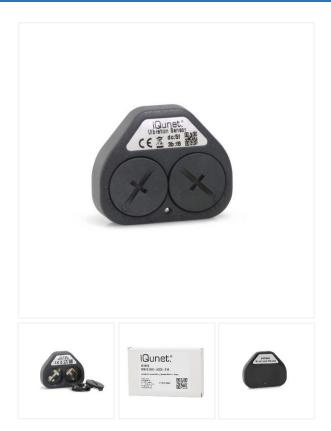


DATASHEET



Wireless Battery-Powered Vibration Sensor



SKU: IVIB161010-ACC3-016

Category: Sensors

Description

Industrial Wireless Battery-Powered Vibration Sensor

The iQunet Vibration Monitoring Sensor is a device that monitors asset health of rotating equipment which fits well in the predictive maintenance and asset reliability strategy.

The iQunet wireless battery-powered machine condition sensor combines a sensor, data collector and radio into one compact, battery-powered device that measures **both vibration and temperature data**. The sensor collects **triple axis** time series vibration data. The sensor is powered with **2 standard CR2032 coin cells** (included) which assures function for several years in standard operation mode (>5 years with one measurement a day). Sensor parameters can be set remotely such as sampling rate, samples number, dynamic range, automatic measurement interval, etc.

The sensor makes a network direct to the central Base Station node or via the optional Repeater. Sensor data is visualized in the iQunet **Sensor Dashboard** on the iQunet Data Server, offering temperature graphs, time series in acceleration (g) and velocity (mm/s), spectrum graphs in (g) and (mm/s) including waterfall plots, RMS trend values and graphs in (g) and (mm/s), crest factor, peak values, etc.

Used in: condition monitoring of bearings, misalignment, unbalance, ... of rotating equipment



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Technical specifications

Physical:

• Dimensions (mm): 57 x 47 x 14

Weight: 35g

Case material: thermoplastic

• Sealing: IP65 (IP68 with upgrade set)

- Installation: M3 screws (epoxy adhesive for permanent mount)
- Operating temperature: -20°C to +70°C
- Recommended storage temperature: +30 °C maximum
- Certifications:
 - CE
 - FCC
 - KC
 - ATEX / IECEx certification (available 2023)
- Wireless communications range: up to 50 m typically in plant (actual range depends on specific site topology and device placement)

Power supply:

- 2 x 3V (replaceable CR2032 battery)
- Up to 10 year battery life (depending on settings, usage and operating temperature)

Measurements:

Amplitude range: 2G, 4G, 8G or 16G
Measurement axis: X, Y and/or Z (3 axis)

Sampling rate: 12 to 3200 Hz

• Number of samples: 32 to 8192 samples

Units: g or mm/s

• Activity threshold: 0G to 1G

Postprocessing:

- Time series, frequency or waterfall plots
- 1/f flicker noise detrending (for velocity spectra)
- DFT averaging for noise reduction
- Trend tracking: RMS or Kurtosis
- Configurable high pass cut off filter
- Temperature sensor on board: yes
- Start data acquisition:
 - Manual trigger (REC button in Sensor Dashboard)
 - Automatic measurements (programmable time interval)
 - Conditional automatic measurements (programmable threshold level)

• Communication protocols:

- Subscribe to sensor parameters and data with OPC UA
- Control sensor settings and start measurements using GraphQL mutations
- Read out sensor parameters and data using GraphQL queries
- Data storage: on iQunet Data Server
- Compliance:
 - RoHS: 2011/65/EU and 2015/863
 - EMC: EN 301 489-1 / EN 301 489-3
 - SPECTRUM: EN 300 220-2 868.8 Mhz, Max. EIRP < 10dBm (<10mW)