AirVibe

A battery-powered, long-range, and wireless vibration analysis and monitoring sensor for industrial applications. Using the low-power, open LoRawan Protocol (https://lora-alliance.org/about-lorawan/) to get actionable machinery health data to reduce downtime and preventable, catastrophic machinery failures. Battery/communication module can be mounted away from hot/cold applications to extend the life of the battery which is 10 years.

Specifications and Dimensions

Specifications

Internal Sensor

Frequency Range	All Axes - 2.0 Hz to 4000 Hz
Amplitude Range	2g (standard) 15g, 30g, 60g (options)
Sample Rate	16,000 samples/second
Overall Filter Range	2.0 Hz to 4000 Hz

Environmental

Temperature Range	Vibration Module: -40° to +105°C (-40°F to +221°F) LoRa Transmitter Module: -40° to +85° C (-40°F to +185°F)
Material + IP Rating	Vibration Module: Material PPS, IP68 LoRa Transmitter Module: Material ASA, IP67
Mounting	Vibration Module: 1/4-28 Bolt (standard), Epoxy or Magnet (options) LoRa Transmitter Module: Magnet (standard), Mounting Bolt (option)

Battery

Battery Type	D-Cell, non rechargeable, *Lithium Thionyl* Chloride
Battery Life	Application dependent, 4+ years

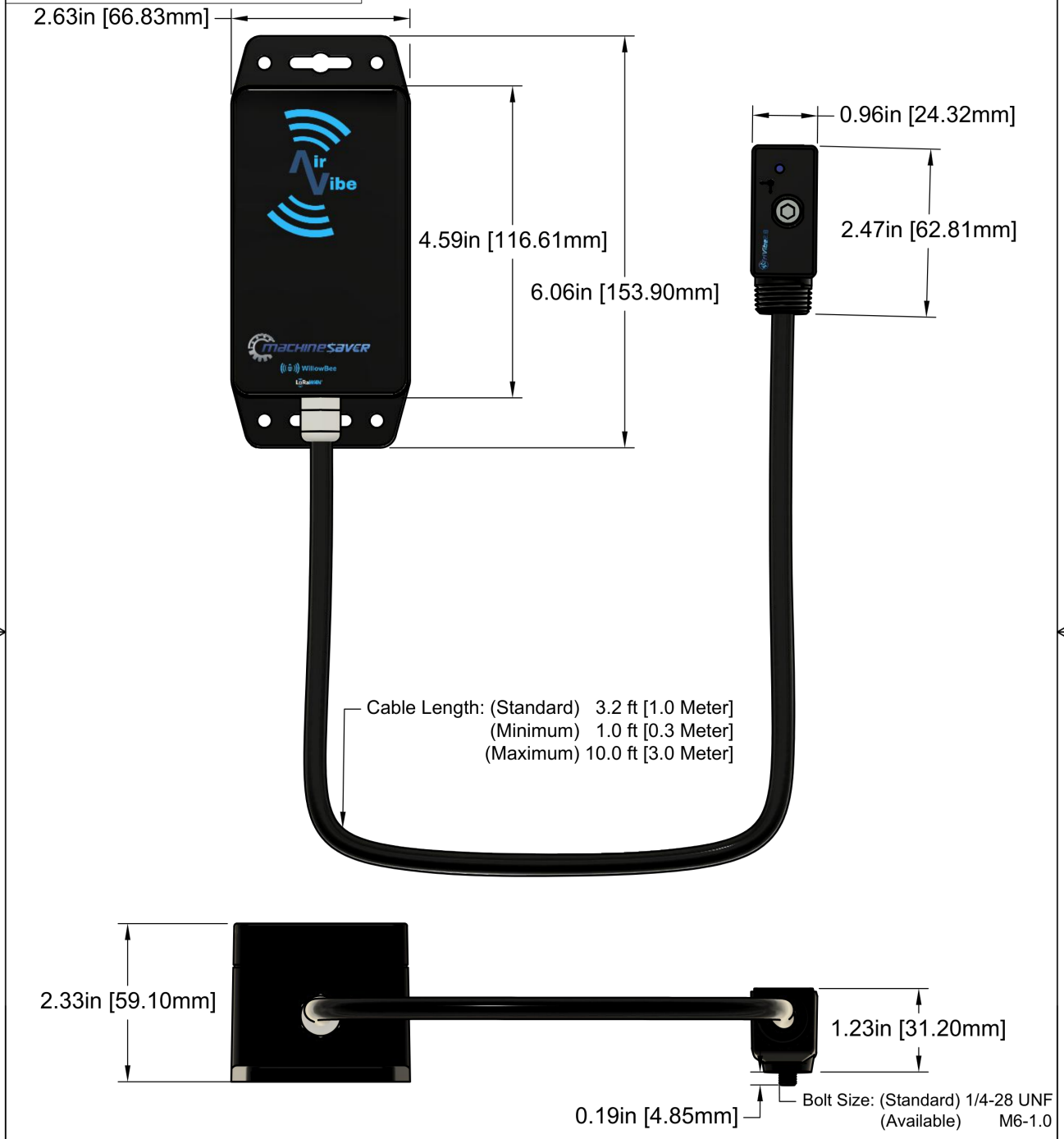
Communication

LoRa Frequency	868 MHz for Europe and Middle East 915 MHz for North America
LoRa Range	Site dependent, up to 1 miles (1.5 kilometers) non-line-of-sight, up to 10 miles (15 kilometers) line-of-sight
Antenna	Built-in

Output

Vibration	Acceleration, Velocity, Time Waveform, Spectrum (FFT)

Dimensions



PROJECT AirVibe			TITLE AirVibe			
APPROVED	Leo Bach	5/1/2023				
CHECKED	Bryson Carroll	5/1/2023	SIZE	SCALE	DWG NO	REV
DRAWN	Luke Benjamin	5/1/2023	A	1:2	2023_05_01_01	1.01