

Indoor Air Quality Detector

DATASHEET

Document Information	
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1. Overview



Figure 1. Indoor Air Quality Detector

1.1. Features

- 24-hour real-time online monitoring of overall indoor air quality
- Advanced sensor technology
- Remote monitoring
- Supported frequency band: RU864, IN865, EU868, US915, AU915, KR920, and AS923-1/2/3/4
- Easy to install and configure
- Power Supply: 100~240 V_{AC}
- Intelligent data processing
- Meets the stringent WELL v2 standard for indoor air quality
- Color-changing LED to indicate indoor air quality levels visually
- Network Join Mode: OTAA/ABP
- Device Work Mode: Class A, Class B, or Class C

1.2. Main Applications

- Design for indoor air quality monitoring
- Fresh air filtration system
- Office building system
- Building energy efficiency reform and evaluation system
- All green buildings
- Comprehensive real estate projects, etc.

2. Specifications

Parameter	Specification
Detection Data (Optional)	Modular design sensor, up to 7 parameters (Max.) Temperature and humidity are standard configurations. Optional parameters: <ul style="list-style-type: none"> ● PM2.5/PM10 ● CO₂ ● TVOC ● CO ● HCHO ● O₃ ● NO₂
Output	LoRaWAN (CayenneLPP)
Frequency	RU864, IN865, EU868, US915, AU915, KR920, AS923-1/2/3/4
Operating environment	Temperature: 0° C~50° C Humidity: 0 ~90% RH
Storage environment	Temperature: -10° C~50° C Humidity: 0~70% RH
Power Supply	100~240 V _{AC}
Overall Dimension	130 mm × 130 mm × 45 mm (l × w × h)
Ingress Protection	IP30
Enclose material	PC + ABS (flame retardant material)
Certification Standard (CE)	SAR: EN 62479 & 50663 Health Assessment RF: ETSIEN300328 LVD (Bluetooth): EN61010-1 EMC: EN61326-1 EMC (Wi-Fi): <ul style="list-style-type: none"> ● ETSI EN301489-1V2.2.3 (2019-11) ● ETSI EN301489-17V 3.2.4 (2020-09)

2.2. Sensor Characteristics

2.2.1. PM2.5/PM10 Data

Parameter	Specification
Sensor	Laser particle sensor, light scattering method
Measuring Range	<ul style="list-style-type: none"> PM2.5: 0~1000 $\mu\text{g}/\text{m}^3$ PM10: 0~1000 $\mu\text{g}/\text{m}^3$
Output Resolution	1 $\mu\text{g}/\text{m}^3$
Accuracy	$\pm 5 \mu\text{g}/\text{m}^3 + 20\%$ at 1-100 $\mu\text{g}/\text{m}^3$

2.2.2. CO₂ Data

Parameter	Specification
Sensor	<ul style="list-style-type: none"> Non-dispersive Infrared Detector (NDIR) Lifetime and auto calibration
Measuring Range	400~5000 ppm
Output resolution	1 ppm
Accuracy	$\pm 50 \text{ ppm} + 5\%$ at 400-2000 ppm

2.2.3. TVOC Data

Parameter	Specification
Sensor	Multi-pixel gas sensor
Measuring range	1~2000 $\mu\text{g}/\text{m}^3$
Output resolution	1 $\mu\text{g}/\text{m}^3$
Accuracy	$\pm 20 \mu\text{g}/\text{m}^3 + 15\%$

2.2.4. Temperature and Humidity Data

Parameter	Specification
Sensor	Digital integrated temperature and humidity sensor
Measuring range	Temperature: 0° C~60° C Humidity: 0~99% RH
Output resolution	Temperature: 0.01° C Humidity: 0.01% RH
Accuracy	Temperature: ±0.5° C (10~40° C) Humidity: ±5.0% (10%~90% RH)

2.3. Dimensions

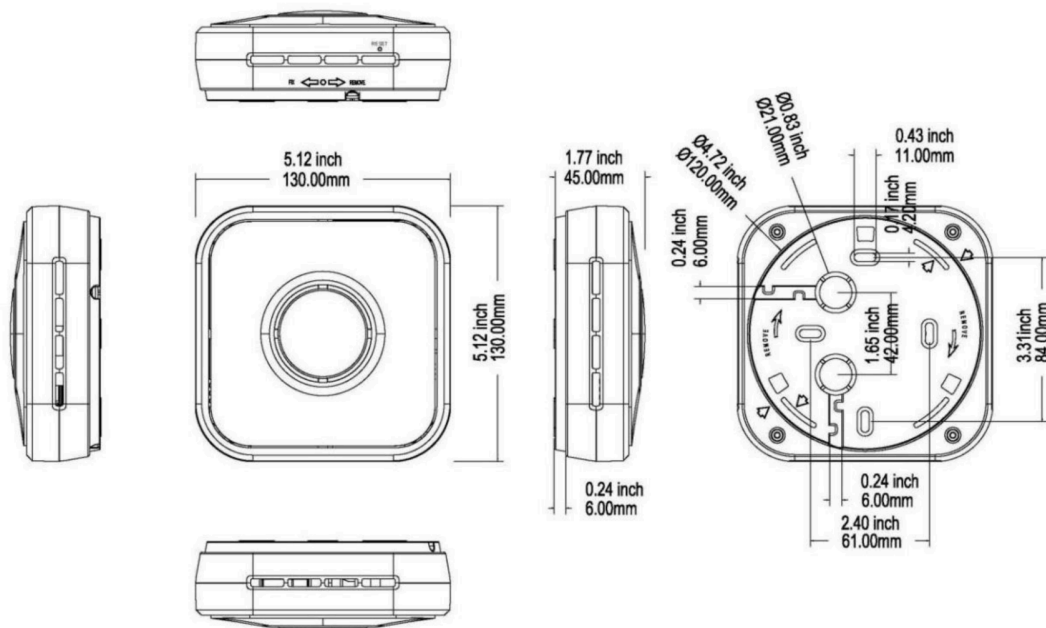


Figure 2. IAQ Detector Dimensions