

DATA SHEET

BearingBud™

Real time online Vibration Analysis of rotating components



General

- Real-time 24/7 autonomous vibration monitoring of pulley idlers and other rotary equipment.
- Completely wireless design requires no external wiring
- Seamless hardware installation within rotary equipment
- Typically requires 1 Gateway per 6 BearingBud™
- Low cost, high-performance design
- Intrinsically safe for Zone 0, Group I (Ex ia I Ma).
- Consumable/replaceable item (OPEX)
- Designed to meet IP67 requirements

Control System Integration

WiFi, Ethernet and 4G network interfaces available

Barcode

Barcode is used to identify BearingBud™ and assign it to the network.

Mechanical

Plug and play mounting on steel surfaces, utilising the devices internal high pull strength Neodymium magnets.

High Resolution Acceleration Data

Incorporates a high resolution 3-Axis accelerometer MEMs sensor, with the facility to sample one of the Axis at 1kHz and store up to 30 seconds of time sampled data.

Power

Incorporates a non-volatile lithium chemistry battery

Parameter	Conditions	Min	Typ	Max	Units
General Characteristics					
Ambient Operating Temperature		-20		+40	°C
Ambient Storage Temperature		-20		+60	°C
Operating Power		0.6	1	2.5	mW
No. of Devices per Gateway		1		6 ¹	ea
Shelf Life				30	years
Radio Frequency Characteristics					
Range				30	m
Frequency		2.402		2.480	GHz
Data Rate		32	400	1200	pkts.min
Channel Spacing			79		kHz
Transmit Power			4		dBm
Receive Sensitivity			-96		dBm
Transaction Time			10		ms
Data Acquisition Characteristics					
Sampling Frequency			1125		Hz
Sampling Duration				30	s
Data Transfer Time			60		s
Battery Characteristics					
Battery Chemistry			Lithium SOC I2		
Battery Capacity			2.6		Ah
Battery Voltage			3.6	3.67	V
Operating Life – Very Fast Mode	5 Minute Acquisition Intervals – Max devices: 1 per Gateway		4		months
Operating Life – Fast Mode	15 Minute Acquisition Intervals – Max devices: 2 per Gateway		8		months
Operating Life – Medium Mode	30 Minute Acquisition Intervals – Max devices: 4 per Gateway		11		months
Operating Life – Slow Mode	60 Minute Acquisition Intervals – Max devices: 6 per Gateway		13		months
Shelf Life	Device Disabled		30		years

1. Maximum number of devices per gateway is based on 1 hour acquisition intervals. Number of devices may be increased if the acquisition period is increased, however, further testing and consultation with Vayeron is advised.

