

Atomsenses LoRaWAN Industrial Temperature Sensor

Product Specification

Applicability

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

Model	Description
AEM-500	- LoRaWAN Industrial Temperature Sensor

Declaration of Conformity

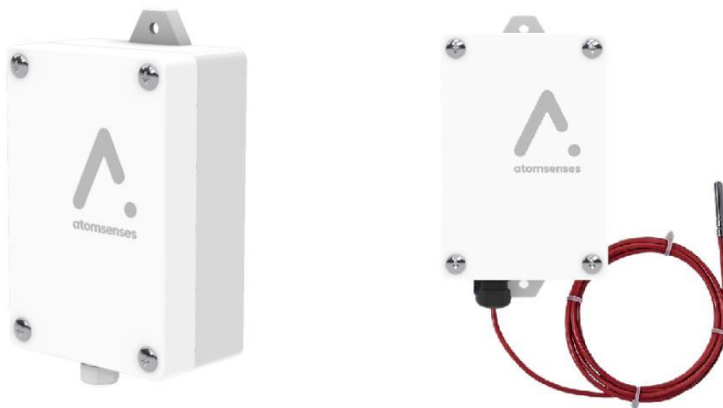
Atomsenses sensors and other products comply with the essential requirements and relevant provisions of CE/EMC, and RoHS standards.



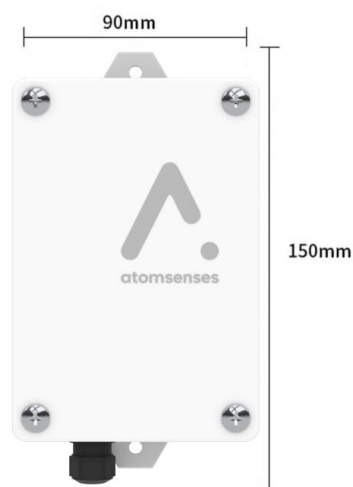
Product Overview

The Resistance Temperature Sensor is engineered for the measurement of an extensive temperature range within harsh environments and facilitates data transmission via LoRaWAN® technology. Leveraging this low-power consumption technology, the AEM500 is capable of operating for up to 10 years with 3x4000mAh battery. In conjunction with the Atomsenses LoRaWAN® gateway and IoT Cloud solution, users can remotely and visually manage all sensor data. It has extensive application in temperature monitoring scenarios such as industrial machinery, ovens, and piping systems.

Device Appearance



Dimensions(mm)



Features

- Corrosion-resistant cable and a diverse range of probe alternatives are available.
- A 3-wire connection configuration is employed to ensure high precision.
- It enables ultra-long-distance transmission, reaching up to a line-of-sight distance of 10 kilometers.
- The IP67 waterproof enclosure is designed for applications in harsh environments.
- Incorporates a built-in 3x4000mAh replaceable battery, providing a service life of 10 years without the need for replacement.
- Complies with standard LoRaWAN[®] gateways and network servers.
- Allows for rapid and effortless management through the Atomsenses IoT Cloud solution.

Technical specifications and standards

Specifications	Parameters
Technology	LoRaWAN [®]
Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
Tx Power	16dBm(868MHz)/20dBm(915MHz)/19dBm(470MHz)
Sensitivity	-137dBm @300bps
Mode	OTAA/ABP Class A
Connection Type	3-wire connection
Range	-30 °C~70 °C (Customizable from -200 °C~ 800 °C)
Accuracy	±0.5°C
Resolution	0.1°C
Power On & Off	power button (Internal)
Configuration	PC software(via USB Type-C)
Advanced Feature	Data Storage, Data Retransmission, Data Retrievability, Threshold Alarm, Change Alarm, D2D Controller
Power Supply	1 × 19000 mAh ER34615 Li-SOCL2 Battery
Battery Life*	10 years (15 min interval, 25 °C)
Operating Temperature	-30°C~70°C
Relative Humidity	0% to 100% (non-condensing)
Ingress Protection	IP67
Dimension	90 × 56 × 150 mm
Installation	Pole, wall or DIN Rail Mounting
Probe Type	Straight tube (Customizable), 304 Stainless Steel
Cable Length	1.5 m (Customizable)
Cable Material	Teflon
Cable Operating	-200 °C~290 °C