

IVS-LN Industrial Vibration Sensor



IVS-LN

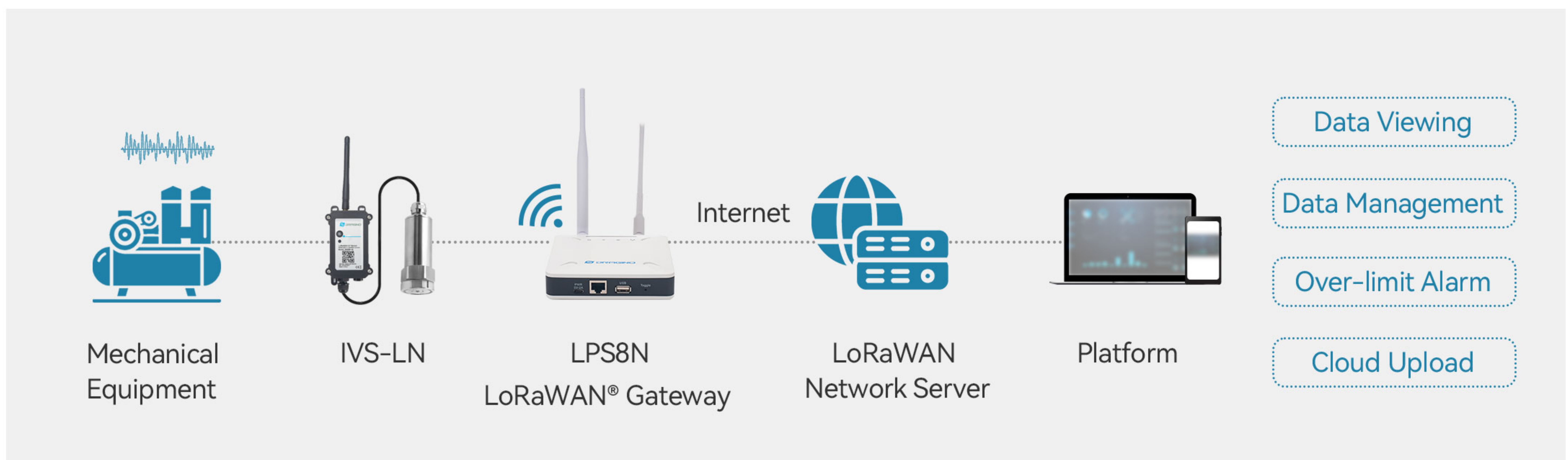


Overview

Industrial Vibration Sensor is designed for motors, pumps, fans, and other rotating equipment, enabling early fault detection and predictive maintenance. ISO 20816-1 provides general guidelines for measuring and evaluating machine vibration, establishing standardized methods to assess equipment condition and detect potential faults.

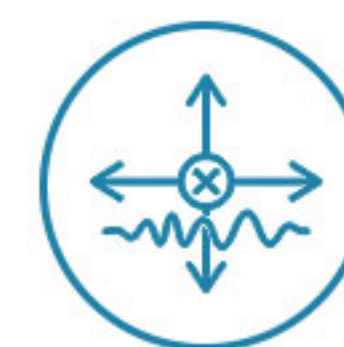
IVS-LN is compliant with ISO 20816-1 vibration evaluation guidelines. IVS-LN measures temperature, vibration frequency, RMS acceleration, RMS velocity & vibration displacement. And send these value to application server via LoRaWAN wireless protocol.

How does this product work?



Features

- LoRaWAN v1.0.3 protocol
- Bands: US915/EU868/AS923/AU915/IN865...
- Compliant with ISO 20816-1 vibration evaluation guidelines.
- Monitor: RMS Acceleration/RMS Velocity/Vibration Frequency/Temperature
- Support Bluetooth v5.1 and LoRaWAN remote configure
- Support wireless OTA update firmware
- DC Power + 1000mAh BackUp Battery



Monitor RMS
Acceleration



Monitor
RMS Velocity



Monitor Vibration
Frequency



Monitor
Temperature

Specification

- Probe IP Rate: IP68
- Probe Operate Temperature: -40 ~ 80°C
- Vibration Measure Parameters:
 - Frequency: 10~1600Hz or 10~5000Hz
 - RMS Velocity: 0 ~ 50 mm/s, Accuracy : <1%
 - Vibration Displacement: 0-5000 μm (Peak-to-Peak)
 - RMS Acceleration: 16g, Accuracy : <1%
 - Surface Temperature: -40 ~ 80°C

Applications



Workshop



Power Generation



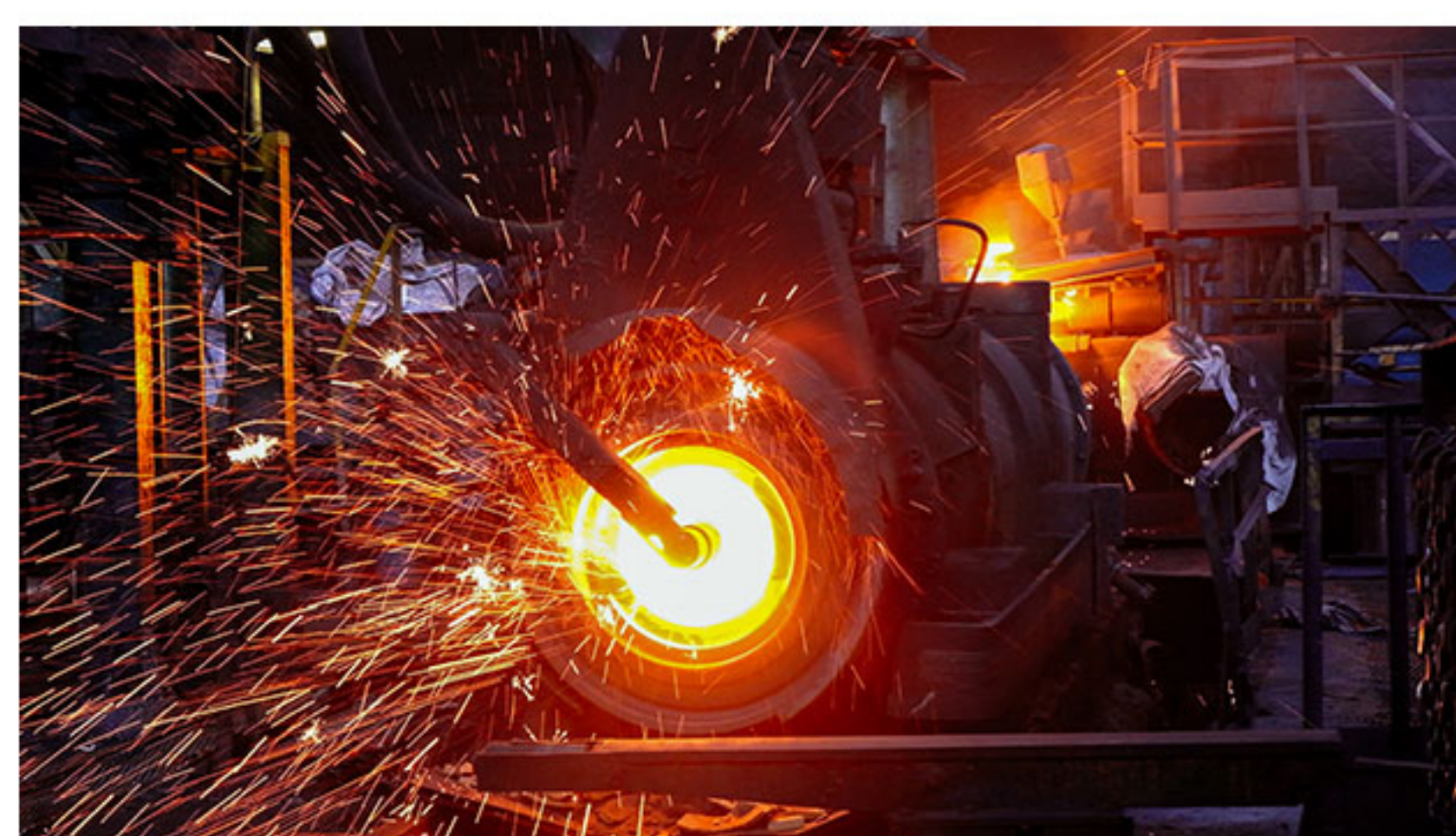
Laboratory



Coal Mine



Chemical Industry



Metallurgy

Install Examples



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Reference

ISO 20816-1 Mechanical Vibration Standard

Applicable to various types of rotating and reciprocating machinery such as motors, fans, pumps, and machine tools. This product can detect vibration velocity and vibration displacement, suitable for equipment vibration testing, condition monitoring, and fault diagnosis.

Typical Range of Boundary Values for Zones A/B, B/C, and C/D on Non-Rotating Parts

	Typical Range of Boundary Values for Zones on Non-Rotating Parts RMS Vibration Velocity (mm/s)			
0.28				0.28
0.45				0.45
0.71	A/B Zone Boundary 0.71~4.5			0.71
1.12				1.12
1.8				1.8
2.8		B/C Zone Boundary 1.8~9.3		2.8
4.5				4.5
7.1				7.1
9.3			C/D Zone Boundary 4.5~14.7	9.3
11.2				11.2
14.7				14.7
18				18
28				28
45				45
Note 1: This table applies only to machines for which no specific standards exist and no adequate experience is available. Note 2: Small machines (e.g., electric motors with power ≤ 15 kW) tend to use the lower end of the range, while large machines (e.g., prime movers with flexible supports in the measurement direction) tend to use the upper end of the range.				

Additional Notes

Since the above data is taken from a basic document providing general guidelines for the measurement and evaluation of mechanical vibration in machines, no specific evaluation criteria for machines are defined. For machine types without specific international standards, evaluation criteria are usually based on successful operating experience with similarly designed machines and shall be subject to agreement between the machine supplier and the customer. Factors to be considered include measurement location and direction, frequency range, support flexibility, and operating conditions. In the absence of adequate experience or international standards, the table above gives typical ranges for the boundaries of zones A/B, B/C and C/D on non-rotating parts. For specific equipment types, priority should be given to the corresponding clauses of ISO 20816 and equivalent national standards such as the GB/T 41850 series.