



REF: PUL-LAB-41NS

INDOOR WATER AND ENERGY METERING (PULSE)



THIS SENLAB M™ SMART WIRELESS SENSOR, FEATURING THE LORAWAN™ CONNECTIVITY PROTOCOL, IS EQUIPPED WITH AN INPUT FOR REED-SWITCH (DRY CONTACT) PULSE EMITTERS.

Designed for indoor use, Senlab M offers a small form factor and discreet aesthetics that make it ideal for the home or office.

This Senlab offers best in class features as:

- Battery Life time
- Rich Data Content
- Radio Performances
- Advanced set of functionalities (see on verso)

TYPICAL APPLICATIONS

- Energy efficiency: electricity, gas and water consumption monitoring and control
- Building Energy Management System (BEMS)



17 years *
(replaceable battery)



15 km *



IP30
(Indoor use)



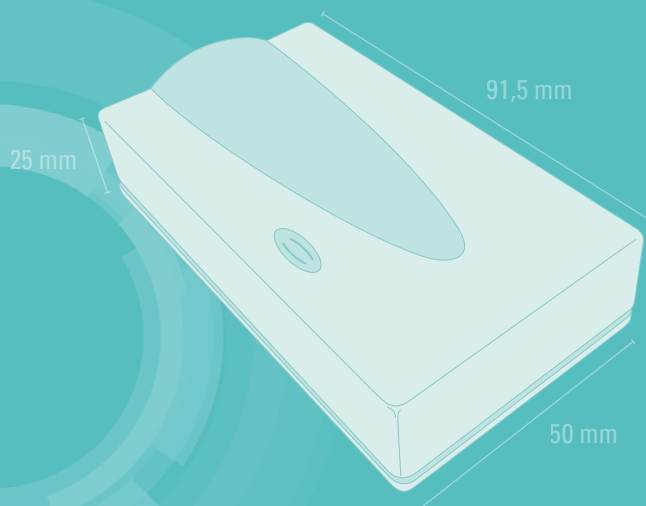
**Local or Public
Network compliant**

TECHNICAL SPECIFICATIONS

Physical specifications	Physical dimensions	50 x 91,5 x 25 mm
	Weight	75 gr
	Operating temperature	0°C to +55°C
RF specifications	RF sensitivity	-137 dBm
	RF power	+14 dBm (25 mW)
	Radio band	868 MHz
EC Conformity: Compliant with Directive 2014/53/UE (RED)	EMC	Final draft EN 301 489-3 v2.1.1 Draft EN 301 489-1 v2.2.0
	Radio	EN 300 220-2 v3.1.1
	Magnetic field exposure	EN 62479
	Safety	IEC 60950-1

* Depending on the operating conditions

DIMENSIONAL DRAWING



TECHNICAL FEATURES FOCUS

Plug & Play installation

- **Product fixing with double sided tape or screw mounting**
- **Screw terminal for pulse emitter cable connection**
- **Activation with magnet (LED feedback)**

High configurability

- **Standard input for dry contact (including debounce algorithm)**
- **Specific input for open collector circuit**
- **Set/Reset of start index**
- **Wirecut and minimal flowrate information**
- **Log and transmit mode for battery lifetime enhancement up to 24 logs per transmission**
- **Stream mode (timestamp for each pulse) for consumption profile analysis**
- **Reconfiguration possible over the air**

Network configuration

- **LoRaWAN parameters (OTAA or ABP activation mode, initial datarate,...)**
- **Encryption keys customizable by client**
- **Standard LoRaWAN retries support**
- **Radio collisions avoidance by pseudo-randomization of transmissions**
- **Advanced transmission reliability mechanisms (redundancy of data, recovery of lost messages, ...)**

BATTERY LIFE DURATION ESTIMATION

This following matrix provides the estimated battery lifetime depending on the average Spreading factor used by the Senlab and the transmission period.

Battery life (years)	10mn	15mn	30mn	1h	2h	4h	6h	8h	12h	24h
SF7	11,9	13,2	14,8	15,8	16,4	16,7	16,8	16,8	16,9	16,9
SF8	9,8	11,4	13,6	15,1	16,0	16,5	16,6	16,7	16,8	16,9
SF9	7,3	9,0	11,8	13,9	15,3	16,1	16,4	16,5	16,7	16,8
SF10	4,9	6,5	9,4	12,1	14,1	15,4	15,9	16,2	16,4	16,7
SF11	3,1	4,3	6,8	9,7	12,4	14,3	15,1	15,5	16,0	16,5
SF12	1,8	2,6	4,5	7,2	10,1	12,6	13,8	14,5	15,2	16,1