Water flow meter for longterm data collection of velocity and discharge measurements

- **Usage Type**
  Fixed installation
- **Measurement technology**
  Acoustic
- **Parameters measured**
  Flow velocity
- **Product Highlights**
  Side-Looking-Doppler for continuous discharge measurement in rivers and open channels. Discharge calculation based on velocity - index - method. Integrated vessel filter algorithm, Modbus interface and output of total volume of flow (max. interval 1 day).
- **Measurement range**
  ± 10 m/s
- **Accuracy**
  ± 1 % of measured value ± 0.5 cm/s

The OTT SLD is a measurement system for continuous measurement of water velocity and level in streams, rivers, and canals. The sensor employs the acoustic Doppler principle to reliably measure flow velocity in a variety of naturally occurring conditions, including during most flood events.

Flow velocity measurement	
Measuring range	±10 m/s
Accuracy	1% of measured value ± 5 mm/s
Number of measuring cells	9

Cell size / Blanking	
600 kHz	2 ... 10 m/0.5 ... 30 m
1.0 MHz	1 ... 4 m/0.3 ... 15 m
2.0 MHz	0.2 ... 2 m/0.1 ... 8 m

Beam angle / Max. profiling range*	
600 kHz	2.4° / 80 m
1.0 MHz	2.4° / 25 m
2.0 MHz	2.1° / 10 m
Minimum coverage	0.15 m (water level option)

Electrical data	
Supply voltage	12 ... 16 V DC, typ. 12 V
Power consumption	50 ... 500 mW, depending on measurement cycle

Water level measurement	
(optional)	
Measuring range	0.15 ... 10 m
Accuracy	±3 mm, depending on stratification
Pressure cell (optional)	
Measuring principle	Piezo-resistive
Measuring range	0 ... 10 m
Accuracy	±0.25 % FS

Interfaces	RS-232, SDI-12 or SDI-12 via RS-485, Modbus (optional)

Environmental conditions	
Operating temperature	-5 ... + 35 °C
Storage temperature	-20 ... +70 °C

Length x Ø	45 ... 52.2 cm x 7.5 cm

Housing material	POM

Wall bracket (accessory)	
Components	Bracket, protective cover, and C rail mount
Material	Stainless steel
Details	On request

Discharge calculation	Within the unit or externally on a datalogger, e.g. OTT netDL

OTT SLD EasyUse Installation and service software	System setup, commissioning, reviewing and optimizing
OTT Prodis 2 (accessory) Calibration software	Determining correction factors, (velocity-index method and others), optimizing discharge calculation, managing stations

*The beam angle is understood to be the measured angle with regard to the main axis. The maximum profiling range depends on the water profile, salinity, suspended matter content etc.