# LoRaWAN Sound Level Sensor

Smart Agriculture, Smart Building, Smart City, Smart Facility, Smart Farm, Smart Factory, Smart Transportation

SKU: WSLRW-SL
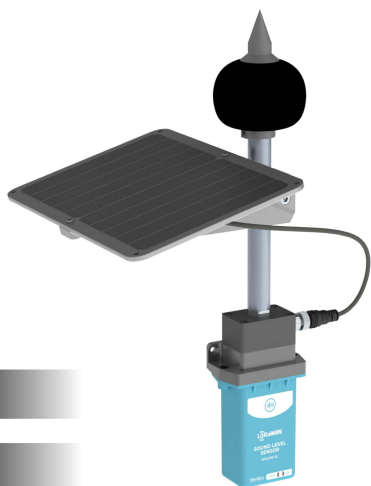
**daviteq**

## LORAWAN SOUND LEVEL SENSOR
### WSLRW-SL

LoRaWAN

10-Year

✓ Safe Zone          ◯ Hazardous Zones

WSLRW-SL is a LoRaWAN noise sensor with a measuring range of 30-120 dB(A) for residential, office, factory, construction sites, and public areas... Capacitive technology has high sensitivity, accuracy, and stability. LoRaWAN connectivity enables kilometer-long data transmission to LoRaWAN Gateways. With an ultra-low power design and intelligent firmware, the sensor can operate for up to 10 years with only 2 AA batteries (depending on configuration), or use solar panels for applications of continuous monitoring. The device supports all LoRaWAN bands worldwide.

### Applications
Ambient Air Quality Monitor, Facility Monitoring, Machine Health Monitoring, Safety Monitoring

### Notes For Applications
Sensitivity: Match to environment (high for quiet, low for noisy). Frequency Response: Ensure required range (e.g., 20 Hz–20 kHz for audio). Environmental Protection: Dust/moisture sealing, EMI shielding for harsh conditions.

CE  FC  ARIB

✓ **Wide frequency range**
Allows measurement from 20-12,500 Hz

✓ **LoRaWAN Communication**
Support Worldwide LoRaWAN® frequency bands
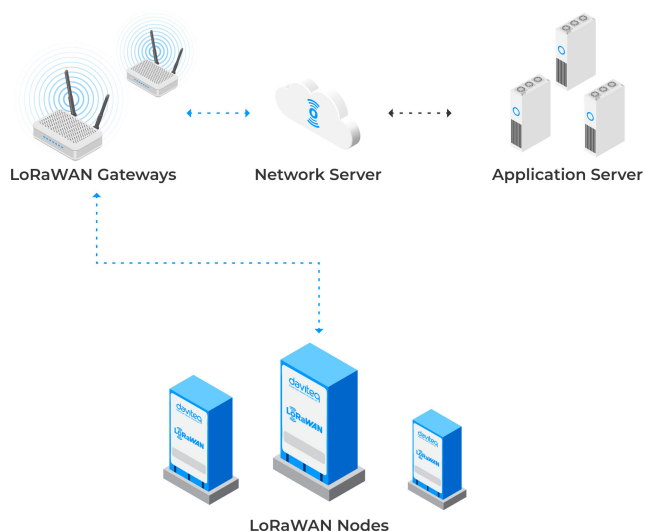
✓ **10-Year battery**
Use batteries for up to 10 years, or use solar panels for continuous monitoring applications.

✓ **For Outdoor**
Designed to be installed both indoors and outdoors

## SYSTEM ARCHITECTURE
### LoRaWAN

LoRaWAN Gateways          Network Server          Application Server

LoRaWAN Nodes

# Specification

| | |
|---|---|
| Measuring range | 30~120dB(A) |
| Frequency range | 20~12,500Hz |
| Resolution | 0.1dB(A) |
| Accuracy | ±0.5dB(A) at 94dB(A) and 1kHz |
| Working temperature | -20~60℃ |
| Working humidity | 0~80% RH |
| COMMUNICATION | |
| SF Factors | SF7~SF12 |
| Antenna | Internal Antenna 2.0dbi |
| Power Supply | 02 x AA size 1.5VDC, battery not included for Primary Battery version OR solar panel (buy separately) with 2 x Panasonic® Eneloop™ standard batteries (customer to supply). Solar panel version is powered by 6..9VDC solar panel or DC supply via M12 connector. |
| RF Frequency and Power | 860~930MHz, 14~20dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915 |
| Protocol | LoRaWAN Class A V1.0.3 |
| Data sending modes | interval time, and manually triggering by magnetic key |
| CE and FCC | Yes |
| Working temperature | -40~60℃ (with AA L91 Energizer®). Rechargeable battery version can only be recharged at ambient temperature higher than +5℃. |
| Dimensions | please check dimension drawings |
| Net-weight | < 300g (main device only, not included solar panel and batteries) |
| Housing | Aluminum + Polycarbonate plastic, IP67 |

LORAWAN SOUND LEVEL SENSOR
WSLRW-SL

CONSTRUCTION



LORAWAN SOUND LEVEL SENSOR
WSLRW-SL

FACTORY

## LORAWAN SOUND LEVEL SENSOR
### WSLRW-SL



223.0

375.3

61.8

2x ø 4.5

72.8

42.0
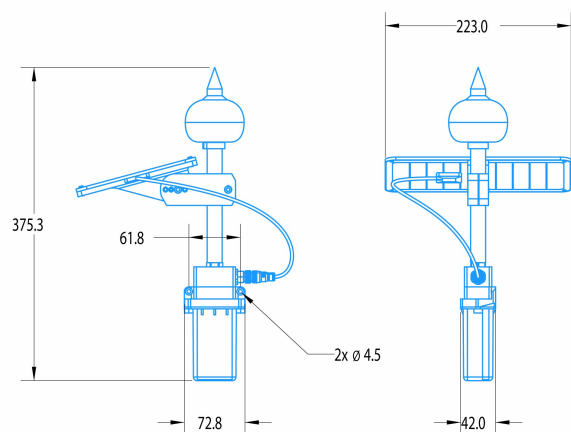
DIMENSION DRAWING OF
WIRELESS NODE (Unit: mm)

### RECOMMENDED BATTERIES FOR LoRaWAN SENSOR POWERED BY SOLAR PANEL



AA RH6 Rechargeable Battery

AA NiMH Rechargeable Battery

-20 .. +50°C working temperature

-20 .. +50°C working temperature

2000 mAH Capacity

2000 mAH Capacity

WSLRW-AG-H11.JPG

## LORAWAN SOUND LEVEL SENSOR
### WSLRW-SL



Main device

Parts kit

Solar panel
(optional)
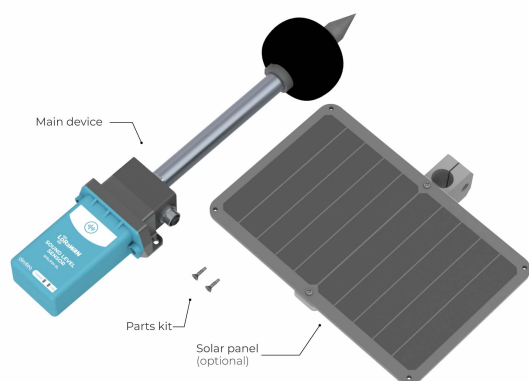
STANDARD PRODUCT PACKAGE

## Ordering Information

| ITEM CODE | DESCRIPTIONS |
| --- | --- |
| WSLRW-SL-01 | LoRaWAN Sound Level Sensor, 31.5 - 8000 Hz, 30-120 dB(A), AA batteries, IP67 |
| WSLRW-SL-01S-OP | LoRaWAN Sound Level Sensor, 31.5 - 8000 Hz, 30-120 dB(A), Solar panel/External power supply powered, with Outdoor Protector |
| SOLAR-PN-5W6V-ETFE-M12M-20-PIPEMNT | Solar panel, 5W/6V, ETFE Coated, M12-M connection, 20cm cable, tilt adjustment, 18mm OD Pipemount |