

## LoRa™ Water Meter Sensor Sens'O

### 1. General features

Sens'O is dedicated to the measurement and transmission via LoRa™ radio network of the water meter index. It incorporates the following functions :

- LoRa™ radio transceiver, bidirectional, long range and low power consumption, with an integrated antenna.
- Optical coder for the detection of the meter cycle.
- Electronics circuitry for the cycle direction of rotation detection and index counting.
- Lithium battery for an operation of up to 15 years.
- Plastic housing, IP68, which clips to the meter.



Sens'O, thanks to its data processing capability, can provide if needed a histogram of water consumption (Consumption in % /flow rate)

Sens'O transmits the following alarms:

- Water reverse flow
- Sens'O removal from meter
- Water leak
- Battery low



Operational parameters are fixed in factory. They can be updated over the air during operation:

- Alarm level (3) for reverse flow.
- Index time interval of transmission (4h to 120h).

Operational time of 15 years is given for one radio transmission per day.

## 2. Technical specifications

Parameters	Min.	Typical	Max.	Unit	Comments
Radio transceiver					
Frequency		868		MHz	25°C
Tx power			14	dBm	25°C
Rx sensitivity			-128	dBm	25°C
Modulation		LoRa			
MAC layer		LoRaWAN			
Network layer		IPv6/6LowPan			
Application layer		"ZCL like"			
Battery		3,6		V	Lithium battery (A; 3,6Ah)
Autonomy	10	15		Year	1 Transmit/day
Temperature					
Operation	-20		55	°C	
Storage	-20		30	°C	
Plastic Housing		97x76x105		mm	IP68, UL-V0 HB
Applicable norms					
EN 61000-4-2		CE			
EN 300-220-1 V2-4-1					
EN 301 489 V1-6-1					
CE & RoHS					

## 3. Mechanical specification

Sens'O module is compatible with ARAD composite volumetric water meters type DN15 & DN20. It clips directly to the meter leaving visible the mechanical index. Dimensions of the module are as follow:

Length	Width	Height
97mm	76.23mm	105.5mm

