

UltraLab[®] ULS Advanced

Measuring of very fast Waves and Targets



The ULS Advanced with array of three sensors for the 1st Channel



The **UltraLab[®] ULS Advanced** is a high precision measuring system based on ultrasound technology for towing tanks and hydraulic laboratories.

Steep and very fast moving waves can be measured with a relative velocity up to 15 m/s. This device has four independent channels. Each one can be equipped with three sensors arranged in an array. Due to high measuring rate of 100 Hz, every measurement unit detects high dynamic processes in an impressive resolution of 0.36 mm within the measurement range between 200 and 1.200 mm.

Because of the high precision sound velocity measurement via calibrated reference distance, the accuracy of 1 mm can be guaranteed.

The **UltraLab[®] ULS Advanced** is equipped with an Ethernet interface, realising the reception of the output data stream at any PC in a local network. Via the serial interface RS232 the data stream can be directly imported to any computer next to the device. A trigger is implemented for time synchronisation.

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Specifications:

- Measurement range: 200 mm up to 1200 mm
- Superior resolution: up to 0.36 mm
- Measuring rate: 100 Hz
- Power supply: 230 V (110 V optional)

Interfaces:

- RS232 with 115 kBaud
- LAN / Ethernet (Virtual COM-Port Server)
- TTL Trigger (opto-isolated)

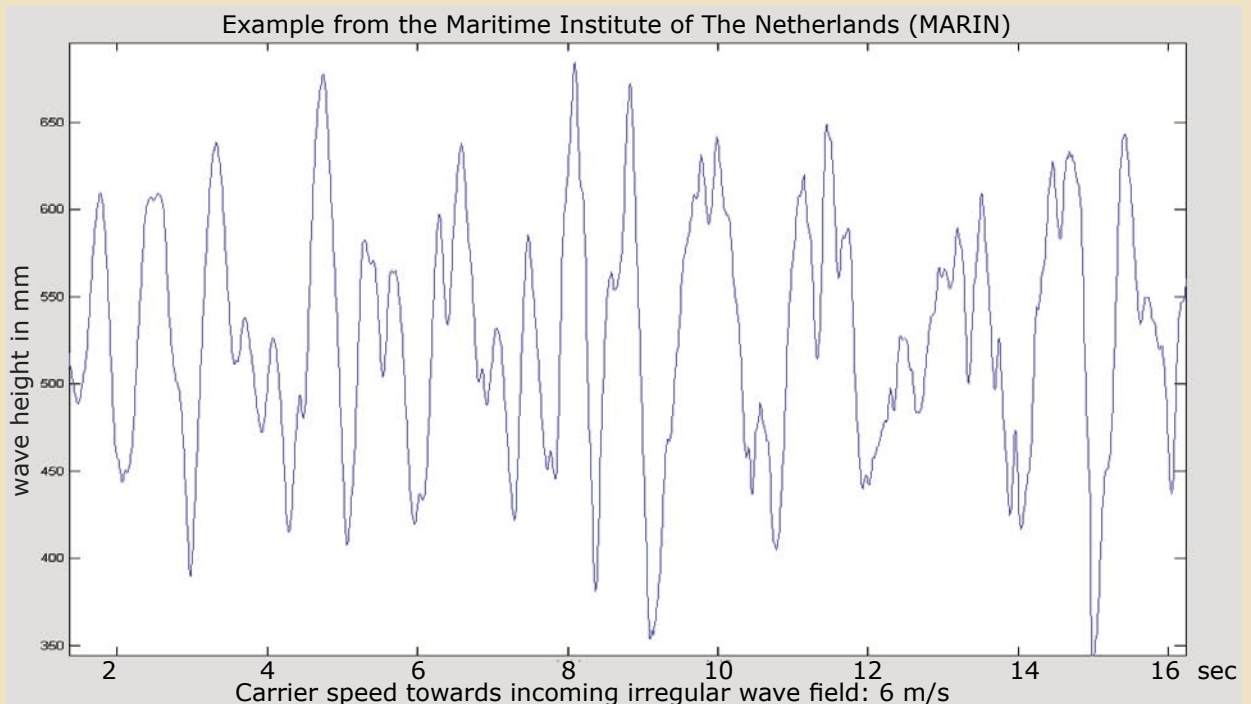
Application:

Measurements in towing tanks, flood- and surface water models for:

- fast analysis of waves and wave fields
- fast recording of topographic contours in models

The **UltraLab[®] ULS Advanced** consists of:

- 3 UltraLab[®] USS 12/HF sensors in array for one channel
- 1 Controller unit with four independent channels
- 1 Sensor REF-300 for precise sound velocity measurement
- 1 Sensor connection cables



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