

AURORA smart vibration sensor 213MM1-B1



The Aurora system is the highly accurate and cost-effective machine health monitoring system. It assembles several vibration sensors with built-in intelligent computing functions, which can actively sense the health status of equipment, and transmit the computing results to the field control system via open transmission protocols.

213MM1-B1 is a triaxial, Bluetooth, high-bandwidth, smart vibration sensor, which can instantly diagnose the health status of machine.

The built-in time domain data cleaning and RPM identification functions can handle the monitoring and diagnosis of variable frequency rotating machine and variable operating equipment easily.

Applications:

Providing early warning diagnosis and rest useful life estimation of components in high-speed rotating machine, motor, gearbox and changeable motion equipment, such as robot and linear guide.

Model		213MM1-B1
Measurement capability	Mechanical phenomenon	Vibration
	Measurement direction	Triaxial (X, Y and Z)
	Amplitude	±50 g
	Sensitivity (±5%)	0.488 mg / LSB
	Frequency	5 - 5 kHz
Computing capability	ADC resolution	16-bit
	CPU	Arm® Cortex®-M7 core
	Clock speed	480 MHz
	Flash memory	2 Mbytes
Environmental resistance	RAM	1 Mbyte
	Temperture	0 - 65 °C
Power supply	Power voltage	18 to 24 VDC
	Power consumption	0.45 W
	Reverse voltage protection	V
Feature extraction and damage identification	Cycle speed	1 Cycle/s
	Sampling rate	~26,667 Samplings/s
	Sampling mode	Successively sampling
		Software trigger
		Hardware trigger
	Time domain data cleaning	V
	RPM identifier	V
	Time domain features	Overall (mm/s)
		Peak (mm/s)
		Peak to peak (mm/s)
		Crest factor
	Damage identification	Power in band
		Power in order
	Failure alarm	Caution
		Warning
Communication	Method	Wireless communication
	Protocol	BLE 4.2
	Radio band	2.4 GHz
	Transmission distance	20m(standard)
	Upload content	Raw data
		Time domain features
		Damage identification
		Failure alarm
	Download settings	Sampling mode
		Time domain data cleaning
		Damage identification
		Failure alarm
		Algorithm upgrade
Configuration	Dimensions w/ the antenna	40 x 46 x 63 mm
	Dimensions without the antenna	40 x 46 x 34.7 mm
	Housing material	engineering-plastics
	Secure method	Seal
	Power supply wires	Integrated, 1m of length
	LEDs for running status	V 2*
	LED for communication status	V 3*
Software (device management)	Connection / disconnection	V
	Enablement / disablement	V
	Sampling mode setting	V
	Time domain data cleaning setting	V
	Damage identification setting	V
	Failure alarm setting	V
	Algorithm upgrade setting	N/A

1* Use software to select the trigger mode

2* GREEN LED on: satisfactory status / RED LED on: Failure

3* LED blinks: Bluetooth pairing / LED dims: Failure to Bluetooth pairing

