SENSING LABS

OUTDOOR AND INDOOR PEOPLE COUNTING

Ref : PIR-LAB-41NS
PIR-LAB-51NS

MADE IN FRANCE

LoRaWAN CERTIFIED

6 years*
(replacable battery)

15km*

IP30 (Indoor use)
IP55 (Outdoor use)

Local or Public
Network compliant

*Depending on the operating conditions

THIS SENLAB™ P SMART WIRELESS DEVICE, FEATURING THE LoRaWAN™ CONNECTIVITY PROTOCOL, INTEGRATES A PASSIVE INFRARED SENSOR FOR PASSAGE DETECTION.

Designed for indoor use, PIR-LAB-41NS offers a small casing with a discreet aesthetic that makes it ideal for housing or work environments. PIR-LAB-13NS version offers a ruggedized IP55 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 up to 6 years**
- **Rich data content thanks to datalogging : Up to 24 measures / radio transmission**
- **Advanced set of functionalities**

TYPICAL APPLICATIONS

- Compile traffic statistics to predict attendance in public sites, stores...
- Manage cleaning services systems
- Optimize workspace comfort

TYPICAL SPECIFICATIONS

Physical specifications	Dimensions	IP30 : 50 X 91,5 X 25 mm / IP55 : 74 x 104 x 40 mm
	Weight	IP30 : 60gr / IP 55 : 170 gr
	Operating temperature	IP30 : 0°c to +55°C / IP55 : -20°C to +70°C
RF specifications	RF sensitivity	-137dBm
	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

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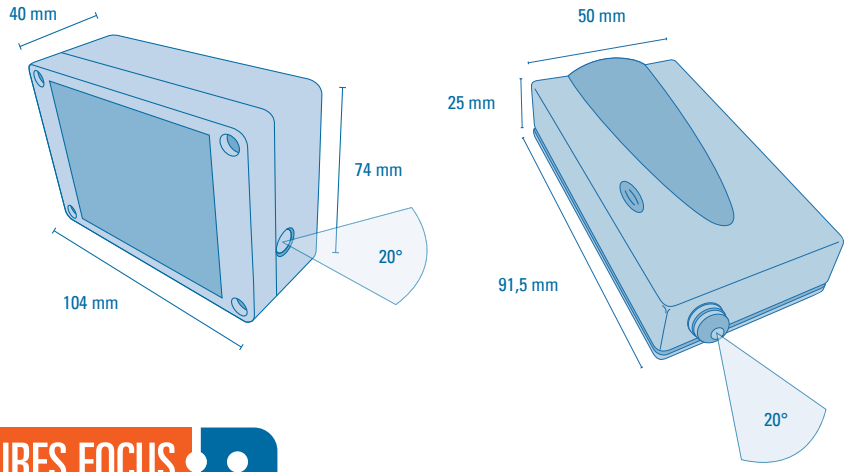
DIMENSIONAL DRAWING



TECHNICAL FEATURES FOCUS

Plug & Play installation

- Product fixing with double sided tape or screw mounting
- LED indication of passage detection during 1 hour after activation
- Activation with magnet (LED feedback)

Advanced application feature

- Set/Reset of passage number
- Log and transmit mode for battery lifetime enhancement (up to 24 compressed measures per transmission)
- Stream mode (timestamp of each detection) for attendance 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	4,1	4,2	4,3	4,4	4,4	4,4	4,4	4,4	4,4	4,4
SF8	3,8	4,0	4,2	4,3	4,4	4,4	4,4	4,4	4,4	4,4
SF9	3,4	3,7	4,0	4,2	4,3	4,4	4,4	4,4	4,4	4,4
SF10	2,9	3,2	3,8	4,1	4,3	4,4	4,4	4,4	4,4	4,4
SF11	2,2	2,6	3,3	3,8	4,1	4,3	4,3	4,4	4,4	4,4
SF12	1,5	2,0	2,7	3,4	3,8	4,1	4,2	4,3	4,3	4,4

6 measures per frame,
1000 detection per day.

For guidance and information purposes only.

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