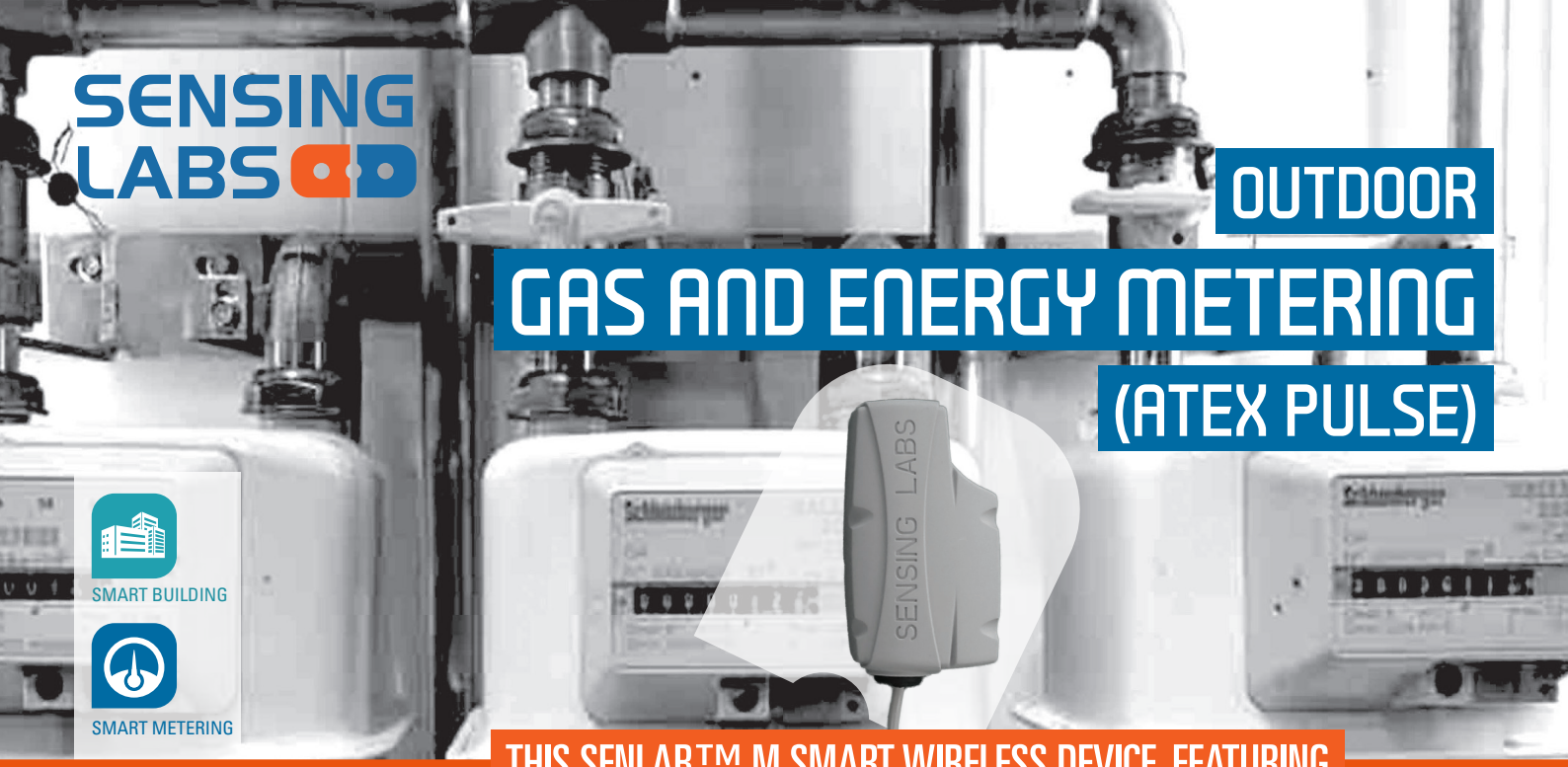


SENSING LABS

OUTDOOR GAS AND ENERGY METERING (ATEX PULSE)

SMART BUILDING

SMART METERING

Ref : PUL-LAB-13XS

MADE IN FRANCE

LoRaWAN CERTIFIED™

+ 20 years *

II 3 G
Ex ic IIB T4 Gc

15 km *

IP68
(Outdoor use)

Local or Public
Network compliant

* Depending on the operating conditions

THIS SENLAB™ M SMART WIRELESS DEVICE, FEATURING THE LoRaWAN™ CONNECTIVITY PROTOCOL, IS SUITABLE FOR GAS METERING AND ENERGIES COUNTING IN EXPLOSIVE ATMOSPHERE.

It is equipped with two inputs : Dry contact, elec. switching, S0 output (compatibility to check). PUL-LAB-13XS is compliant with ATEX certification. Designed for outdoor use, Senlab™ M offers a ruggedized IP68 casing for outdoor use which enables a reliable wireless connectivity for continuous monitoring in challenging environments.

This Senlab offers best in class features such as :

- **Battery life time more than 20 years**
- **Rich Data Content thanks to datalogging : Up to 24 measures / radio transmission**
- **Radio Performances**
- **Advanced set of functionalities**
- **Dual meters monitoring**

TYPICAL APPLICATIONS

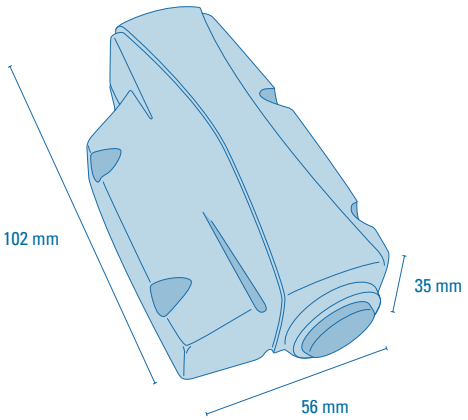
- Building Energy Management System
- Energy efficiency : Regulate energy costs
- Water, gas, and electricity metering
- Control and monitor energy consumption

TECHNICAL SPECIFICATIONS

Physical specifications	Dimensions	56 x 102 x 35 mm
	Weight	140 gr
	Operating temperature	-20°C to +70°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	EN 60950-1, EN 60950-22

SENSING LABS

DIMENSIONAL DRAWING



TECHNICAL FEATURES FOCUS

Plug & Play installation

- Product fixing with 2 cable ties on wall or pipe
- Provided with 1 meter cable ready to be plugged on pulse emitter
- Activation with magnet (LED feedback)
- LED indication of pulse during few minutes after activation

High configurability of pulse counting

- 2 inputs configurable for dry contact or open collector interfaces
- Set/Reset of start index
- Wirecut and minimal flowrate information
- Log and transmit mode for battery lifetime enhancement (up to 24 compressed measures 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)	10 min	15 min	30 min	1 h	2 h	4 h	6 h	8 h	12 h	24 h
SF7	15,8	17,6	>20	>20	>20	>20	>20	>20	>20	>20
SF8	12,9	15,1	18,3	>20	>20	>20	>20	>20	>20	>20
SF9	9,4	11,7	15,6	18,6	>20	>20	>20	>20	>20	>20
SF10	6,2	8,2	12,2	16,0	18,9	>20	>20	>20	>20	>20
SF11	3,9	5,3	8,7	12,6	16,3	19,2	>20	>20	>20	>20
SF12	2,3	3,2	5,7	9,1	13,1	16,7	18,4	19,4	>20	>20

6 measures per frame.

For guidance and information purposes only.

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