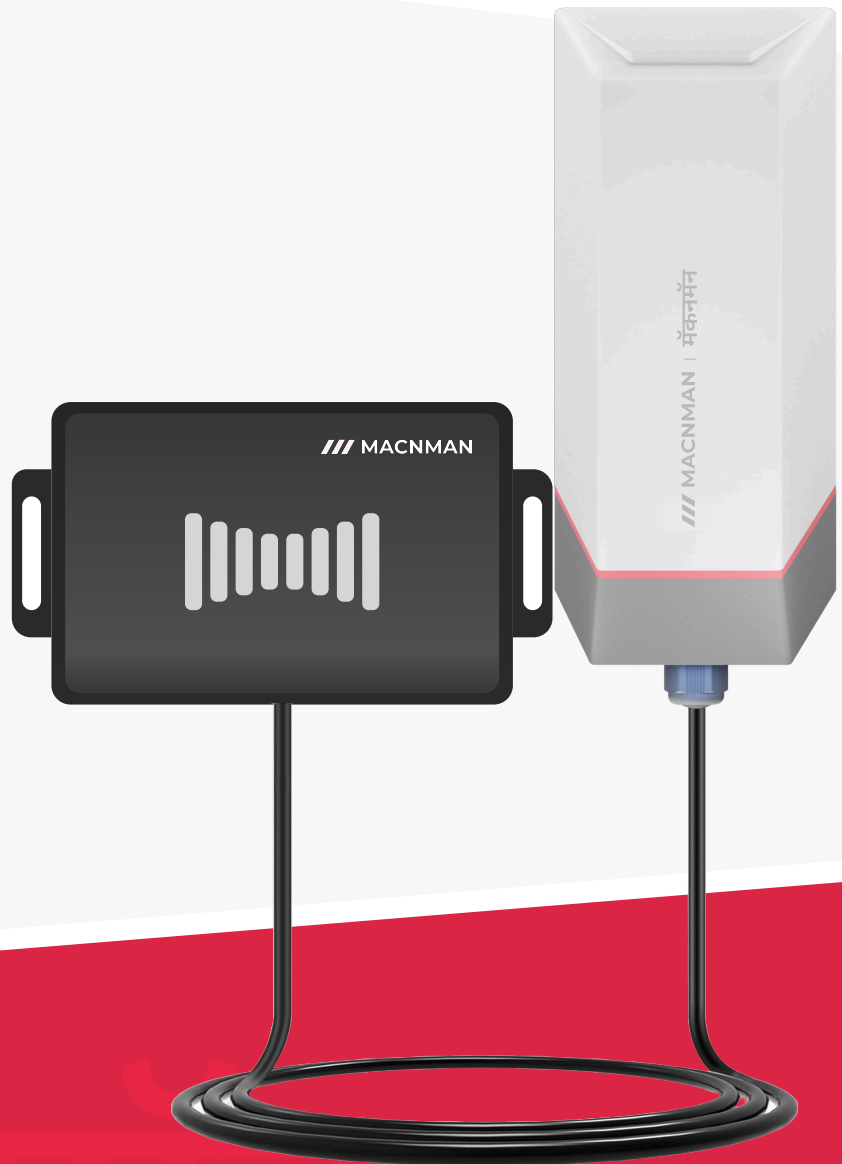




# LoRaWAN® Odor Level Sensor

## MacSync L Odor X2

LoRaWAN® odor monitoring sensor for real-time H<sub>2</sub>S & NH<sub>3</sub> detection with long-range wireless connectivity & ultra-low power operation.



## Introduction

The MacSync L Odor X2 is a high-performance, battery-powered LoRaWAN odor level sensor designed for accurate detection of gases such as hydrogen sulfide (H<sub>2</sub>S) and ammonia (NH<sub>3</sub>) across industrial, agricultural, and environmental applications. Built on low-power wide-area network (LPWAN) technology, the device enables long-range wireless communication while maintaining ultra-low energy consumption, making it ideal for remote and large-scale deployments.

From wastewater treatment plants and livestock farms to industrial facilities and waste management sites, the sensor delivers real-time gas concentration data that helps improve safety, ensure regulatory compliance, and support proactive environmental monitoring.

## Features

- Dual Gas Detection (H<sub>2</sub>S & NH<sub>3</sub> in a Single Device)
- High-Accuracy Gas Sensing for Critical Environments
- Fast Response with High Stability
- Ultra-Low Power with Multi-Year Battery Operation
- Wireless Configuration via BLE (Maya App)
- Macnman MacTalk Protocol Support (Gateway-Free Communication Device to Device Communication)
- Secure & Scalable Deployment
- Universal LoRaWAN Gateway Compatibility

## Key Advantages

- Enhances Workplace Safety in Hazard-Prone Environments
- Ideal for Remote and Distributed Monitoring Locations
- Supports Compliance with Environmental and Safety Regulations
- Reduces Operational Risk Through Early Detection
- Optimized for Large-Area Monitoring Deployments
- Minimizes Maintenance and Operational Costs
- Enables Data-Driven Environmental Management

## NH<sub>3</sub> Sensor Measurement

Range	0 – 100 ppm
Max Detecting Concentration	200 ppm
Sensitivity	(50–100) nA/ppm
Resolution	0.5 ppm

Repeatability	< 10% of output value
Stability	< 10%
Drift	-3 to +10 ppm (at -20°C to +40°C)
Sensor Type	Electrochemical NH <sub>3</sub> gas sensor
Calibration	Factory calibrated

## H<sub>2</sub>S Sensor Measurement

Measurement Range	0 – 100 ppm
Max Detecting Concentration	500 ppm
Sensitivity	(0.8 ± 0.15) µA/ppm
Resolution	0.1 ppm
Repeatability	< 2% of output value
Drift	≤ 0.2 ppm
Expected Lifetime	2 years (in clean air)
Sensor Type	Electrochemical H <sub>2</sub> S gas sensor
Calibration	Factory calibrated

## Wireless Specifications

Wireless Protocols	LoRaWAN® (v1.0.4), Macnman MacTalk Protocol
Antenna	Internal high-efficiency antenna
Supported Bands	IN865 / RU864 / EU868 / US915 / AU915
Tx Power	23 dBm @ 865 MHz
Sensitivity	-137 dBm @ 300 bps
LoRaWAN® Class	Class A (Default), Configurable to Class C via Maya
Device Activation	OTAA
Supported LNS	Private LNS ,Chirpstack ,The Things Networks , MQTT, Orbiwise

## Device Management

Configuration Method	Via Macnman Maya Android App
Local Configuration	BLE-Based Local Configuration

Remote Configuration	Over-the-Air Configuration (Downlink Commands)
Cloud-Based	Configuration via Macman IoT platform *
Status LED	1 x Internal Multi-Color LED

## Device Configuration Parameters

Data Reporting Mode	Periodic / Event-based / Hybrid
Transmission Interval	Independent uplink interval for optimized power consumption
Threshold-Based Alerts	Configurable Gas Level threshold for event-triggered transmission
Sampling Interval	Configurable data acquisition interval (e.g., 1 min to 24 hours)

## Power & Battery Performance

Power Supply	Integrated 19 Ah Lithium Battery
Battery Type	Lithium Thionyl Chloride (Li-SOCl <sub>2</sub> )
<b>Estimated Battery Life at 25 °C</b>	
5-minute reporting interval	~1 year
15-minute reporting interval	~2.5 years
60-minute reporting interval	~3.5 + years

## Physical & Environmental Specifications

<b>Enclosure &amp; Mechanical</b>	
Material	Glass Filled Nylon
Protection Rating	IP 65
Dimensions	152 mm X 62 mm X 43 mm
Weight	175 grams
<b>Mounting &amp; Installation</b>	
Wall-mounted installation	Supported
Pole - mounted installation	Supported
<b>Environmental Conditions</b>	
Operating Temperature	-20 °C to + 50°C
Operating Humidity	0% to 95% RH (Non-Condensing)

## Regulatory Certifications & Compliance

Wireless Certification	WPC
Environmental	RoHS Compliant

## What's in the Box ?

- MacSync L Odor X2 Sensor
- Mounting Clip
- User Manual
- Warranty Card
- IP68 Cable Extender \*
- Mounting Screws
- Power Adapters \*

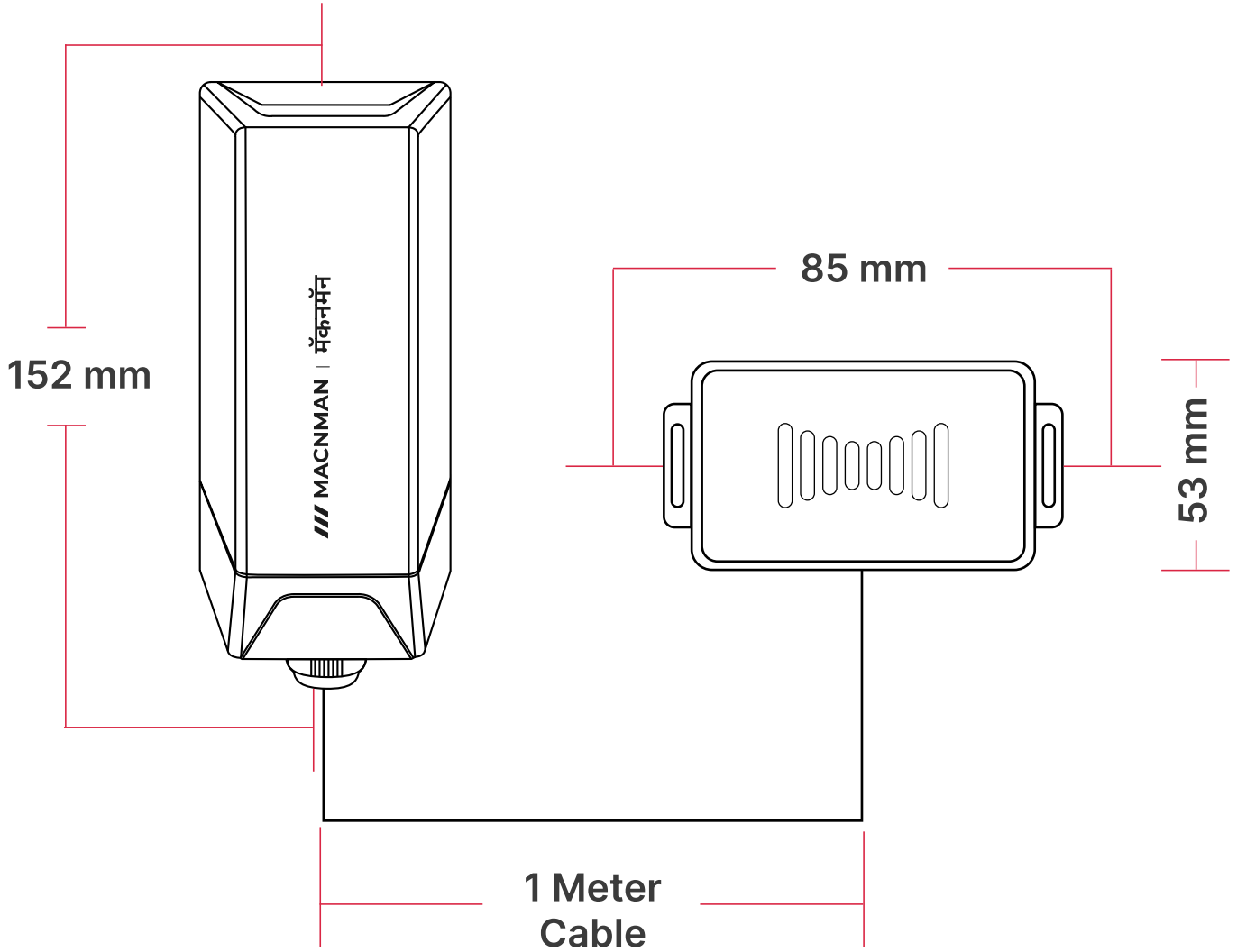
## Models & Ordering Information

Variant Name	Power Source	SKU
MacSync L Odor X2 PO	External Power (9–36 V DC)	824
MacSync L Odor X2 BO	Integrated 19 Ah Lithium Battery	825

## Notes

- Power operated models are only available with external probe option
- (\*) Marked accessories must be purchased separately

## Device Dimensions






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के अवसर के लिए धन्यवाद भवतः सेवायाः अवसरस्य कृते धन्यवादः तमारी सेवा करवानी

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-  [www.macnman.com](http://www.macnman.com)
-  [info@macnman.com](mailto:info@macnman.com)
-  +91 7972856163
-  Office -15, 635 1B, Bibwewadi, Pune,  
Maharashtra 411037

### Support Mails

-  [chat@macnman.com](mailto:chat@macnman.com)
-  [helpdesk@macnman.com](mailto:helpdesk@macnman.com)
-  [support@macnman.com](mailto:support@macnman.com)

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