



SMART BUILDING



SMART INDUSTRY

REF: TOR-LAB-41NS

INDOOR EVENT AND ALARM MONITORING



**SENLAB D™ IS A SMART WIRELESS MODULE,
FEATURING THE LORAWAN™ CONNECTIVITY PROTOCOL,
EQUIPPED WITH AN INTEGRATED DIGITAL INPUT SENSOR FOR ON/OFF
OR OPEN/CLOSE STATE DETECTION.**

Designed to monitor the status of relays, transistors, and switches, it offers a highly-configurable information reporting algorithm, notably for triggering alarms, counting, and more. It is ideal for your security or preventive maintenance needs.

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

- **Engines and machines state monitoring**
 - Alert and Event management
- **Building information modeling (BIM) systems**

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



17 years *
(replaceable battery)



15 km *

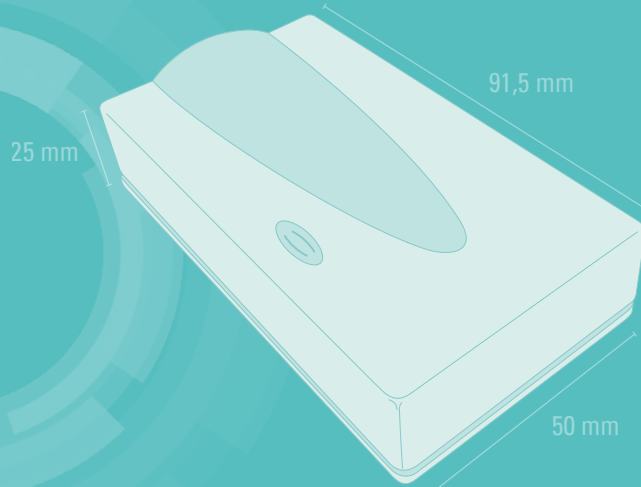


IP30
(Indoor use)



Local or Public
Network compliant

DIMENSIONAL DRAWING



TECHNICAL FEATURES FOCUS

Plug & Play installation

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

High configurability of event detection and transmission

- Event notification of open/close or on/off digital state
- State detection duration configurable
- Immediate transmission or after N events or after maximum duration
- 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	13,1	14,2	15,4	16,2	16,6	16,8	16,8	16,9	16,9	16,9
SF8	11,3	12,7	14,5	15,7	16,3	16,6	16,7	16,8	16,9	16,9
SF9	8,7	10,4	12,9	14,7	15,7	16,3	16,5	16,7	16,8	16,9
SF10	6,1	7,8	10,7	13,1	14,8	15,8	16,2	16,4	16,6	16,8
SF11	3,9	5,3	8,1	10,9	13,3	14,9	15,6	15,9	16,2	16,6
SF12	2,4	3,3	5,5	8,4	11,2	13,5	14,5	15,0	15,6	16,3