

YF100

Air Quality Sensor

The YF100 series indoor air quality sensor is a versatile device capable of measuring multiple air parameters. It supports the detection of ten environmental parameters, including PM2.5, PM10, PM1.0, CO₂, TVOC, formaldehyde, temperature, humidity, light, noise, atmospheric pressure, PIR, ozone, and CO, allowing for flexible combinations.

The YF100 series supports multiple communication protocols such as LoRaWAN, RS485, 4G, Bluetooth, and Wi-Fi. Additionally, it is compatible with third-party IoT platforms, enabling remote data monitoring and management.

The YF100 series is widely suitable for indoor air quality monitoring in offices, shopping malls, campuses, laboratories, hospitals, and other similar environments.

Features

- **High Precision:** Independent sensor modules enable reliable, simultaneous multi-parameter detection.
- **Flexible Configuration:** Detect a wide range of parameters PM, CO₂, TVOC, Formaldehyde, etc. in customizable combinations.
- **Versatile Connectivity:** Supports RS485, 4G, Bluetooth, and Wi-Fi for easy integration.
- **Durable & Adaptable:** Flame-retardant ABS housing allows for ceiling or wall mounting.

Model Description

Model Number	Description
YF100(R)	Indoor Air Quality Sensor (RS485 Communication)
YF100(L)	Indoor Air Quality Sensor (LoRaWAN Communication)
YF100(W)	Indoor Air Quality Sensor (WiFi Communication)
YF100(B)	Indoor Air Quality Sensor (Bluetooth Communication)

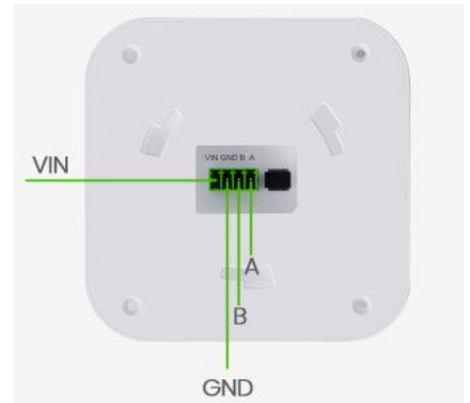


Technical Specification

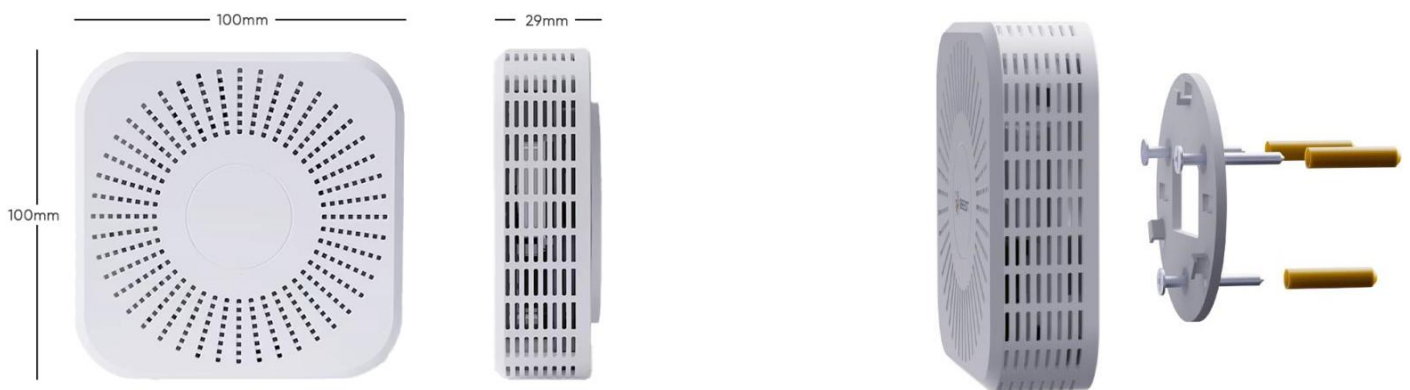
Model		YF100		
Electrical Parameters	Operating Voltage	DC 10V~30V (standard 24V)		
	Operating Current	≤200mA (@5Vpower supply)		
	Stabilization time	2min		
	Detection Frequency	Data updates every second (default)		
	Output Method	Default	Modbus-RS485	
		Options	LoRaWAN、4G、WIFI、BLE	
	Material	ABS flame-retardant housing		
	Installation	Ceiling-mounted, Wall-mounted		
Dimensions	100x100x30 mm			
Environmental Parameters	Operating Temperature	-10°C ~ 55°C		
	Operating Humidity	0 ~ 99%RH (non-condensing)		
	Storage Environment	-30°C ~ 60°C; 0 ~ 99%RH (non-condensing)		
Sensor Specification				
Detection Type	Range	Resolution	Accuracy	Lifespan
Temperature	-20°C~55°C	0.01°C	±1°C	10 years
Humidity	0~99%RH	0.1%RH	±5%RH	10 years
pm2.5	0~1000µg/m ³	1µg/m ³	±10% reading	≥40000h
pm10	0~1000µg/m ³	1µg/m ³	±10% reading	≥40000h
pm1.0	0~1000µg/m ³	1µg/m ³	±10% reading	≥40000h
CO2	400~5000ppm	1ppm	±50ppm±3%FS	10 years (in air)
HCHO	0~5000µg/m ³	1µg/m ³	±10µg/m ³ ±10%FS	2 years (in air)
TVOC	0~5000µg/m ³	1µg/m ³	±10% reading	10 years (in air)
O3	0~10ppm	0.001ppm	±2%FS	2 years (in air)
CH4	0~100%LEL	1%LEL	±5%FS	3 years (in air)
CO	0~1000ppm	0.1ppm	±3%FS	2 years (in air)
O2	0~25%Vol	0.1%Vol	±3%FS	2 years (in air)
NH3	0~100ppm	1ppm	±5%FS	2 years (in air)
H2S	0~100ppm	1ppm	±5%FS	2 years (in air)
NO2	0~20ppm	0.1ppm	±3%FS	2 years (in air)
SO2	0~20ppm	0.1ppm	±3%FS	2 years (in air)
Atmospheric Pressure	30~110Kpa	0.1Kpa	±0.15Kpa@25°C 75Kpa	3 years (in air)
Illuminance	0~200K Lux	1Lux	±7%@25°C	3 years (in air)
Noise	3b~130db	0.1db	±1db	3 years (in air)

Pin Definition

PIN	Definition	Description
24V	VCC	Power Input +24V
GND	GND	Ground Terminal
B	485B	Modbus-RS485 B
A	485A	Modbus-RS485 A



Installation



Step 1: Secure the mounting plate using expansion screws.

Step 2: Align the device with the mounting slots.

Step 3: Rotate the device clockwise to lock it in place.