

Applications

Surface Water Velocity
Discharge Monitoring
Hydropower
Lake & Reservoir
Watershed Monitoring



Mobile Discharge Measurement

Modern technology for rough environments

Compact and light-weight sensor without moving mechanical parts – requires almost no maintenance

Automatic measurement of vertical depth and sensor immersion (optional)

Automatic storage of all data recorded – one person is sufficient to perform the measurement within the shortest possible time

Point velocity immediately shown on the display – allows trends to be visualized quickly

Discharge calculation according to intl. standards – less time required for desk work, no calculations necessary after measurement

Easy data export from handheld unit to PC through USB interface – no error-prone copying of log data

Low-maintenance

The OTT MF pro unit is a magnetic-inductive current meter designed to measure point velocities in streams, smaller rivers, canals, or measurement flumes. The low-maintenance system consists of a compact and light-weight sensor and a robust handheld unit that reliably operates even under rough environments. Both system components are designed to be attached to conventional wading rods.

Step-by-step menu

As with conventional current meters, the sensor is guided through the measurement cross-section using the rod. The step-by-step menu of the handheld unit directs the user through these operations from the first to the last vertical. The measured point velocities are immediately

shown on the display of the handheld unit and automatically stored. At the end of the measurement, the software uses the data recorded to calculate the total discharge according to recognized international standards.

Compact design

Because of the principle of measurement used and the compact design, the unit measures even the lowest velocities (from 0 m/s on) in shallow waters and may be used for measuring in both weed-infested and dirty waters.

Technical Specifications

	Feature	Value
Velocity measurement	Measurement method	Magnetic-inductive
	Measuring range	0 m/s ... 6 m/s
	Accuracy at 0 ... 3 m/s	±2 % of meas. value ±0.015 m/s
	Accuracy at 0 ... 5 m/s	±4 % of meas. value ±0.015 m/s
	Zero stability	±0.015 m/s
	Resolution	0.001 at measured value <10 0.01 at measured value <100 0.1 at measured value >100
Depth measurement (option)	Absolute pressure sensor with single point calibration	
	Measuring range	0 ... 3.05 m
	Accuracy*	The larger of ±2% of measured value or ±0.015 m *Steady state temperature and static non-flowing water
Methods for velocity measurement	Streams	1, 2, 3, 5, and 6 point measurement (ISO and USGS standards)
	Conduits (canalization)	0.9 x Vmax; 0.2/0.4/0.8; 2D; velocity integrating method
	Conduit profiles	Circular, rectangular, trapezoidal, 2/3 egg, inverted 2/3 egg
	Methods for discharge calculation	EN ISO 748 Mid section method Mean section method
	Operating modes	Real-time velocity measurement Discharge profile (stream/conduit)
	ELECTRICAL DATA	Power supply
Data memory capacity		Up to 10 measuring locations (of 32 vertical profiles each)
ENVIRONMENTAL CONDITIONS	Temperature (operation/storage)	-20°C ... +60°C
GENERAL	IP Protection Sensor	IP68
	IP Protection Handheld unit	IP67 (USB cap attached)
	Handheld unit display	Graphic colour display, transfective LCD, 3.5", QVGA
	Handheld unit interface	USB, Mini B type, 5-pin
	Export format	TSV (Tab Separated Value) file format
	Operating modes	Real-time velocity measurement Discharge profile (stream/conduit)
	Noise suppression	50 Hz, 60 Hz (adjustable)
	Cable lengths	2 m, 6 m, 12 m, and 30 m
MATERIAL	Material	Sensor housing: ABS, glass-fiber reinforced Handheld unit: Polycarbonate, moulded by shock-absorbing elastomer (TPE)
	DIMENSIONS AND WEIGHT	Sensor body
Handheld unit		L x W x H: 21.8 cm x 9.3 cm x 5.3 cm Weight: 0.68 kg