

INDOOR COMFORT AND OCCUPANCY MONITORING



SMART
BUILDING



PRESENCE

REF: PTL-LAB-41NS



**SENLAB 0 IS A SMART WIRELESS MODULE,
FEATURING THE LORAWAN CONNECTIVITY PROTOCOL.**

4 FUNCTIONALITIES «ALL IN ONE» transmission: This device is designed to log temperature, relative humidity of the air, luminosity and presence.

Designed for indoor use, this Senlab offers a small form factor and discreet aesthetics that make it ideal for the home or office. This Senlab offers the best in class features as:

- **Battery Life time**
- **Rich data content thanks to datalogging** (12 data/radio transmission)
- **Radio performances**
- **Advanced set of functionalities**
- **«Over the air» activation and reconfiguration**

TYPICAL APPLICATIONS (SMART BUILDING)

- **Office comfort monitoring**
- **Space optimization** (presence monitoring)
 - **Occupancy rate**
 - **Energy efficiency**



6 years *
(replaceable battery)



15 km *



IP30
(Indoor use)



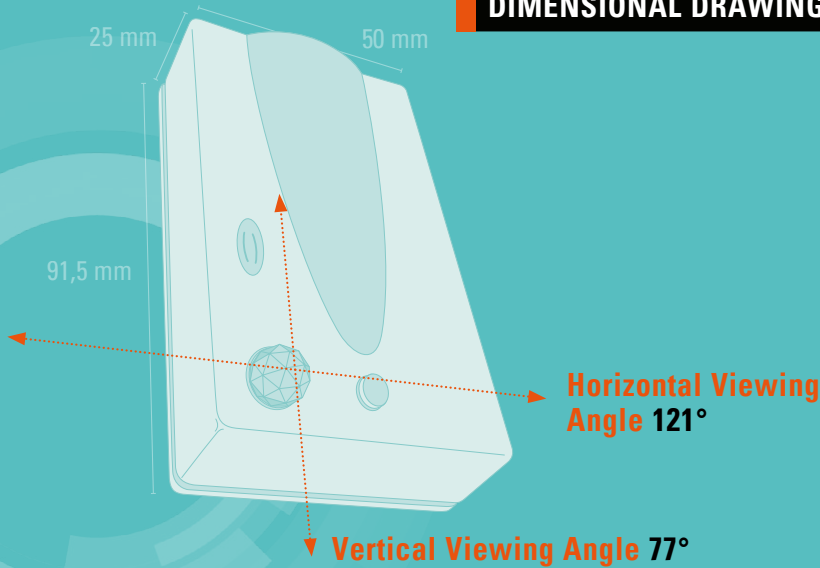
**Local or Public
Network compliant**

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
- Long term measure stability
<0,02°C/Yr and <0,25%RH/Yr - no need for calibration
- Activation with magnet LED feedback

High configurability

- Temperature precision of +/-0.3°C range [0;+55°C]
- Humidity precision of +/-2%RH range [+10;+55°C]
- Luminosity range from a few Lux up to 60K Lux
- Optional light source type variations detection
- Presence detection range up to 5m
- Wide detection angles (121°H / 77°V)
- Temperature High and Low threshold overrun configuration
- Log and transmit mode for battery lifetime enhancement (up to 12 compressed logs 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.

	Tx period - Detection slots of 15 mn				
	15mn	30mn	1h	2h	3h
SF7	5,5	5,6	5,7	5,8	5,8
SF8	5,2	5,5	5,7	5,7	5,8
SF9	4,8	5,2	5,5	5,6	5,7
SF10	4,1	4,8	5,2	5,4	5,6
SF11	3,2	4,1	4,7	5,1	5,3
SF12	2,3	3,2	4,1	4,6	5,0

* Battery life (years)