



MacSync-LPS1 Overview

MacSync-LPS1 is a compact, industrial-grade LoRaWAN® pressure sensor designed for accurate, real-time monitoring of liquid and gas pressure in demanding environments. Built with a high-quality Hall Effect sensor and IP65-sealed housing, it ensures long-term reliability even in rugged outdoor or industrial conditions.

Seamlessly integrated with Macnman LoRaWAN® gateways and dashboards, it supports low-power operation, secure onboarding, and event-driven or threshold-based uplinks, making it perfect for smart infrastructure, automation, and remote diagnostics.

Sensors

Pressure

1.2 Mpa

Wireless Technology



Features

High-Quality Hall Effect Sensor

High accuracy: ±(40 ppm + 5 %)

High Accuracy & Fast Response

Ensures ±1.5%FS measurement accuracy

Long Life Span

Over 1,000,000 cycles for extended deployment

Supports Macnman Beam Protocol

Direct control, & local device-to-device actions

Supports periodic, threshold-based, & event-driven uplinks

Wide Pressure Range

From 0 to 1.2 MPa, withstanding up to 2.4 MPa

LoRaWAN® Class A & C communication

Communication for flexible uplink strategies

Low power consumption

Optimized for battery-powered operations

Secure onboarding with pre-flashed DevEUI / AppEUI / AppKey

Compatible with all LoRaWAN® network servers & gateways



Specifications

Measurement	
Range	0 ~ 1.2Mpa
Accuracy	±1.5% Full Scale (FS)
Max. Pressure	2.4Mpa
Destructive pressure	3.0Mpa
Response Time (Sensor)	≤2.0ms
Cycle Life	1,000,000
Protection Rating (Sensor)	IP67

Wireless Transmission	
Technology	LoRaWAN® (v1.0.4), Macnman Beam Protocol
Antenna	Internal high-efficiency antenna
Supported Bands	IN865 / RU864 / EU868 / US915 / AU915 / KR920 / AS923-1/2/3/4
Tx Power	16 dBm @ 868 MHz 20 dBm @ 915 MHz 19 dBm @ 470 MHz
Sensitivity	-137 dBm @ 300 bps
Activation	OTAA / ABP
LoRaWAN® Class	Class A (default), Configurable to Class C via Maya

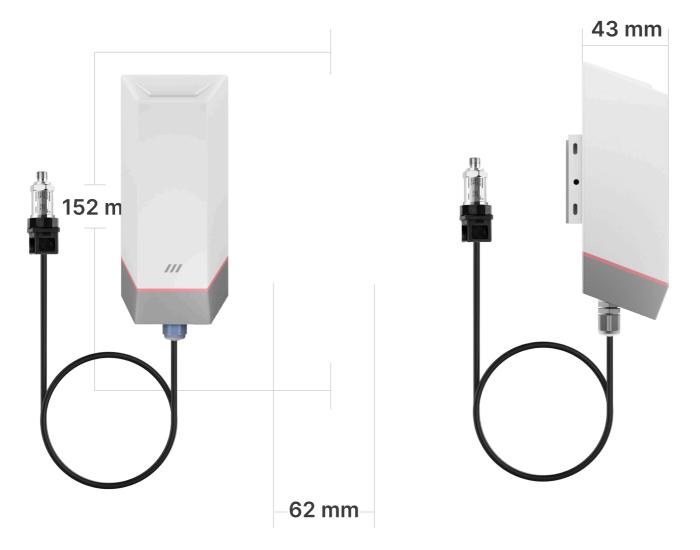


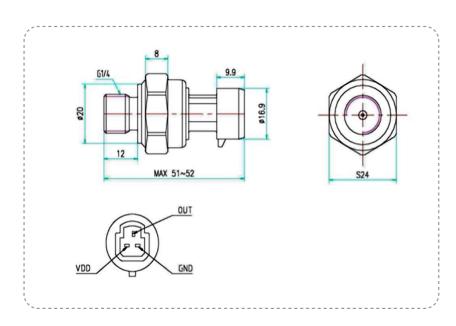
Led Status	
LED Type	1 Internal Multi-Color LED
Solid Blue	Device is connected with Maya App
Flashing Blue	OTA (Over-the-Air) update in progress
Slow Blinking Green	Attempting to connect to the LoRaWAN® network
Single Red Blink	A confirmed parameter of MacSync is being modified

Configuration	
Configuration	Via Macnman Maya Android App
Maya Fatures	Threshold / Trigger / Sample based alarm triggers
Stored Records	30,000 Records (accessible via Maya)
Remote Configuration	Yes - JSON format Data

Physical Characteristics	
Power Supply	Inbuilt Battery - 19,000 mAh / Optional Solar
Operating Temp	-40°C to +80°C
Humidity Range	0% to 100% RH (non-condensing)
Ingress Protection	IP65 standard (IP67 optional variant)
Housing Material	Made of durable ABS plastic for long-lasting field use
Color	Matte Black (Sensor)
Weight	~240g (with 19 Ah battery)
Dimensions	Approx. 152 mm X 43 mm X 63 mm (customizable branding available)
Mounting Options	Wall Mounting / Pole Mounting

Device Dimensions





Pressure Sensor Probe



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Given the compact size of the module, the "®" symbol is omitted from Bluetooth-related trademarks in compliance with applicable regulations

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