



PRODUCT RANGE

Senlab Sensors



SENLAB™ SENSORS FEATURE LORAWAN™ CONNECTIVITY TO PROVIDE AN OPTIMAL DATA RETRIEVAL SOLUTION FOR INDOOR, OUTDOOR, AND HARSH ENVIRONMENT CONDITIONS.

SENLAB sensors use innovative LoRaWan technology to provide very long-range connectivity and high immunity to interference, while minimizing power consumption. SENLAB sensors are compatible with both public and private LoRaWAN network architectures. A complete range of Sensing Labs tools and services ensure easy operation and flexible configuration.

GENERAL FEATURES

- LoRa Alliance™ certified
- License-free 868 MHz ISM band
- ETSI compliant (25 mW / +14 dBm)
- Bi-directional communication
- Custom radio antenna for optimal radio link quality
- -137dBm sensitivity (with range up to 15 km)
- High data transmission reliability (robustification features)
- Enhanced security (double AES-128 encryption)
- Data analytics and embedded intelligence
- Event notification (such as threshold overrun, etc.)
- Battery level notification
- Easy “plug and play” activation with magnet
- CE certifications:
 - EN 301-489 Electromagnetic compatibility
 - EN 60950-1 Electrical safety
 - EN 300-220-2 Electromagnetic compatibility
 - EN 62-479 EMF Human exposure compliance

1 OUTDOOR CASING

- *IP 68 protection (resin potted)*
- *UL94 flame rating & UV stabilized casing*
- *Dimensions: 102 x 56 x 35 mm*
- *Weight: 130 g*
- *Utility meter, wall, or pipe mount*
- *Operating temperature: -20°C / +70°C*
- *ATEX II ic IIB T4 Gc (option for utility metering products)*
- *High energy density battery*
- *Battery life > 20 years*

2 INDOOR CASING

- *IP 30 protection*
- *Dimensions: 85 x 53 x 25 mm*
- *Weight: 75 g*
- *Free-standing or wall-mounted*
- *Replaceable AA battery*
- *Battery life > 10 years*

designed by Pine Caberera
DESIGN STUDIO

PRODUCT REFERENCES

Product		Sensor	Input type	Indoor use (IP30)	Outdoor use (IP68)
SENLAB M	Standard pulse		Screw terminal block 1 m cable (included)	PUL-LAB-41NS	PUL-LAB-13NS
	Standard pulse (ATEX)		1 m cable (included)		PUL-LAB-13XS
	LED electricity sensor	External optical sensor (1 m cable)		LED-LAB-41NS	
SENLAB T	Temperature	Temperature sensor integrated inside casing		TEM-LAB-41NS	TEM-LAB-13NS
		External temperature sensor (1 m cable)		TEM-LAB-44NS	TEM-LAB-14NS
SENLAB H	Temperature + humidity	Temperature/humidity sensor		THY-LAB-41NS	
		External temperature/humidity sensor (0.5 m cable)		THY-LAB-44NS	THY-LAB-14NS
SENLAB A	4-20 mA		Screw terminal block 0.5 m cable (included)	4MA-LAB-41NS	4MA-LAB-13NS
SENLAB D	Digital (On/off)		Screw terminal block 0.5 m cable (included)	TOR-LAB-41NS	TOR-LAB-13NS
		Magnetic door switch set (included) 5 m water detection cable (included)		OPE-LAB-41NS LEA-LAB-41NS	OPE-LAB-13NS LEA-LAB-13NS
SENLAB P	Passage counting	Passive infrared sensor		PIR-LAB-41NS	
SENLAB O	Comfort and Occupancy monitoring	Presence, Luminosity, Temperature and Humidity sensor		PTL-LAB-41NS	

TYPICAL APPLICATIONS

Markets	Use cases	Monitoring	References
Smart metering		Energy consumption	PUL-LAB-41NS / PUL-LAB-13NS
Smart building		Energy consumption	PUL-LAB-13XS (gas meters) LED-LAB-41NS (electricity meters)
Smart operations		Ambient temperature	TEM-LAB-41NS / TEM-LAB-13NS / PTL-LAB-41NS
Temperature control		Indoor humidity	THY-LAB-41NS / PTL-LAB-41NS
Smart agriculture		Occupations / human activity	PIR-LAB-41NS / PTL-LAB-41NS
Energy efficiency		Door opening	OPE-LAB-41NS / OPE-LAB-13NS
Comfort / workspace		Critical equipment	LEA-LAB-41NS / LEA-LAB-13NS
Activity - services		Legionella prevention	TEM-LAB-44NS / TEM-LAB-14NS
Remote control		Equipment failure	TOR-LAB-41NS or TOR-LAB-14NS connected to equipment output
Cold chain		Tank - silo level control	4MA-LAB-13NS connected to 4-20 mA ultrasonic level sensor TOR-LAB-13NS connected to level sensor switch
Equip. over-heating		Temperature	TEM-LAB-44NS / TEM-LAB-14NS
Smart irrigation		Door opening	OPE-LAB-41NS / OPE-LAB-13NS
Greenhouse, animals		Water consumption	PUL-LAB-13NS
		Rainfall	PUL-LAB-13NS connected to tipping bucket rain gauge
		Soil moisture / temperature	THY-LAB-14NS
		Ambient temperature	TEM-LAB-13NS
		Ambient humidity	THY-LAB-14NS