

BluVib ATEX Sensors



Bluetooth Wireless Vibration Sensor For Hazardous Locations

The BluVib ATEX wireless vibration sensor is certified for use in hazardous locations, is an ultra-low power, battery operated, wireless sensor that measures vibration and temperature. It uses the latest Bluetooth 5 low power wireless communications standard and can operate stand alone, or in a network of multiple sensor devices. Operation is user programmable, from waking up at pre-determined intervals to take vibration and temperature measurements, through near continuous operation, constantly monitoring data and signaling pre-set 'events'.

Raw data is then transferred to our Asset Minder IoT cloud platform for processing, trending and archiving.

The main components of the wireless sensor are a piezo-electric accelerometer, signal conditioning electronics, anti-aliasing low pass filter, analog-to-digital conversion, processor section, power/wake-up control and a low power radio module. The field replaceable battery is contained in a sealed compartment and the device mounts, via a screw thread, directly onto the machine which it is monitoring.

The wireless vibration sensor provides a solution for condition monitoring of rotating machinery. It is used primarily in process industries where common applications are monitoring of motors, fans, pumps, gearboxes etc. The device provides data from which overall values of vibration, bearing condition and temperature (often referred to as process variables) as well as high resolution spectra of vibration and bearing envelope, can be determined.

When compared with wired alternatives, the wireless vibration sensor offers the advantages of extreme ease of installation and battery life up to 5 years.



- Monitors vibration and temperature
- Measuring Range +/- 20g
- Certified for use in Hazardous Locations
- High resolution spectra available
- Fully compatible with Bluetooth v5 standard
- Self-contained device that mounts directly onto the machine
- Rugged and corrosion resistant
- Field replaceable battery, up to 5 years life

HIGH PERFORMANCE

Outstanding measurement capability. User selectable operating modes.

SIMPLE INSTALLATION

Simply fix the sensor to your machine, set it running and it measures, unattended for up to 5 years.

RUGGED

Suitable for harsh industrial conditions. Corrosion resistant.

WIRELESS OPERATION

Low power radio, with power management, ensuring long battery life.

FLEXIBLE

Available in OEM versions, can be installed using various methods including strong permanent magnets, screw on and glue on nodes, making installation quick and easy. Contact DMS for details.

BluVib ATEX Specification

MEASUREMENTS

Number of Channels:	2 (1 x vibration and 1 x temperature)
Accelerometer Input	
Sensor Type:	Piezoelectric accelerometer, ultra low power
Sensitivity:	Programmable (50mV/g, 100mV/g, 200 mV/g, 500mV/g)
Measurement Range:	+/-20g at 50mV/g
Frequency Range (+/-3dB):	0.3 to 10000 Hz
Resonant Frequency:	25kHz
Amplitude Linearity:	±1% typical in passband
Dynamic Range:	>70dB
Temperature Input	
Temp Measurement Range:	-20°C to +75°C
Accuracy:	+/-2.0°C, (0.5°C from 0°C to +65°C)

DATA ACQUISITION

ADC:	16-bit SAR
Sample Rate:	Programmable from 256Hz to 25.6kHz
Anti-Aliasing Filter:	Compound analog/digital
Data Block Lengths:	64 to 32768 samples
Spectral Line Equivalent:	100 to 12800 lines
Modes:	Continuous, Wake Up, Triggered ('g' level) Manual wake-up via magnetic switch

PROCESSING

Processor:	Ultra Low Power, 32 bit
Configuration:	Over Radio Network
Programming:	Firmware upgrades over radio network

COMMUNICATIONS

Network:	Bluetooth 5 Low Power
Certifications:	Europe: R&TTE USA, Canada, International: FCC/IC

MECHANICAL

Enclosure:	Base: 316 Stainless Steel, Cover: Nylon 2200
Dimensions:	Weight 200g 36mm diameter x 102mm high
Mounting:	Internal 1/4-28 UNF thread

ENVIRONMENTAL

Operating Temperature:	-20°C to +75°C
Sealing:	IP66
Compliance:	CE, RoHS
Hazardous Locations:	ATEX Ex II 1G Ex ia IIC T4 Ga -20oC to +75oC

POWER

Battery Type:	Lithium Thionyl Chloride, 3.6V Size AA SAFT LS1400Ex
Battery Monitor:	Internal battery monitor
Battery Life:	Up to 5 years (dependent upon measurement intervals)
Replacement:	Field Replaceable

Specification subject to change without notice.

For more information on any of our products or services please visit us at: www.dmsinteractive.co.uk

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