

# LoRaWAN Piezo-Electric 10kHz Vibration Sensor



Smart Agriculture, Smart Building, Smart City, Smart Energy, Smart Facility, Smart Factory, Smart Farm, Smart Retail, Smart Utilities

SKU: WSLRW-V1A

## LoRaWAN PIEZO-ELECTRIC 10KHZ VIBRATION SENSOR WSLRW-V1A



WSLRW-V1A-H1.JPG



WSLRW-V1A is a cost-effective, LoRaWAN accelerometer single-axis vibration sensor designed for condition monitoring and preventive maintenance applications. The Piezo-electric accelerometer is available in ranges  $\pm 25g$  or  $50g$  and features a flat frequency response up to  $>10kHz$ . Besides that, it can also measure the temperature at the mounting point. It is the best choice to replace the traditional 4-20mA output Vibration Sensor. Typical Applications: Machine Health Monitoring, Predictive Maintenance Installations, Vibration Monitoring, Impact & Shock Monitoring, Bearing monitoring, ...

### Applications

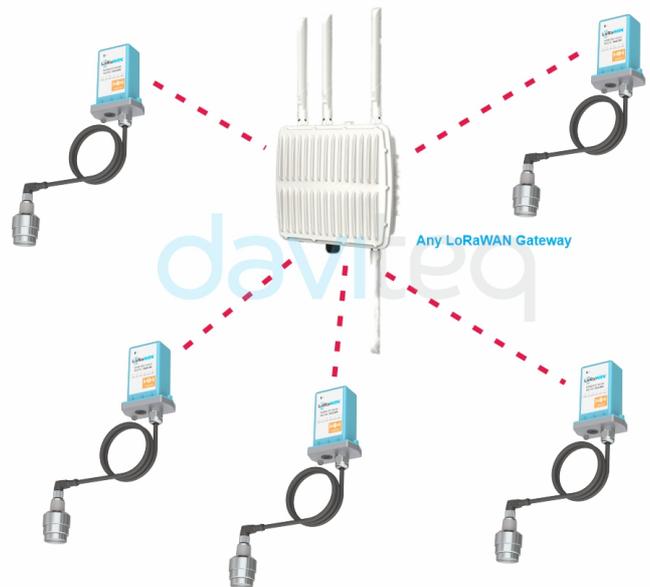
Condition Based Monitoring, Machine Health Monitoring, Safety Monitoring, Vibration Monitoring

### Notes For Applications

Measure Single-axis vibration and/ or surface temperature of Motor, Bearing, Pump, Fan, Gearbox, Rotary machine/ equipment... with vibration from 2 to 10,000 Hz. Deliver the overall calculated parameters: RMS acceleration, RMS and peak velocity, RMS and peak-peak displacement, frequency, temperature and crest factor. DO NOT deliver raw values (acceleration G value in time domain) and parameters in frequency domain (FFT function).

- ✓ **LoRaWAN communication**  
LoRaWAN communication standard to allow sensor connect to any LoRaWAN Gateway on the market
- ✓ **10-Year battery**  
Ultra-low power sensing technology from Daviteq with Ultra-low power wireless technology allow the sensor can last up to 10 years with 2 x AA batteries 1.5VDC
- ✓ **10kHz Bandwidth**  
Wide bandwidth up to 10,000 Hz
- ✓ **High Performance Piezo-electric sensor**  
Hermetically Sealed, Piezo-Ceramic Crystal, Shear Mode accelerometer sensor is designed and qualified for machine health monitoring and has superior Resolution, Dynamic Range and Bandwidth to MEMS devices

## LoRaWAN NETWORK



WSLRW-V1A-H4.JPG

### DAVITEQ TECHNOLOGIES INC

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Created date: Dec-21-2022

Updated date: Feb-23-2026

## Specification

(\* Note: All below values are typical at +24°C, 80Hz)

Sensor technology	Hermetically Sealed, Piezo-Ceramic Crystal, Shear Mode
8-Parameter Measurement	Acceleration Peak, Velocity RMS & Peak, Displacement RMS & Peak, Frequency, Temperature, and Crest Factor
Acceleration Range & Shock Limit (g)	±25, 10000
Acceleration resolution	6.1mg
Velocity range and resolution	0~50mm/s, 0.1mm/s
Displacement range and resolution	±5000µm, 1µm
Frequency Response and Resonant (Hz)	2~10000, > 30000
Frequency resolution	2~10000Hz, 1Hz
Non-Linearity, Transverse Sensitivity	±2% FSO, < 5%
Temperature measuring and operating	-40~85°C, with accuracy: ±0.5 and resolution: 0.125
Sensor Material, rating and mounting	304SUS, IP67, M6 Screw
Connector	M12-M 5-pin (Coding A) with 2m cable, wired to LoRaWAN node
COMMUNICATION	
SF Factors	SF7~SF12
Antenna	Internal Antenna 2.0dbi
Battery	02 x AA size 1.5, battery not included
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 when alarm occurred
RF Module complies to	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
Working temperature	-40~60°C (using Energizer® Lithium Ultimate AA battery)
Dimensions & Net-weight	H106xW73xD42, 190g
Housing	Aluminum+Polycarbonate, IP67
Mounting	Wall mount bracket

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WIRELESS LoRaWAN VIBRATION SENSOR  
INSTALLED ON MOTOR/FAN



WSLRW-V1A-H2.JPG

WIRELESS LoRaWAN VIBRATION SENSOR  
INSTALLED ON BEARING



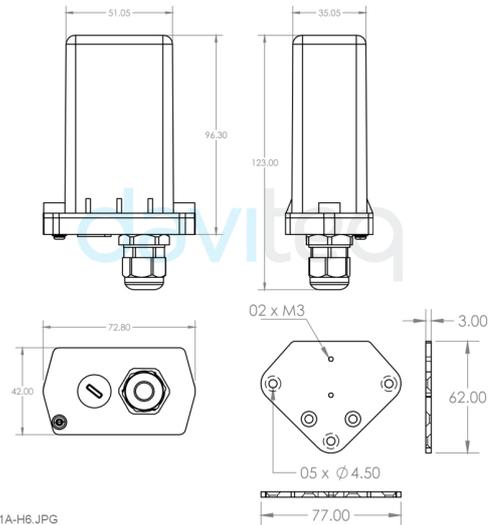
WSLRW-V1A-H3.JPG

VIBRATION SENSOR WITH M6 SCREW



WSLRW-V1A-H5.JPG

DIMENSION DRAWING OF WIRELESS NODE  
(Unit: mm)



WSLRW-V1A-H6.JPG

RECOMMENDED BATTERIES

E91 AA Alkaline battery



-18 .. + 60 oC working temperature  
10-year shelf life  
3000 mAH Capacity  
Price: 1X

L91 AA Lithium battery



-40 .. + 60 oC working temperature  
20-year shelf life  
3500 mAH Capacity  
Price: 3.5X

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WHAT'S IN THE PACKAGE?



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## Ordering Information

ITEM CODE	DESCRIPTIONS
WSLRW-V1A-025	LoRaWAN PIEZO-ELECTRIC 10KHZ VIBRATION SENSOR, $\pm 25G$ , INTERNAL ANTENNA, TYPE AA BATTERY 1.5VDC, IP67, 860-930MHZ

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