



MacSync-LS7 Overview

MacSync-LS7 is a compact and versatile LoRaWAN® soil sensor designed for real-time, multi-parameter monitoring of soil health in diverse agricultural and environmental settings. It provides accurate data essential for modern farming enabling smarter irrigation, fertilizer optimization, and crop management.

Ideal for precision agriculture, greenhouse automation, land restoration, and research-based farming, MacSync-LS7 seamlessly integrates with Macnman LoRaWAN® gateways and cloud dashboards to help farmers and agronomists make informed, sustainable decisions.

Sensors

Temperature

Moisture

pH Range

NPK

EC

Wireless Technology



Features

High-Precision Multi-Parameter Sensors

For accurate soil parameter sensing

LoRaWAN® Class A & C communication

Communication for flexible uplink strategies

IP66-Rated Enclosure (Sensor)

Designed for industrial & outdoor environments

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

BLE Support

Easy local configuration and diagnostics with Maya

Ultra-long-range transmission

Up to 08 km line of sight

Supports Macnman Beam Protocol

Direct control, & local device-to-device actions

Secure onboarding with pre-flashed DevEUI / AppEUI / AppKey

Optional Onboard Data Buffering

To prevent data loss in case of network downtime

Compatible with all LoRaWAN® network servers & gateways

 Specifications

Measurement

Parameter	Value	Accuracy
Temperature Range	−45°C to +115°C	±0.5°C
Moisture Range	0–100% RH	±3% (0–53% RH), ±5% (53%+)
pH Range	3–9 pH	±0.3 pH
NPK Range	0–1999 mg/kg	±2% F.S
EC Range	0–10000 µS/cm	10 µS/cm
Response Time (sensor)	<1 second	
Ingress Protection(sensor)	IP68	

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) (optional)
Remote Configuration	Yes - JSON format Data

Physical Characteristics

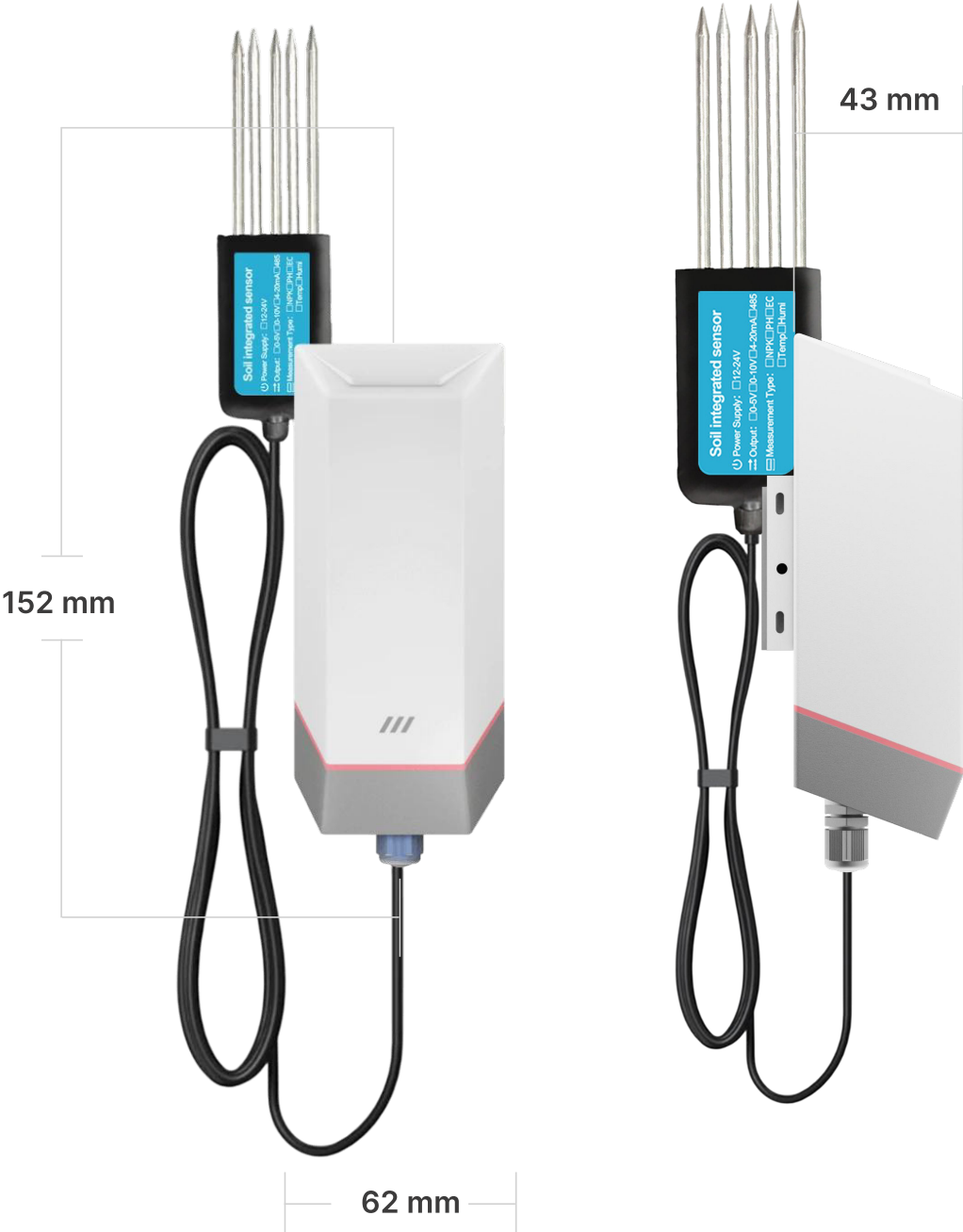
Power Supply	Inbuilt Battery - 19,000 mAh , Optional Solar Panel
Operating Temp	-40°C to +80°C
Humidity Range	0% to 100% RH (non-condensing)
Ingress Protection	IP65 standard (IP67 optional variant)
Housing Material	SS Metal(Sensor) , ABS (Sensor Cover), Glass field Nylon (MacSync)
Color	Matte White (MacSync)
Weight	~190g (with 19Ah battery)
Dimensions	Approx. 152 mm X 62 mm X 43 mm + Sensor Probe
Mounting Options	Pole Mounting / Wall Mounting

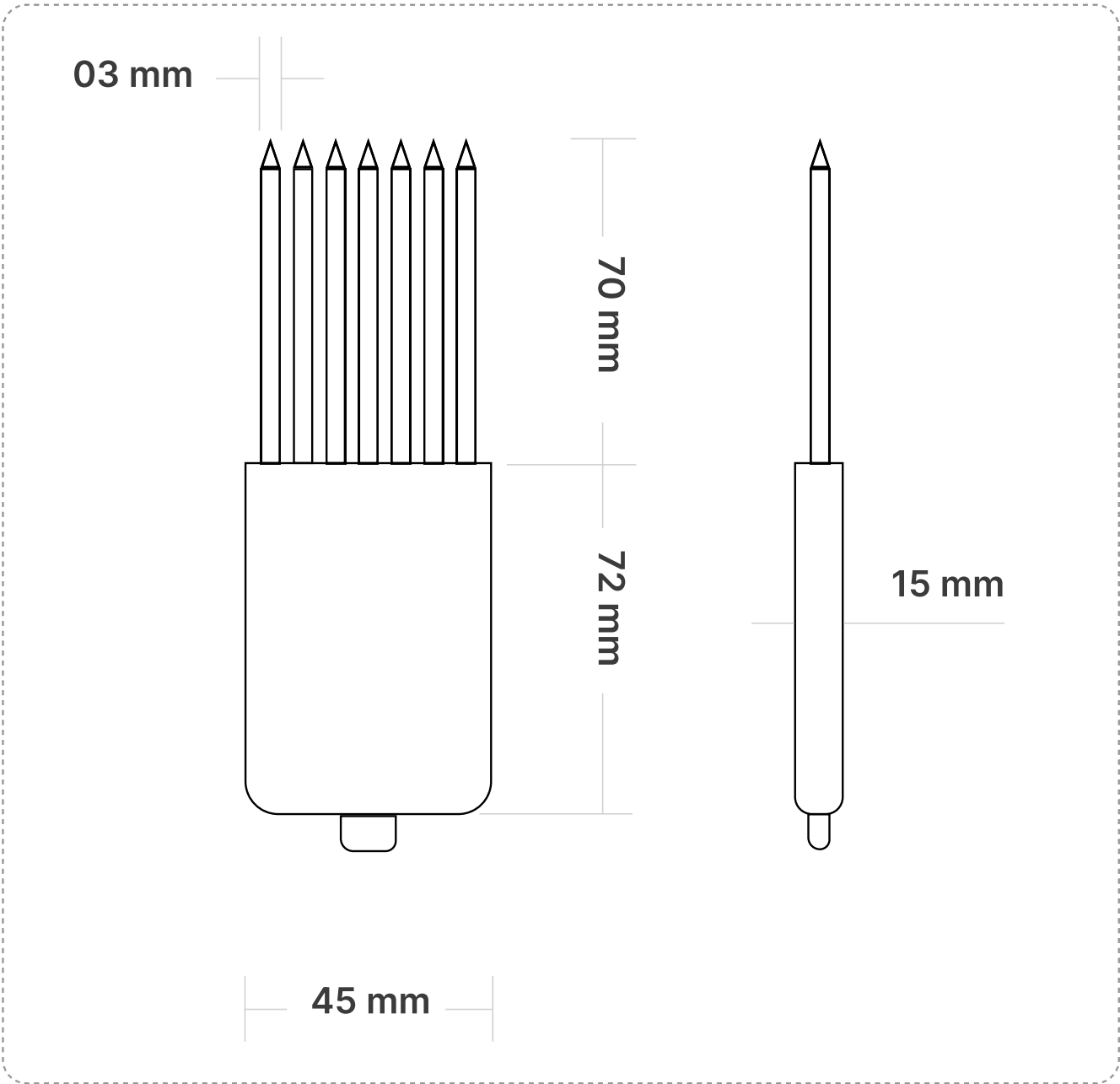
Certifications

Regulatory	WPC
Environmental	RoHS compliant

Product Dimension

Sensor Probe Cable: Free-mounted probe with 1-meter standard cable (custom lengths available on request)





Sensor Probe

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के अवसर के लिए धन्यवाद भवतः सेवायाः अवसरस्य कृते धन्यवादः તમારી સેવા કરવાની

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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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