# ULTRASONIC HYDROMETER ULM20

CAE ultrasonic hydrometer ULM20 is a fully electronic sensor designed to measure the variations of water levels in a water body.

The measurement, combined with the precipitation and evaporation data, is essential for the real time monitoring of hydro-meteorological risks, therefore to prevent potential damages to the population.

It is also used to calculate the minimum-vital flow rate, or rather the threshold that has to be respected to maintain the natural environmental balance of a river or stream when waters are withdrawn.

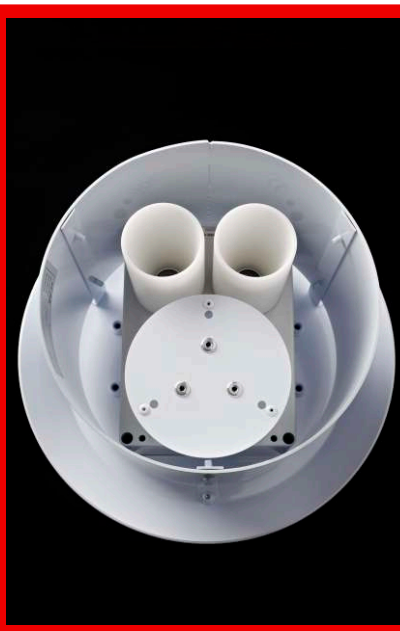
Long term data are used to evaluate water balance and in general for the water management in the civil, agricultural and industrial sectors.

## TECNOLOGY AND FUNCTIONING

The ultrasonic hydrometer is composed of two transducers placed side by side: the first sends the ultrasonic impulse to the underlying water body, while the second measures the elapsed time for the impulse to cover the distance between the transducers and the body's surface, thus providing an instant measurement of the level of the underlying liquid.

The software purifies the signal, compensating surface turbulences and the temperature influence on the ultrasonic propagation time.

The sensor refers to an independent controlling unit equipped with a microprocessor that translates and processes data on a first level before delivering them to the central unit SPM20.



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All data are organized in pre-coded packages immediately available, for faster transmission and to avoid overloads or loss of data from the station.

## TECHNICAL SPECIFICATIONS

- Measurement range: 0 ÷ 20 m
- Flash-Eprom memory capacity: 128 kB (equal to one year's data)
- Accuracy: 0.2% of the measure (typically within ±1 cm)
- Resolution: 1 cm
- Internal temperature compensation
- Size: 185 (Ø) x 290 mm
- Weight: 2,6 kg

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