy installation in well pipes of 1" diameter and larger by adapter plates and suspension bracket. For large cable lengths or special measuring sites an extra cable suspension unit can be supplied. An additional opening in the adapter plates from 2" diameter allows measurement with a contact gauge without removing the **OTT** Orpheus Mini.



Various communication opportunities – simple operating concept with Pocket PC, **OTT** Vota 2 or notebook

Data retrieval and configuration conveniently via infrared interface (IrDA). Set operating parameters at a glance: carry out the complete set-up of a groundwater measuring site in just one screen window.



Highly durable ceramic measuring cell

The groundwater data logger **OTT** Orpheus Mini features a ceramic-capacitive measuring cell. Rugged and long-term stable: crucial advantages compared to piezo-resistive standard measuring cells with metal membrane.



Technical data

| | |
|---|---|
| Measuring ranges | 0 ... 4 m, 0 ... 10 m, 0 ... 20 m, 0 ... 40 m water column |
| Resolution, pressure | 0.01 % FS |
| Accuracy, pressure | 0.05 % FS |
| Measuring range temperature | -25 °C ... +70 °C (ice-free) |
| Resolution temperature | 0.1 °C |
| Accuracy temperature | ±0.5 °C |
| <hr/> | |
| Power supply | 3 x 1,5 V LR6-cells Alkaline- or Lithium-type |
| Lifetime (at 1 h reading interval) | |
| with Lithium batteries | min. 5 years |
| with Alkaline batteries | min. 1.5 years (high quality battery types) |
| <hr/> | |
| Interface | Infrared (IrDA) |
| Temperature-compensated working range | -5 °C ... +45 °C (ice-free) |
| Storage temperature | -40 °C ... 85 °C |
| <hr/> | |
| Memory | 4 MB |
| Number of measured values | approx. 500 000 |
| Reading interval | 1 second ... 24 hours |
| Storage interval | 1 second ... 24 hours |
| <hr/> | |
| Installable in well pipes | |
| with adapter plates for OTT top caps | 1", 2", 4", 6" |
| with suspension bracket | ≥ 1" |
| Dimensions | |
| Communication unit L x Ø | 320 mm x 23 mm |
| Pressure probe L x Ø | 245 mm x 22 mm |
| System length (cable length incl. communication unit/pressure probe) | 1 ... 200 m ± 0.25 cm |
| Weight | |
| Communication unit (incl. batteries) | approx. 0.360 kg |
| Pressure probe | approx. 0.260 kg |
| Material of casing | ABS, V4A (DIN 1.4539) |
| Type of protection | |
| Communication unit | IP 68 immersion depth max. 2 m, duration of immersion max. 24 h |
| Pressure probe | IP 68 |
| EMV thresholds | EN61000-6-2:1999 and EN61000-6-3:2001 are complied with |



OTT – Your partner for:

- Water level measurement in ground and surface water
- Discharge measurement
- Precipitation measurement
- Water quality measurement
- Data management and communication
- HydroService: consulting, training, installation and maintenance

