Discharge Measurement Sensor Selection Guide

Portable Measurement Systems:

Acoustic Digital Current Meter

OTT ADC

- Measures point velocities in open channels using acoustic signals
- Automatic depth measurement
- Step-by-step user guidance for easy and safe deployment in the field
- Automatic discharge calculation in accordance with international standards
- Internal quality control of each measurement (Mis-alignment, obstructions, signal quality)
- Data post processing using the OTT QReveiw application software

Electromagnetic Current Meter

OTT MF pro

- Measures point velocities in open channels using electromagnetic principle (Faraday law)
- Automatic measurement of vertical depth and sensor immersion (optional)
- Step-by-step user guidance
  - Automatic discharge calculation in accordance with international standards
  - Real-time measurement – allows trends to be visualized quickly
- Large graphic color display on the unit handheld
- Works well in weed-infested or polluted waters and under turbulent flow conditions
- Pre-defined conduit profiles for easy discharge measurement in conduits

Sensor Selection Table Part 1

		OTT ADC	OTT MFpro
Parameters	Flow Velocity	x	x
	Depth	x	x
	Temperature	x	
Velocity Measurement and Discharge Calculation Methods	ISO and USGS standards	x	x
	2-point KREPS	x	
	Ice, 1-point and 2-point	x	
	Multi point	x	
	Conduits (canalization): 0.9xVmax; 0.2/0.4/0.8; 2D; velocity integrating meth.		x
	EN ISO 748 Mid-section	x	x
	EN ISO 748 Mean section	x	x
Applications	Simple maintenance	+	+
	Turbulent flow conditions	-	+
	Attached to conventional wading rods	+	+
	In-situ calculation of total discharge	+	+
	Weed-infested waters	-	+
	Real-time measurement	o	+
	In-situ calculation of velocity	+	+
	Use with cable ways	-	-
	Shallow water (<4cm)	+	+
	Polluted / waste water	o	+
	Wading measurements	+	+

Symbols: **+** highly suitable **o** suitable **-** not suitable

Sensor Selection Table Part 2

		OTT ADC	OTT MF pro
Type of of operating technique		Acoustic pulse-to-pulse coherent	Magnetic Inductive
Measuring Range	Velocity	-0.2 m/s … 2.4 m/s	0 m/s … 6 m/s
	Water Level	0 m … 5 m	0 m … 3 m
	Temp.	-5°C … 35°C	
	Minimum Water Depth	≥ 4 cm	≥ 3.2 cm
Accuracy	Velocity	± 1% FS ± 0.25 cm/s	0 … 3 m/s: ± 2% FS; ± 0.015 m/s 3 … 5 m/s: ± 4% FS; ± 0.015 m/s
	Water Level	0.1% FS	The larger of ± 2% of measured value or ± 0.015 m
	Temp.	± 0.1°C	
Interface	Output	USB	USB
	OTT Software	OTT QReveiw	
	Data Export	ASCII, XML (OTT QReveiw export)	TSV
Estimated Battery Life*		14 h	18 h

*Battery Life time is affected by environmental conditions and charging cycles.

OTT Discharge Software

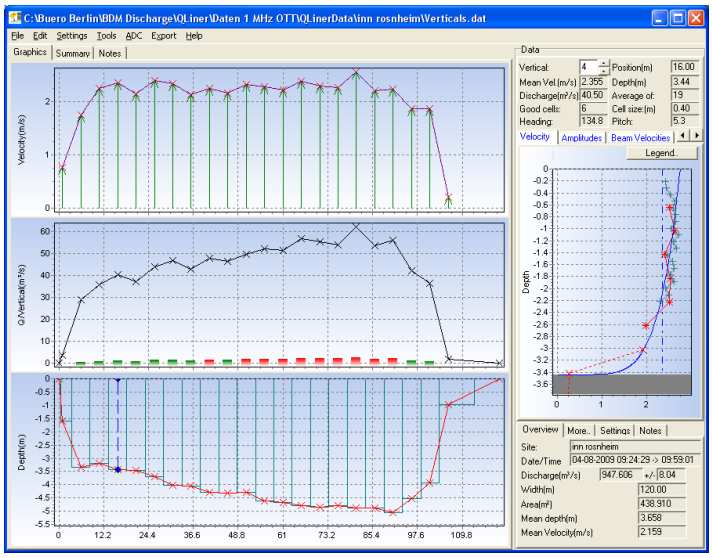
OTT QReveiw

Characteristics / Advantages

- Validation of flow measurement data
- Clear representation of the measurement cross-section and the different values measured
- Convenient processing
- Specially conceived for data from OTT ADC
- The processing software OTT QReview is included with the OTT ADC

Useful functions

- Visualization of individual verticals and of the measurement cross-section with the measured velocities in each case
- Production of a measurement report with overview of results and details of verticals
- Post processing and correction of OTT ADC measurements
- Editing of measurement settings and recalculation of flow
- Changing the flow calculation method
- Export of the measurement to TXT or XML format, e.g. for transferring to BIBER software and Software Q
- Export of the cross-section coordinates (waterway profile) in text format



OTT Solutions

- Discharge
  - Spot measurement
  - Continuous measurement
- Pressure, radar, and bubbler level sensors

- Surface water sensors
- Groundwater sensors
- Multiparameter Sondes for surface and groundwater

- Software for communication and data management
- Web application for data management
- Tel-, Sat, GSM-, GPRS- and IP-Com

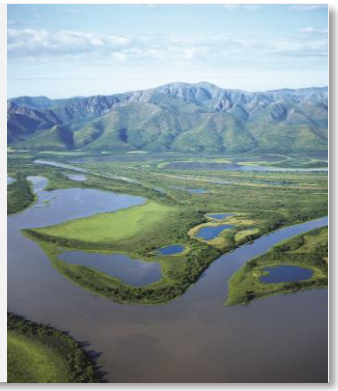
- All weather precipitation gauges
- Present weather sensors

- Groundwater dataloggers
- Remote groundwater monitoring
- Groundwater level sensors

Established technology in discharge measurement

Traditionally, OTT has produced reliable, mechanical meters for a wide range of potential applications for decades. Their calibration in the in-house calibration tank ensures long-term, reliable measurement values.

The product range of the classic OTT meters is extended today with acoustic current meters and magnetic-inductive sensors, whose high-performance sensors use the most modern technology for evaluation of acoustic and electric signals and are distinguished by their reliable operation and high level of measurement accuracy.



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