Options for the Continuous Monitoring of Data

Quanta Multi-Parameter Probe – OTT LogoSens 2: the ideal combination for a stationary measuring site for the monitoring of water level and water quality.

Station-Manager OTT LogoSens 2

Characteristics
- the Quanta needs only one physical signal input to monitor all 7 parameters and to store each parameter separately
- alarm management possible
- storing capacity of up to 400 000 values
- up to 15 signal inputs can be used for other sensors

Datatransfer
- via IrDA interface
- via RS-232 interface
- via modem
- via radio transmission
- via satellite

Technical Data

Quanta Multi-Parameter Probe

Housing	shock-resistant (RYTON), IP 67
Depth	up to 100 m
Dimensions	Ø 76 x 229 mm
Weight	1.3 kg
Temperature	–5 °C … +50 °C
External Power Supply	7 … 14 V DC
Power Consumption at 12 V_{cc}	
SDI-12 standby	<100 µA
Circulator off	<40 mA
Circulator on	<70 mA

Quanta Field Display

Housing	waterproof, plastic (IP 67)
Dimensions (L x W x H)	269 x 127 x 75 mm
Weight	0.95 kg
Temperature	–5 °C … +50 °C
LC-Display	readings of up to 5 parameters can be shown at the same time; language: English
Integrated Memory	stores up to 200 frames of data (one frame can store all parameter values)
4.5 V DC Power Supply	3 x 1.5 V alkaline batteries for up to 15 hours operation – battery indicator – plug for connection of the Quanta probe cable

Quanta Field Display

OTT – Your partner for:
- Water level measurement in ground and surface water
- Discharge measurement
- Precipitation
- Water quality measurement
- Data management and communications
- HydroService: consulting, training, installation and maintenance

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Multi-Parameter Probe for Water Quality Monitoring in both Ground and Surface Water

Quanta

Quanta Multi-Parameter Probe

The Quanta Measuring System has been developed for the cost effective and accurate monitoring of water quality parameters in ground and surface waters. Whether in freshwater, saltwater or contaminated water environments the Quanta delivers data about water quality and level quickly and in an easy to use format.

Combined with the Quanta Field Display the robust, low maintenance probe gathers data on up to 7 parameters simultaneously: temperature, specific conductance, pH, ORP (Redox), dissolved oxygen, turbidity and water level.

For long-term, continuous measurement the Multi-Parameter Probe Quanta can be connected to an external data logger via an SDI-12 cable. This combination can also provide a quick and easy access to data by telecommunications (GSM-modem, satellite, radio transmission etc.) as well as the potential for alarm functionality to alert users to possible quality events.

The Quanta Field Display – waterproof (IP 67/NEMA 6), robust, compact, easy to use, simple menu-driven operation

The Quanta Field Display – displays readings of up to 5 parameters simultaneously

Advantages

- readings of up to 5 parameters can be shown at the same time
- easy installation and handling thanks to modular system design
- proven sensor technology, easy calibration and maintenance
- for mobile spot measurements and long-term measurements
- three-year warranty
- optional RTC/PC dump feature to transfer max. 200 logged frames of data to the PC (csv-format)
- 4.5 V DC power supply, low power consumption /alkaline batteries, rechargeable batteries or solar power
- SDI-12 interface option to connect the Multi-Parameter probe Quanta to an external data logger (e.g. OTT LogoSens 2) for continuous monitoring
- can be used in groundwater monitoring wells from 2"-Ø (special type: Quanta-G). When combined with the optional flowcell, monitoring is also possible in wells with a smaller diameter (e.g. laboratory bottles, 1" wells, etc.)

Portable online-measurement of water quality at a waste-water outlet

Accessories

- Storage Cup
- Calibration Cup
- Guard
- Probe cable with SDI-12 interface
  - firmly connected to the probe
  - standardized (max. 100 m)
  - for the connection of the field display
- Adapter Cable
  - for the connection of external dataloggers (e.g. OTT LogoSens 2, OTT DuoSens)
  - open wires
- Backpack Carry Case to accommodate the measuring equipment
- Maintenance and Calibration Sets
- Quick-Cal Cube – patented plastic cube for insitu-calibration control of the turbidity sensor and re-calibration if necessary
- Standard Calibration Solutions

Parameters

The modular system of the Quanta Multi-Parameter Probe enables the customer to specify sensors individually, according to the requirements of the measuring site.

Depending on the type of the sensors it is possible to collect up to 7 parameters from 4 sensor ports.

The temperature sensor is integrated in every Quanta Multi-Parameter Probe as a standard.

(1) µS – Conductivity Sensor

Four electrode cell methodology – sensors are encapsulated in graphite

- 4 different measuring ranges
- various calculation formulas can be integrated
- special design guarantees accurate data by reducing air bubbles and sediment build-up
- no corrosion

Measuring range:	0 … 100 mS/cm
Accuracy:	±1% of reading ±0.01 PSS
Resolution:	4 digits

Salinity
calculated from conductivity

Measuring range:	0 … 70 PSS
Accuracy:	±1% of reading ±0.01 PSS
Resolution:	0.01 PSS

(2) DO – Dissolved Oxygen Sensor

Gold electrode with ion selective membrane; field proven Clark-cell technology

Measuring range:	0 … 50 mg/l
Accuracy:	±0.2 mg/l (≤20 mg/l) ±0.6 mg/l (>20 mg/l)
Resolution:	0.01 mg/l

(3) pH-Sensor

Glass Sensor

Measuring range:	0 … 14 units
Accuracy:	±0.2 units
Resolution:	0.01 units

(4) Water Level Sensor

Absolute Pressure Measuring Cell

Measuring range:
0 … 25 m (A = ±0.1 m; R = 0.1 m)
0 … 100 m (A = ±0.3 m; R = 0.1 m

Reference Measuring Cell

Measuring range:
0 … 10 m (A = ±0.003 m; R = 0.001 m)

(5) °C – Temperature Sensor

NTC

Measuring range:	–5 … 50 °C
Accuracy:	±0.15 °C
Resolution:	0.01 °C

(6) ORP Sensor (Redox)

Platinum Electrode

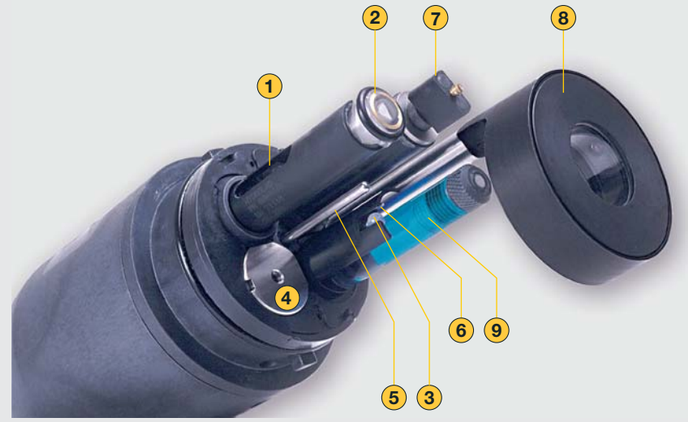
Measuring range:	–999 … +999 mV
Accuracy:	±20 mV
Resolution:	1 mV

(8) Turbidity Sensor

4-Beam Turbidity

- two measurement phases provide four independent measurements from two light sources according to DIN 38404/ISO 7027
- eliminates all errors due to air bubbles and ambient light

Measuring range:	0 … 1000 NTU
Accuracy:	±5% of reading ±1 NTU
Resolution:	0.1 NTU (<100) 1 NTU (≥100)



Thanks to the modular system architecture it is possible to combine the sensors to the individual requirements of any measuring situation

(7) Circulator

Designed to create a continuous flow around the sensor

- removes debris and biologically active influences
- essential in poorly mixed areas of water
- gives longer maintenance intervals and service life of sensors

(9) Reference Electrode (pH)

Ag/AgCl Electrode

- refillable electrolyte solution
- replaceable membrane