



WLRC-S195 / WLRC-S1952



Wireless Vibration Sensor Spring Type

This commercial-grade vibration detection sensor can be used to detect vibrations on mechanical equipment and on any surfaces to monitor vibrations. The device is small and has a sleek design making it easy to install and handle. This device can be used to monitor machinery; vibrations for too long, vibration count per day and no vibration at all. This device helps in predictive maintenance by analyzing the efficiency of the machine on a daily basis.

Features:

- Super Long Range Signal Penetration
- 5 years plus Battery Life*
- Easy Installation
- Frequency Hopping Spread Spectrum (FHSS)
- Improved interference immunity
- Encrypt-RF™ Security (Diffie-Hellman Key Exchange + AES-128 CBC for sensor data messages)
- Over-the-air updates
- Interactive WatchNET IoT platform with dashboard, search and notification settings
- * Magnetized ABS enclosure for easy installation



Applications:

- Vibration count per day
- Monitor machinery to know whether it is On/Off
- Equipment cycle per period
- Excessive vibrations
- Sudden impact off a force

Schematic Diagram:



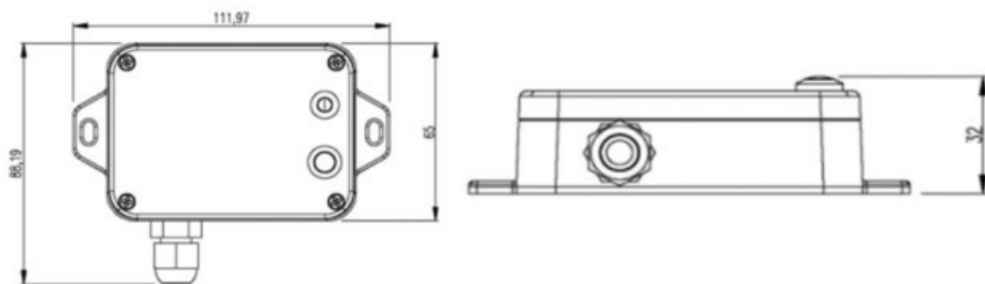
Technical Specifications

Electrical	
Input Power	2x 3.6V ER14505 AA lithium batteries (3.6V/2400mah/section)*
Sleeping Mode	23uA
Wake up Mode	6.3mA@3.3V
Low Voltage Threshold	3.2V
Transmitting current (max)	120mA@3.3V
Receiving current (max)	11mA @3.3V
Battery Measurement Accuracy	±0.1V
<i>*Specific electrical characteristics may vary depending on the power supply voltage.</i>	
Vibration Sensor	
Vibration Sensor Case Size	L:43mm x W:13mm x H:12mm / L:1.69"W:0.51"xH:0.47"mm
Vibration Sensor Maximum Voltage	5V
Sensor Switch Life	Up to 200,000 times
Vibration Sensor Working Principle	When it is at rest, it is in the open state OFF state. When the external force is touched to reach the corresponding vibration force, or when the moving speed reaches the appropriate centrifugal force, the conductive pin will instantly reach the ON state. When the external force disappears, the switch returns to the OFF state.
Frequency	
TX Power	19dBm±1dBm
Rx Sensitivity	-136dBm (LoRa, Spreading Factor=12, Bit Rate=293bps) -121dBm (FSK, Frequency deviation=5kHz, Bit Rate=1.2kbps)
Antenna Type	Built-in antenna
Communication Range	Up to 500m/0.310miles, the actual transmission distance depends on the environment*
Data Transfer Rate	0.3kbps ~ 50kbps
Spread Technique	LoRa/FSK
Available Frequency	US915 / AU915. Configured before shipment.
Physical	
Dimension	L:112mm x W:65mm x H:32mm / L:4.41" x W:2.6" x H:1.26"
Weight	150g / 0.33lb
Protection Class	Main Part IP65 / External Sensor IP65
Environment Temperature Range	-20°C ~ 55°C / -4°F ~ 131°F
Environment Humidity Range	<90%RH (No condensation)
Storage Temperature	-40°C ~ 85°C / -40°F ~ 185°F

* Actual signal range may vary depending on the environment.

* Battery life is determined by sensor reporting frequency and other variables.

Dimensions



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