

4ch Wireless Vibration Sensor

Wireless Solution for the Industrial IoT - Sushi Sensor

Broad Coverage Expanding Monitoring Targets with Vibration Pickups

Deep Insight Advanced Diagnostics through Vibration Monitoring

■ Product Overview

By combining the battery-powered Wireless Communication Module (XS110A) and the Vibration Measurement Module (XS540), and connecting one to four Vibration Pickups (XS01VT), these components form a 4ch Wireless Vibration Sensor compatible with LoRaWAN® wireless communication. The separated structure allows the vibration pickup to be installed at optimal monitoring points—including metal-enclosed or high-temperature locations—while the other units are placed where stable wireless communication and reliable operation can be maintained.

■ Features

Expanded Monitoring Coverage for Diverse Equipment

- Monitoring in confined spaces using compact vibration pickups
- Wide operating temperature range: -40°C to 125°C
- Wide-band vibration measurement: 5 Hz to 10 kHz
- High environmental resistance, including dustproof, waterproof, and suitability for hazardous areas (Zone 1 and Division 1)

Support for Detailed Diagnostics

- Multi-channel monitoring (up to 4 channels) to support identification of abnormal locations within equipment
- Early detection of bearing anomaly signs using Crest Factor (CF)
- Support for fault cause investigation through FFT-based analysis of time-domain waveform data
- Remote sensor configuration via LoRaWAN downlink



Wireless Communication Module

XS110A

Vibration Measurement Module

XS540

Vibration Pickup XS01VT Dimensions

Body:
Φ24mm×42.5mm

Magnet:
Φ30mm×15mm



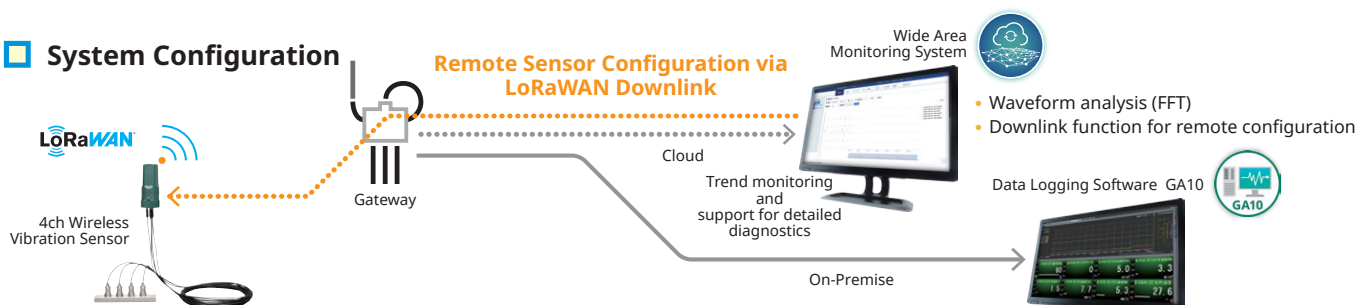
Dedicated Cable
(Extension option: +5m)



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System Configuration



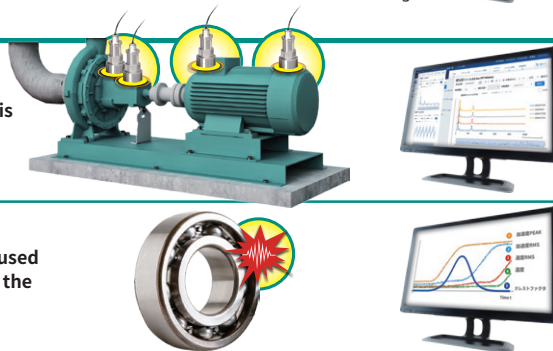
Application Example

Trend monitoring with support for detailed diagnostics for rotating equipment.

Applicable equipment includes pumps, fans, compressors, bearings

Equipment diagnostics are supported through FFT analysis of time-domain waveform data in the cloud.

Early-stage bearing defects caused by wear can be detected using the Crest Factor (CF).



Specifications: 4ch Wireless Vibration Sensor

Measurement Range	Input Frequency			5 Hz to 10 kHz (±3 dB)
	Acceleration Range			±50 G (Linearity: ±0.5% F.S.)
Performance Specifications	Measurement Axis			Z-axis (single axis)
	Transmitted Data	Vibration	Acceleration	Peak, RMS, Crest Factor
			Velocity	Peak, RMS
			Time-domain waveform	Acceleration time-domain waveform data
		Temperature	-40°C to 125°C	
	Number of channels			4ch
	Update Interval*1	Trend monitoring		2 minutes to 3 days
Waveform transmission		1 week to 1 month		
Applicable Standards	Explosion Protection			Intrinsic Safety (Certification planned)
	Degrees of Protection			IP66/IP67
Vibration Pickup Specifications	Size			Φ24mm×42.5mm
	Ambient temperature range			-40°C to 125°C*2
	Cable			Length: 5m (extension option: +5m)
	Mounting method			Magnet (sold separately), M6 female thread

*1 Trend monitoring data and waveform transmission data are sent at different intervals.

*2 The connector portion connected to the vibration measurement module supports -40°C to 85°C . Product specifications are subject to change without notice.



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