Velocity and Acoustic Turbidity Profiles for Laboratory Setup and Industrial Pipes

Features

- velocity and backscattered intensity profile measurement by **high accurate** pulsed coherent Doppler (UVP)
- compact and splash-proof enclosure adapted to harsh environments
- native Ethernet communication
- **ergonomic** embedded Web interface for setting up, observing instantaneous data and recording
  - control of a wide variety of external transducers
  - **high quality** measurements
  - high spatial and time resolution
  - wide emission frequency range

Applications

- sediment and suspension monitoring in flume and pipe
- **laboratory** studies
- turbine and marine current turbine calibration
- **complex fluids** studies
- CFD input and validation
- industrial process optimization
- **food engineering** process control
- reactor and tank monitoring

Our devices are available for rent, for lease and for sale.

Contact

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### Specifications

**Measurement Performances**
- **Sampling range**: 0.005 to 4 m
- **Number of cells**: 2 to 200
- **Cell size**: 0.36 mm to 10 cm
- **Velocity range**: [-4 to 4] m/s (under Nyquist condition)
- **Velocity accuracy**: 0.2 to 1%
- **Sampling rates**: up to 100 Hz
- **Signal processing**: Coherent Doppler with phase coding
- **Number of configs**: 12
- **Temperature**: BNC connector for PT100 probe

**Acoustics**
- **Measurement modus**: monostatic
- **Number of transducer connectors**: 2 for transducers in emission/reception
- **Frequency range**: 0.8 to 9.4 MHz (allowing particle size spectroscopy)
- **Beam width**: 2° to 5° half angle (depending on the transducer and on the emitting frequency)
- **Emission voltage**: 30/60V (300/450V upon request)

**Physical**
- **Dimensions**: 5.5 x 11.3 x 38.5 cm
- **Weight**: 1.5 kg
- **Cable**: 10 m typical (up to 50 m upon request)

**Data Management**
- **Communication**: HTTP and TCP-IP protocols through Ethernet
- **Internal data logger**: 3 Go (more than 20 000 profiles)
- **File format**: ASCII CSV (compatible with Excel, Matlab …) and binary
- **Velocity**: Velocity profile data (relative to acoustic beam directions) per beam and cell
- **Echo**: Backscattered echo RMS amplitude per beam and cell
- **Turbidity**: Acoustic turbidity data per beam and cell
- **Data Quality**: Profile data quality indicator per beam and cell
- **Raw IQ**: yes

**Power**
- **Input**: 110-230V AC, 48V POE
- **Consumption**: Maximum 12 VA

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