AEInnova
Alternative
Energy Innovations

InduEye® VibroSense 3 LoRa (NOD-0008)

InduEye® VibroSense 3 LoRa Ex ic (NOD-0009)

Technical datasheet

WIRELESS SPECIFICATIONS	**Communication protocol**	LoRaWAN Class A EU868, AS923, AU915, US915		
	Data rate	5,5 kbit/s		
	Coverage range	Up to 2 km		
	Frequency	EU868: 863–870 MHz AS923: 923–925 MHz AU915: 915–928 MHz US915: 902–928 MHz		
	Radio security	128-bit AES encryption		
	RF transmission power	EU868: max. 14 dBm AS923: max. 16 dBm AU915: max. 23 dBm US915: max. 23 dBm		
	Antenna	External omnidirectional antenna (2 dBi max.)		
ELECTRICAL SPECIFICATIONS	**Input Supply voltage**	5 V		
	Maximum input current	2 A		
PERFORMANCE SPECIFICATIONS	**Measurement**	**Vibration**	**Delivered parameters**	-Velocity (RMS) -Acceleration: • Peak to Peak (g) • 0 to Peak (g) • Kurtosis • Crest Factor • Waveform • FFT
			Axis	X, Y, Z
			Measurement range	-Acceleration: 0 to 157 m/s² (0 to 16 g) -Velocity: 0 to 180 mm/s
			Frequency range	10 Hz a 6.000 Hz (± 3 dB)
			ISO 10816-3	RMS: 10 Hz–1 kHz (X, Y and Z)
		Temperature	**Measured parameter**	Temperature
			Measurement range	-20 °C to 400 °C (-4 °F to 752 °F) *(Depends on the temperature probe used)*
			Resolution	0,1°C
			Measurement element	External PT100 probe
	Operating options	<u>Option 1: (8 configurable operating modes)</u> Default mode (A): • RMS (X, Y, Z) • Temperature • FFT from 10 Hz to 6 kHz (X, Y, Z). Resolution: 35 Hz Mode B: • RMS (X, Y, Z) • Peak to Peak (X, Y, Z) • 0 to Peak (X, Y, Z) • Kurtosis (X, Y, Z) • Crest Factor (X, Y, Z) • Temperature Mode C: • FFT from 10 Hz to 100 Hz on a selected axis (X, Y, or Z) Resolution: 0,8 Hz • Temperature Mode D: • FFT from 100 Hz to 500 Hz on a selected axis (X, Y, or Z) Resolution: 3,9 Hz • Temperature Mode E: • FFT from 500 Hz to 1 kHz on a selectable axis (X, Y, or Z) Resolution: 0,97 Hz • Temperature Mode F: • FFT from 1 kHz to 2 kHz on a selectable axis (X, Y, or Z) Resolution: 3,9 Hz • Temperature Mode G: • FFT from 2 kHz to 3 kHz on a selectable axis (X, Y, or Z) Resolution: 10 Hz • Temperature		

		Mode H: • FFT from 3 kHz to 6 kHz on a selectable axis (X, Y, or Z) Resolution: 20 Hz • Temperature • **All operating modes transmissions up to 6 times per hour** <u>Option 2 (RAW data):</u> • Waveform (X,Y,Z) Acceleration Configurable: -Sample size (powers of 2 up to 16384 samples) -Sampling frequency (200, 1000, 2000, 4000, 8000, 16000 Hz) **Up to 4 transmissions per day**
INSTALLATION ENVIRONMENT	**Ambient temperature limits**	-20 °C to 50 °C (-4°F to 122 °F)
REGULATORY COMPLIANCE DECLARATIONS	**Ingress protection rating**	IP67
	Explosion-proof	ATEX Zone 2 and Zone 22 (NOD-0009)
	Certifications	CE / FCC / ANATEL (Ongoing)
PHYSICAL SPECIFICATIONS	**Materials**	Aluminium Alloy, AlSi 12 (Enclosure) Stainless steel (Bracket)
	Weight	0,42 kg
	Mounting	Adhesive
	Dimensions (mm)