

WISE-2461

6KHz@3-axis Smart Vibration Sensor

NEW



Features

- RS-485 Serial communication through Modbus/RTU protocols
- 6KHz@3-axis frequency detection range
- Supports 3-axis measurement of Velocity RMS, Acceleration RMS/Peak, Displacement, Crest Factor and others for full-spectrum machinery health monitoring
- Features a wide 6kHz detection range with up to 6 customizable frequency bands per axis for precise failure diagnosis
- ISO 10816/20816 compliant
- Supports wide temperature -40 ~ 85°C
- IP68 rating, internally potted design for outdoor applications.

Introduction

WISE-2461 is a robust RS-485 smart vibration sensor integrated with an ARM Cortex-M33 processor, 6KHz@3-axis high detection range accelerometer and temperature sensor. This powerful computing device balances the bandwidth between edge devices and the application service on the user side.

WISE-2461 builds-in several measurements of vibration, such like velocity RMS, acceleration RMS, acceleration Peak, displacement and so on. By using Advantech WISE Studio utility, users can easily config all the setting, like to customize the 6 detection ranges between 5 ~ 6,000Hz and others.

Common Specification

General

- **Power Input** 10 ~ 30V_{DC}
- **Configuration Interface** RS-485 (Modbus/RTU)
- **Connector** M12, D-code Male
- **Cable Length** 1m
- **IP Class** IP68
- **Casing material** Stainless steel
- **Mounting** Stud mount, mounting pad with adhesives, magnetic base
- **Dimension (W x H x D)** 30 x 30 x 13 mm
- **Certification** CE, FCC

Environment

- **Operating Temperature** -40 ~ 85°C
- **Operating Humidity** 10% ~ 95% RH
- **Storage Temperature** -40 ~ 90°C
- **Storage Humidity** 5% ~ 95% RH

3-Axis Accelerometer Sensor

- **Axis** X/Y/Z
- **Frequency Range** 5~6000Hz
- **Amplitude Range** ±16g
- **Time Waveform Record Length** 16384 points
- **FFT Lines of Resolution** 6400
- **Output Data Rate(Sample Rate)** 26667Hz
- **Accuracy(Z-axis)** 5-3000Hz (10%); 3001~6000Hz (20%)
- **Noise** 75 µg/√Hz in ±16g@X/Y-axis
110 µg/√Hz in ±16g@Z-axis
- **Sensitivity Change Due to Temperature** ±1%

Ordering Information

- **WISE-2461-MA** 6KHz@3-axis Smart Vibration Sensor

Accessories

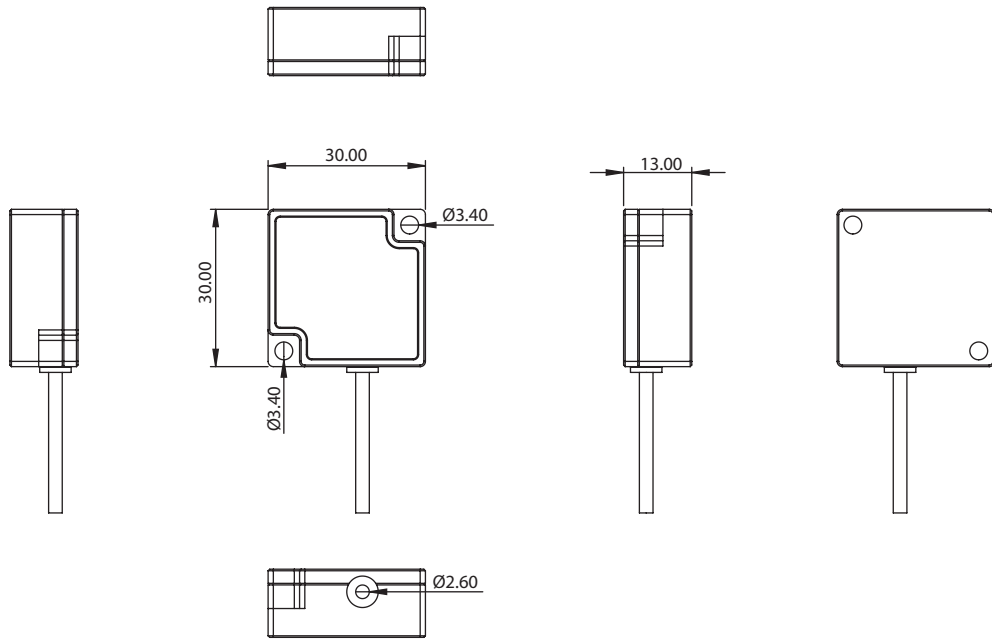
- **25F700004N000** Magnet base D30XH9mm for WISE-2460 installation
- **WISE-2410-MTB01** Metal base for WISE-2460 installation
- **1700028162-01** M12, A-code, 4 pin, Female with 1M cable

Wireless Module

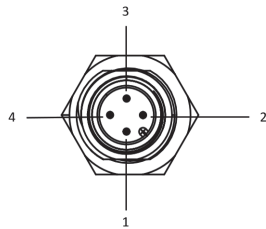
- **WISE-4051-B** 2.4G WiFi IoT Wireless I/O with 8DI/1RS-485
- **WISE-4250-S250-A** 2.4/5GHz Wi-Fi IoT Wireless I/O with 6DI/2DO/RS-485
- **WISE-2200-M** LoRaWAN RS-485 Modbus I/O Module

Dimensions

Unit: mm



Pin Define



WISE-2461 Pin Number	Pin Name	Pin Description
1	+VS	Input power V+
2	Data+	RS-485 Data+
3	-VS	Input power V-
4	Data-	RS-485 Data-

1700028162-01 Pin Number	Wire Color
1	Brown
2	White
3	Blue
4	Black