

# Atomsenses Leak Detection Sensor

## Product Specification

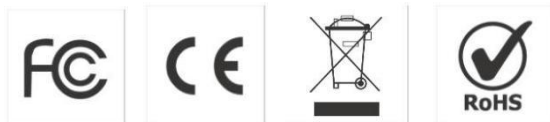
### Applicability

This guide applies to the following Atomsenses products, unless otherwise specified:

Model	Description
AEM300-SLD/AEM300-ZLD	- LoRaWAN Leak Detection Sensor

### Declaration of Conformity

Atomsenses sensors and other products comply with the essential requirements and relevant provisions of CE/EMC, and RoHS standards.



## Hardware Introduction

The Atomsenses water leakage sensor is designed for the detection of water (or other liquid substances) and utilizes LoRaWAN® technology to transmit alarms. Leveraging this low power consumption technology, it can operate for up to five years with a 4000 mAh battery. In conjunction with the Atomsenses LoRaWAN® gateway and IoT Cloud solution, users are enabled to remotely and visually manage all sensor data and receive alarms via a mobile application. Additionally, it incorporates temperature and humidity sensors, which prove highly valuable for applications such as pipe leakage monitoring, basement inundation, and pump malfunction detection.

## Features

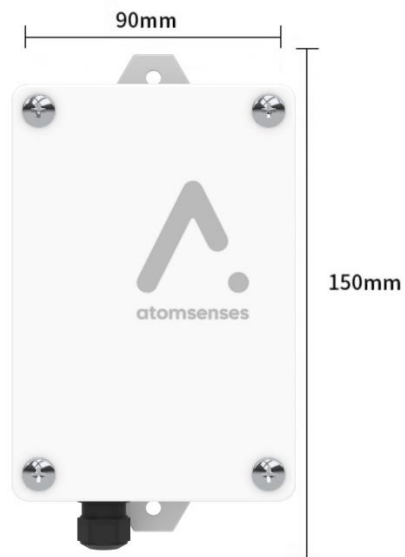
- Liquid presence is detected via a long cable, operating in accordance with the conductive principle.
- It is equipped with embedded temperature and humidity sensors for the purpose of environment monitoring.
- Capable of ultra-wide-distance transmission, with a line-of-sight range extending up to 10 kilometers.
- The device features an IP67-rated, UV-resistant and waterproof enclosure, suitable for applications in harsh environments.
- Incorporates a built-in 4000 mAh replaceable battery, which enables operation for more than five years without the need for replacement.
- Can store 3,000 historical records locally and supports retransmission to safeguard against data loss.
- Complies with standard LoRaWAN® gateways and network servers.
- Enables quick and easy management through the Atomsenses IoT Cloud solution.



## Device Appearance



## Dimensions(mm)



## Technical specifications and standards

Specifications	Parameters
Technology	LoRaWAN
Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
Tx Power	16dBm(868 MHz)/20dBm(915 MHz)/19dBm(470 MHz)
Sensitivity	-137dBm @300bps
Mode	OTAA/ABP Class A
Liquid Type	Conducting liquid
Trigger Condition	When liquid level reaches 5mm
Cable Length	SLD :1.5m (Customizable) ZLD: 3m (Customizable)
Temperature	Range: -30°C to + 70°C; Accuracy: 0°C to + 70°C (+/- 0.3°C), -30°C to 0°C (+/- 0.6°C); Resolution: 0.1°C
Humidity	Range: 0% to 100% RH; Accuracy: 10% to 90% RH (+/- 3%), below 10% and above 90% RH (+/- 5%); Resolution: 0.5% RH
Power Supply	1 × 4000 mAh ER18505 Li-SOCL <sub>2</sub> Battery (extendable to 2 batteries)
Battery Life*	10 years (10 min interval + 24 triggers per day)
Operating Temperature	-30°C to +70°C
Relative Humidity	0% to 100% (non-condensing)
Ingress Protection	IP67
Dimension	90 × 56 × 150 mm
Installation	Wall Mounting

