Wireless CO Detector

Wireless Sensor Network Based on LoRa Technology

LED Indicator

Binding Key

Test Key

Battery Holder

Fixed Base

RA02C

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Wireless CO Detector

General Description

RA02C is a wireless control alarm device for smart home and high reliability. It adopts wireless communication method conforming to the LoRaWAN protocol standard.

RA02C is a device for the detection of harmful gases in the home environment. It is suitable for the detection of CO (carbon monoxide). When the concentration exceeds the preset value, it will trigger the alarm and fully comply with the LoRaWAN protocol standard.

Example Applications

• Carbon Monoxide Detection
• Carbon Monoxide alarm products for families, apartments, schools, hotels, etc.

Features of NETVOX Sensors

• Wireless range of 10 km [*1]
• LoRaWAN™ compatible
• Frequency Hopping Spread Spectrum (FHSS)
• Improved interference immunity
• Encrypt-RF™ Security (Diffie-Hellman Key Exchange + AES-128 CBC for sensor data messages)
• Over-the-air updates (future)
• Third-party online wireless sensor monitoring and notification system to configure sensors, view data and set alerts via SMS text and email (optional)
• Available third-party platform: Actility/ThingPark, TTN, MyDevices/Cayenne
• Uses SX1276 wireless communication module

*1. Actual range may vary depending on environment.
*2. Battery life is determined by sensor reporting frequency and other variables

Wireless CO Detector

Electric

Power Input	2*AAA alkaline battery
Standby Current	18uA/3VDC
Average Operating Current	70uA/3VDC
Current While alarming	20mA/3VDC
Alarm Sound Intensity	85dBm at 3m
CO Detection Concentration Range	0 ~ 1000ppm

Frequency

TX Power	19dBm±1dBm
Rx Sensitivity	-136dBm (LoRa，Spreading Factor=12, Bit Rate=293bps) -121dBm (FSK,Frequency deviation=5kHz, Bit Rate=1.2kbps)
Antenna Type	Build-in antenna
Communication Range	10 km (line-of-sight, the actual transmission distance depends on the environment)
Data Transfer Rate	0.3kbps～50kbps
Spread Technique	LoRa/FSK
Available Frequency	EU863-870，US902-928，AU915-928，KR920-923，AS923，CN470-510　Configured before shipment

Physical

Dimension	D106mm , H36mm
Operating Temperature Range	-20℃ ～ 55℃
Operating Humidity Range	< 90%RH (no condensation)
Storage Temperature range	-40℃ ～ 85℃

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