



LoRaWAN® Pressure Sensor

MacSync LPS X7

Industrial-grade hydrostatic pressure sensing for scalable real-time monitoring of tanks, reservoirs, utility containers, and liquid storage systems.



Introduction

The MacSync LPS X7 is an industrial-grade LoRaWAN® Hydrostatic Pressure Sensor engineered for accurate low-pressure liquid-level monitoring across soap dispensers, water bottles, diesel containers, chemical tanks, small reservoirs, liquid storage systems, and smart IoT monitoring infrastructure. Designed for continuous real-time monitoring, the sensor enables reliable liquid level visibility using long-range LoRaWAN® wireless connectivity and ultra-low power operation.

MacSync LPS X7 combines precision hydrostatic sensing technology, rugged IP-rated construction, configurable threshold alerts, and intelligent event-based reporting to support scalable wireless liquid-level monitoring infrastructure with minimal maintenance requirements.

Features

- Hydrostatic Liquid Level Measurement Technology
- Designed for Low-Pressure Liquid Measurement Applications
- High-Accuracy Hydrostatic Pressure Sensing
- Configurable Sampling & Transmission Intervals
- Fast Sensor Response Characteristics
- Compatible with Public & Private LoRaWAN® Networks & Macnman MacTalk Protocol
- Stable Performance in Industrial & Outdoor Environments
- Supports periodic, event-based, and threshold-based data transmission

Key Advantages

- Reduces Manual Liquid Level Inspection Requirements
- Helps Prevent Tank Overflow & Dry-Run Conditions
- Improves Operational Visibility Across Distributed Assets
- Reduces Maintenance & Operational Costs

Pressure Sensor Measurement

Sensor Type	Hydrostatic Pressure Sensor
Range	0 to +10 kPa
Accuracy	±0.2% FS
Resolution	0.1 kPa
Durability	10 ⁶ Pressure Cycles
Compensated Temperature Range	0°C to +50°C
Long-Term Stability	±0.2% FS / Year

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 Network, 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 Macnman 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 Pressure 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 Battery - 19,000 mAh
Battery Type	Lithium Thionyl Chloride (Li-SOCl ₂)
Estimated Battery Life at 25 °C	
5-minute reporting interval	~2 years
15-minute reporting interval	~4 years
60-minute reporting interval	~7+ years

Physical & Environmental Specifications

Enclosure & Mechanical

Material	Glass Filled Nylon
Protection Rating	IP 65
Dimensions	152 mm X 62 mm X 43 mm (Without Sensor Probe)
Weight	~175 g

Mounting & Installation

Wall-mounted installation	Yes , With Clip
Pole - mounted installation	Yes , Without Clip

Environmental Conditions

Operating Temperature	-40 °C to + 80°C
Operating Humidity	0% to 95% RH (Non-Condensing)

Regulatory Certifications & Compliance

Wireless Certification	WPC
Environmental	RoHS Compliant

What's in the Box?

- MacSync LPS X7 Sensor
- Mounting Clip
- User Manual
- Warranty Card
- IP68 Cable Extender *
- Mounting Screws
- Power Adapters *

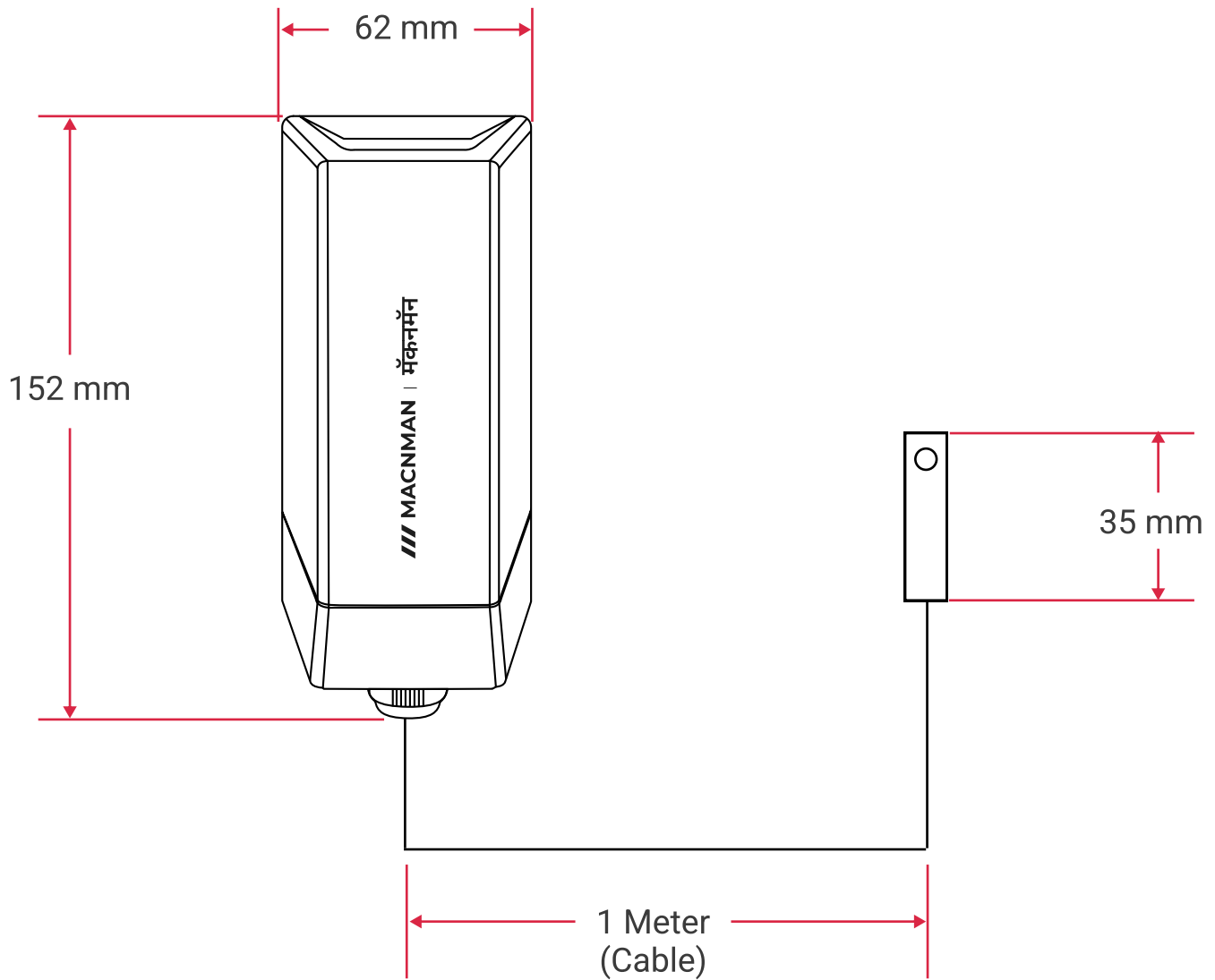
Models & Ordering Information

Variant Name	Power Source	SKU
MacSync LPS X7 B0	Integrated Battery (19 Ah)	853

Notes





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

Device Dimensions






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