

# WIRELESS TRANSMITTER FOR 4-20 MA SENSORS MONITORING



Ref : 4MA-LAB-41NS



\* Depending on the operating conditions

SENLAB™ A IS A SMART WIRELESS DEVICE, FEATURING

THE LoRaWAN™ CONNECTIVITY PROTOCOL, EQUIPPED WITH

A 4-20 MA INPUT SENSOR COMPATIBLE WITH PRESSURE

TRANSMITTERS, ACCELEROMETERS, AIR QUALITY SENSORS...

Designed for indoor use, Senlab™ A offers a small casing with discreet aesthetic that makes it ideal to monitor professional freeze and cold rooms.

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**

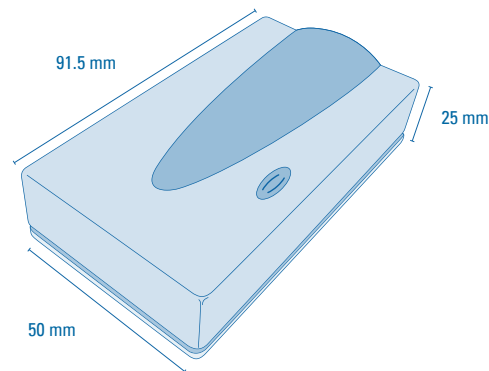
## TYPICAL APPLICATION

- Ensure Air quality
- Optimize 4-20mA sensors

## TECHNICAL SPECIFICATIONS

Physical specifications	Dimensions	50 x 91,5 x 25 mm
	Weight	60 gr
	Operating temperature	0°C to +55°C
RF specifications	RF sensitivity	-137 dBm
	RF power	+14dBm (25mW)
	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

## DIMENSIONAL DRAWING



## TECHNICAL FEATURES FOCUS

### Plug & Play installation

- Product fixing with double sided tape or screw mounting
- Screw terminal for 4/20mA sensor cable connection
- Activation with magnet (LED feedback)

### High configurability

- High and Low threshold overrun configuration
- Log and transmit mode for battery lifetime enhancement up to 24 measures per transmission
- 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	14,1	15,8	18,0	19,4	>20	>20	>20	>20	>20	>20
SF8	11,5	13,5	16,4	18,4	19,6	>20	>20	>20	>20	>20
SF9	8,4	10,4	14,0	16,8	18,6	19,7	>20	>20	>20	>20
SF10	5,5	7,3	10,8	14,3	17,0	18,8	19,5	19,8	>20	>20
SF11	3,4	4,7	7,7	11,3	14,7	17,3	18,4	19,0	19,6	>20
SF12	2,0	2,9	5,0	8,1	11,7	15,0	16,6	17,5	18,5	19,7

6 measures per frame.

**For guidance and information purposes only.**