

Vibration Sensor



Description

The vibration sensor from *Smart Box & GeoPortal* accurately measures temperature, vibrations for acceleration and velocity and communicates this information through our portal. Application examples include monitoring of vibration on rotary machinery, manufacturing equipment, and building maintenance.

Operation

The wireless sensor measures accelerations from a range of 0 m/s² to 130 m/s² and vibrations from a range of 0 mm/s to 20 mm/2. The sensor can be configured into four different modes, X axis, Y axis, Z axis, or compound axes. At regular interval, the sensor communicates with our portal and the alert notification system.

The values for maximum thresholds for both accelerations and vibrations are configured in the portal to alert the users when excessive vibration is detected activating notifications by email or by Telegram. The data is viewed real-time and exported as a data sheet or a graph. Likewise, the portal stores the data for analysis.

Main Features

- Uses LoRaWAN technology
- Range of the wireless network: 3 km
- RF Communication: 915 MHz
- Battery lifespan: 3 years
- Measures acceleration (m/s²) and velocity (mm/s)
- High performance industrial accelerometer
- Measurement of temperature
- Easy to install and maintain



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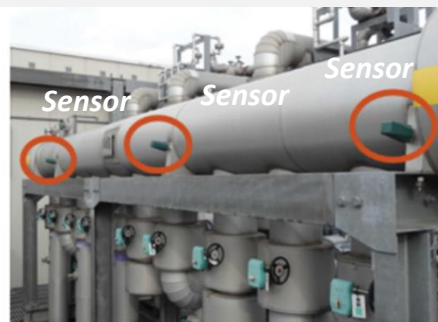
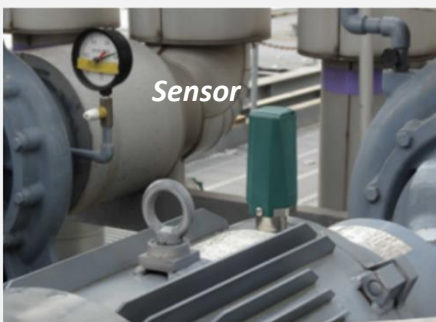
Physical Characteristics	
Weight	260 g with battery
Size	97 mm x 46 mm x 46 mm
Battery	3.6V lithium thionyl chloride
Battery lifespan	3 years
Sampling interval	Configurable
Uplink interval	Configurable

Vibration	
Acceleration range	0 to 130 m/s ² (0 to 13.26 g)
Velocity range	0 to 20 mm/s (0 to 0.79 in/s)
Modes	X axis, Y axis, Z axis, composite
Accuracy (100 Hz)	+/-10% FS, composite +/-20% FS

Temperature	
Range	-20 to 85°C
Resolution	0.1°C
Measurement part	Base

Applications

Vibration sensors are used in rotary machinery such as pumps, compressors, turbines, and motors, etc. By monitoring the vibration levels, it is possible to detect any changes in the machine's condition and identify potential problems before they lead to failure. A different application is monitoring vibration for building maintenance such as HVAC systems to detect any issues with the equipment and address them before downtime or accidents.



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