

# LORAWAN PIEZO-ELECTRIC 10KHZ VIBRATION SENSOR



SKU: WSLRW-V1A

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



WSLRW-V1A-H1.PNG

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  $>10kHz$ . Its accelerometer features a stable piezo-ceramic crystal in shear mode with low power electronics, sealed in a fully hermetic package. The Piezo Electric technology incorporated in the WSLRW-V1A accelerometer has a proven track record for offering the reliable and long-term stable output required for condition monitoring applications. The accelerometer is designed and qualified for machine health monitoring and has superior Resolution, Dynamic Range and Bandwidth to MEMS devices. Beside that it can also measure the temperature at mounting point. The Ultra-Low Power Power design and smart firmware allow the sensor to last up to 10 years with 02 x AA battery (depending on configuration). The sensor will transmit data over kilo-meters away to the LoRaWAN gateway, any brand on the market.

Typical Applications: Machine Health Monitoring, Predictive Maintenance Installations, Vibration Monitoring, Impact & Shock Monitoring, Bearing monitoring, ...



### 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



### 10 KHZ BANDWITH

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

## WIRELESS LoRaWAN VIBRATION SENSOR INSTALLED ON MOTOR/FAN



WSLRW-V1A-H2.PNG

#### DAVITEQ TECHNOLOGIES INC

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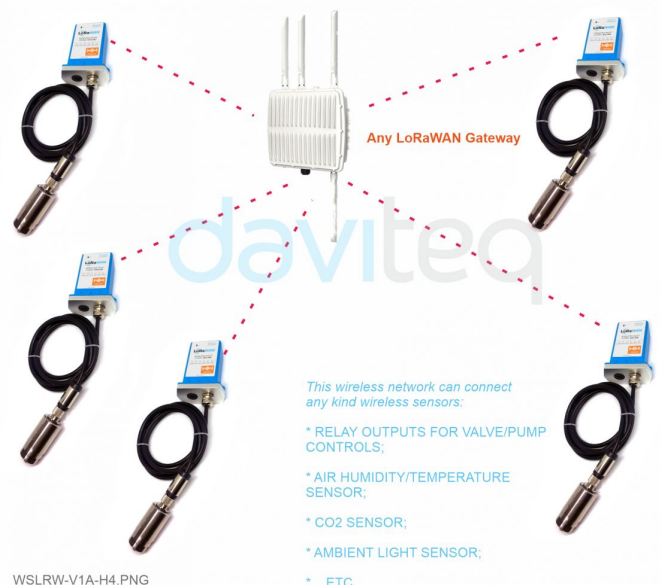
## SPECIFICATION

|                                       |  |
|---------------------------------------|--|
| SENSOR SPECIFICATION:                 | (* Note: All below values are typical at +24°C, 80Hz)  |
| Sensor technology                     | Hermetically Sealed, Piezo-Ceramic Crystal, Shear Mode   |
| 8-Parameter Measurement               | Acceleration RMS & Peak<br>Velocity RMS & Peak<br>Displacement RMS & Peak<br>Frequency & Temperature |
| Acceleration Range & Shock Limit (g)  | ±25 or 50, 10,000  |
| Frequency Response and Resonant (Hz)  | 2-10000, > 30000   |
| Non-Linearity, Transverse Sensitivity | ±2%FSO, < 5%   |
| Temperature measuring and operating   | -40°C.. +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  |
| LoRaWAN SPECIFICATION:                |  |
| Data rate                             | 250bps .. 5470bps  |
| Antenna                               | Internal Antenna 2.67 dbi  |
| Battery                               | 02 x AA size 1.5, battery not included   |
| RF Frequency and Power                | 860..930Mhz, +14 .. +20 dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915 |
| Protocol                              | LoRaWAN, class A   |
| 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                   | -40oC..+60oC (using Energizer Lithium Ultimate AA battery)   |
| Dimensions & Net-weight               | H106xW73xD42, 190 grams  |
| Housing                               | Aluminum+Polycarbonate, IP67   |
| Mounting                              | Wall mount bracket   |

WIRELESS LoRaWAN VIBRATION SENSOR  
INSTALLED ON BEARING

WSLRW-V1A-H3.PNG

## LoRaWAN NETWORK



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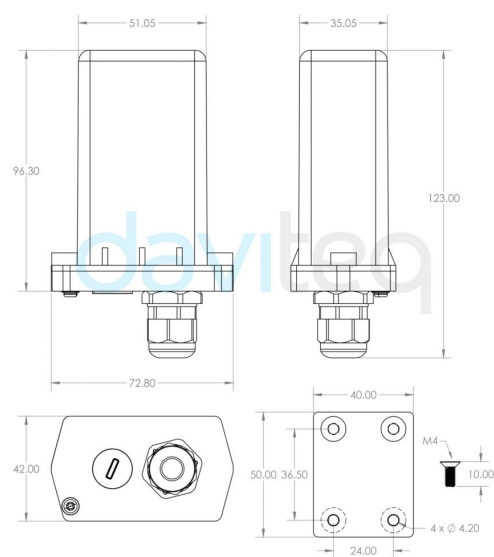
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## VIBRATION SENSOR WITH M6 SCREW



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DIMENSION DRAWING OF WIRELESS SENSOR  
(Unit: mm)

WSLRW-V1A-H6.PNG

## 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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## ORDERING INFORMATION

| ITEM CODE       | DESCRIPTIONS   |
|-----------------|--|
| WSLRW-V1A-9-025 | LoRaWAN PIEZO-ELECTRIC 10KHZ VIBRATION SENSOR, +/- 25G, INTERNAL ANTENNA, TYPE AA BATTERY 1.5VDC, IP67, 900-930 Mhz for KR920, AS923, AU915, US915 |
| WSLRW-V1A-8-025 | LoRaWAN PIEZO-ELECTRIC 10KHZ VIBRATION SENSOR, +/- 25G, INTERNAL ANTENNA, TYPE AA BATTERY 1.5VDC, IP67, 860-870 Mhz for EU868, IN865, RU864        |

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