LNS - Underwater sand level sensor and data logger

The **LNS** is a sonar level solution for level measurements in sand catchers. Fully autonomous with long-life battery, data logger and built-in modem. The unit is easy to install and use, programming is carried out safely by radio link, without any physical action on the sensor. The logger can be equiped with an interchangeable communication card allowing to switch from 4G to LoRa without changing the entire hardware.

The **LNS** solution is composed in a logger associated to an ultrasonic transducer positioned at the bottom of a tube.



LNS logger and its 35 cm long underwater sensor

- **Measuring range : 0.1 to 5 meters**
- **Wireless radio configuration (Wiji protocol)**
- **Long-life lithium battery**
- **Communication: local radio + option: 2G / 4G (LTE-M / NB-IoT) or LoRaWAN**
- **Memory: 500,000 measurements**
- **Data logger** : **IP68 ingress protection (10 meters / 30 days)**

  Ultra sonic sensor : Permanent immersion

LNS logger features		
Communication	• HF radio (868 MHz) • 2G / 4G (LTE M / NB IoT) Protocols: SMS, FTPS, HTTPS, COAP and MQTTS	• LoRaWAN: Europe 863 - 870 MHz (SF12 for RX2) LoRaWAN Specification 1.0.2
Radio Range	100 meters in open field (Wiji protocol)	
Storage capacity	500,000 measurements	
Radio concentrator function	Yes	
Radio / mobile antenna	• Internal or external radio	• Internal or external mobile
Temperature range	-20°C to + 70°C	
Sensor material	PA12	
Ingress protection	IP68: 1 bar for 1 month (only if using an Ijinus mounting kit; ref: H0T00053 or H0T00060)	
Power supply	Lithium battery: 3.6 V - 34 Ah	
Configuration	Wireless programming kit (PN: M0C00001) comprising AVELOUR software, cable and antenna	
ATEX zone 2 certifications 	II 3G Ex ic ec IIB T4 Gc Ambient temp: -20 °C to 60 °C	**Certifications** 



Features Ultrasonic transducer	
Measurement range	From 0.1 to 5 meters
Minimum blind area	0.1 meter
Working frequency	1 MHz ± 3%
Bean angle (-3 dB full open)	6°
Temperature range	- 20°C to + 70°C
Case material	ABS (Transducer) - PVC (TUBE)
IP level	IP68
Cable length	5 meters

