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› WapoRich HZ-011-C Air Quality Dust Particle Counter User Manual

WapoRich HZ-011-C

WapoRich HZ-011-C Air Quality Dust Particle Counter User Manual

Model: HZ-011-C

INTRODUCTION

This manual provides instructions for the WapoRich HZ-011-C Air Quality Dust Particle Counter. This device is designed to accurately detect particle counts and mass concentrations of dust particles, as well as measure temperature and humidity. It is suitable for various applications, including cleanroom testing and general air quality monitoring. The HZ-011-C features six-channel particle size detection, PM2.5/PM10 measurement, temperature and humidity sensing, Tuya app control for remote monitoring, and data export capabilities.

PACKAGE CONTENTS

Verify that all items are present in the package:

- HZ011C Dust Particle Counter × 1
- Carrying Case × 1
- RS485 Cable × 1
- USB Cable × 1
- Power Adapter × 1
- User Manual × 1

Your browser does not support the video tag.

Video: An overview of the WapoRich Dust Particle Counter and its included accessories.

SETUP

Initial Power On

1. Ensure the battery switch inside the compartment is set to **ON**.
2. Connect the device to the power adapter using the USB cable to charge the internal 10,000 mAh battery. The battery icon on the display will indicate charging status.

3. Press and hold the power button (yellow button) to turn on the device.

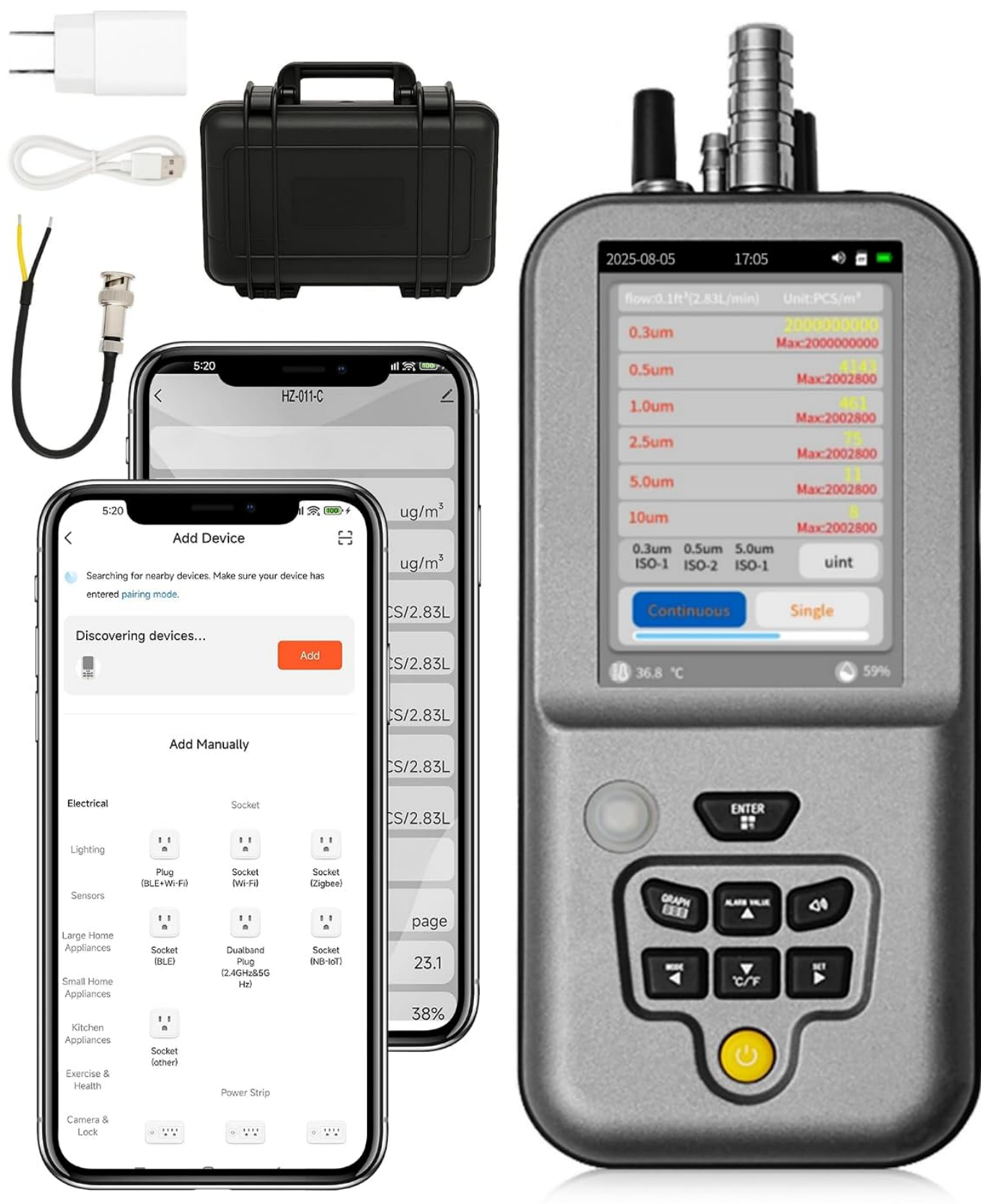


Image: The WapoRich HZ-011-C Dust Particle Counter, showing its main display and control buttons.

Component Identification



Image: A diagram identifying key components of the HZ-011-C, such as the RS485 port, air pump sampling port, air outlet, temperature & humidity sensor, Wi-Fi antenna, light, speaker, USB flash drive port, SD card slot, Type-C port, and alarm light/single test button.

- **RS485 Port:** For external display output.
- **Air Pump Sampling Port:** Where air is drawn in for particle analysis.
- **Air Outlet:** Where processed air exits.
- **Temp & Humidity Sensor:** Measures ambient temperature and humidity.

- **Wi-Fi Antenna:** For Tuya APP connectivity.
- **USB Flash Drive Port:** For data export.
- **SD Card Slot:** For expandable storage and data export.
- **Type-C Port:** For charging and USB data connection.
- **Alarm Light & Single Test Button:** Indicates alarms and initiates single tests.

OPERATING INSTRUCTIONS

Particle Measurement

The device can detect six particle sizes simultaneously: 0.3µm, 0.5µm, 1.0µm, 2.5µm, 5.0µm, and 10µm. The display shows real-time particle counts and mass concentrations (PM2.5/PM10).

Class-100 Cleanroom Validation

Detects particle count & mass for **0.3, 0.5, 1.0, 2.5, 5.0, 10.0 μ m**; validates Class 100 cleanrooms and below.



PM 2.5/10



AQI



Humidity



Temp(°F/°C)



Buzzer Alarm



LED Light



Dust Particles



Auto Power OFF(optional)

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Image: The device's screen displaying particle count data, PM2.5/PM10 levels, AQI, temperature, and humidity, indicating its multi-functional measurement capabilities.

Touchscreen Operation

The device features a touchscreen color display for intuitive navigation and control.

Technical Specifications

Particle size range: 0.3 μ m, 0.5 μ m, 1.0 μ m, 2.5 μ m, 5.0 μ m, 10 μ m

Particle detection range: ≤ 2000000 PCS/L, ≤ 2000000000 PCS/m³

AQI: 0-500 (accuracy: $\pm 10\%$)

PM2.5/PM10 range: 0-1000 μ g/m³

PM2.5/PM10 accuracy: 0-100 μ g/m³: $\pm 10\mu$ g/m³; 100-1000 μ g/m³: $\pm 10\%$

Concentration resolution: 1 μ g/m³

Particle accuracy: $\leq \pm 10\%$

Sampling flow rate: 0.1ft³ (2.83L/min)

Cleanliness standards: Complies with ISO 14644-1, ISO Class 5-9

Response time: 1s

Stabilization time: 60s

Temp measurement range: -10°C to 60°C(accuracy: $\pm 2^\circ$ C, resolution: 0.01°C)

Humidity measurement range: 0% to 100%(accuracy: $\pm 3\%$, resolution: 0.01%)

Weight: 1000g (Packaging Weight: 2000g)



Image: A hand demonstrating the touchscreen functionality of the HZ-011-C, highlighting its user-friendly interface.

Tuya APP Connectivity

For remote monitoring and enhanced control, connect the device to the Tuya app:

1. Download the Tuya Smart app from your mobile device's app store.
2. Register or log in to your Tuya account.
3. On the HZ-011-C, navigate to the Wi-Fi settings and ensure it is enabled.

4. In the Tuya app, select "Add Device" and follow the on-screen instructions to connect to your particle counter.

Connect to Tuya APP

Remotely monitor your measurement data in real time



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Image: The HZ-011-C device shown alongside a smartphone displaying the Tuya app interface, illustrating remote monitoring capabilities.

Data Storage and Export

The device can store up to 10,000 data sets. Data can be exported for analysis:

- **Directly on Device:** View recorded readings on the display.

- **USB Connection:** Connect the device to a computer via USB to export data in Excel or PDF format.
- **USB Flash Drive:** Insert a USB flash drive into the dedicated port for direct data transfer.
- **SD Card:** Use an SD card for expandable storage and data export.



Image: The HZ-011-C connected to a laptop, demonstrating the data export function to Excel or PDF formats via USB, SD card, or USB flash drive.

External Display (RS485)

The RS485 communication interface supports output to an external large screen, allowing for customizable display of chosen values.

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RS485 communication interface



External Display

Freely customize your display!
Supports choosing which values
you want to see on the display.



Image: The HZ-011-C connected to an external monitor, showcasing its RS485 communication interface for displaying data on a larger screen.

Other Features

- **Speaker Alarm:** Provides audible alerts for customizable alarm settings.

- **LED Lighting:** For illumination in low-light conditions.
- **Time and Date:** Real-time display of current time and date.
- **Auto-off:** Customizable auto-shutdown timer to conserve power.

MAINTENANCE

To ensure optimal performance and longevity of your WapoRich HZ-011-C Dust Particle Counter, follow these general maintenance guidelines:

- **Cleaning:** Gently wipe the device's exterior with a soft, dry cloth. Avoid using abrasive cleaners or solvents.
- **Storage:** Store the device in its carrying case in a cool, dry place when not in use.
- **Battery Care:** Charge the device regularly, even if not in frequent use, to maintain battery health. Avoid fully discharging the battery for extended periods.
- **Sensor Protection:** Keep the air pump sampling port and sensors free from dust and debris. Do not attempt to clean internal sensors yourself.

Rechargeable



1000mAh
Large Capacity



10 H
Ultra-long Runtime



5 V
Charging Voltage



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Image: The HZ-011-C device connected to a charger, illustrating its rechargeable battery and long operating time.

TROUBLESHOOTING

Q1: Device will not power on?

- A. Check if the battery switch inside the compartment is set to **ON**.
- B. Charge the device if the battery icon is red or indicates low power.

- C. Try powering the device through the USB cable directly. If it only starts when connected via USB, the internal battery may need replacement.

Q2: Screen is frozen?

- A. Slide the battery switch inside the compartment to **OFF**, wait 10 seconds, then slide it back to **ON**.
- B. Avoid rapid button presses while the device is saving data, as this can cause freezing.
- C. If the issue persists, back up any important files, then navigate to **Settings** and perform a **Factory Reset** (option 11).

SPECIFICATIONS

Technical Specifications of WapoRich HZ-011-C

Parameter	Value
Particle Size Detection	0.3µm, 0.5µm, 1.0µm, 2.5µm, 5.0µm, 10µm (six channels)
Particle Concentration Range	≤ 2,000,000 pcs/L ≤ 2,000,000,000 pcs/m³
Particle Accuracy	≤ ±10 %
Sample Flow-rate	0.1 ft³/min (2.83 L/min)
PM2.5/PM10 Range	0-1000 µg/m³
PM2.5/PM10 Accuracy	0-100 µg/m³: ±10 µg/m³; 100-1000 µg/m³: ±10%
Concentration Resolution	1 µg/m³
AQI Range	0 – 500 (±10 %)
Cleanliness Standard	ISO 14644-1, ISO 5 – ISO 9
Response Time	1 second
Temperature Measurement Range	14-140°F (-10-60°C)
Temperature Accuracy	±2°C
Temperature Resolution	0.01°C
Humidity Measurement Range	0-100%
Humidity Accuracy	±3%
Humidity Resolution	0.01%
Power Supply	3.7 V 10,000 mAh rechargeable battery
Charging Voltage	5V/USB
Operating Time	≥10 hours
Dimensions	231 × 87 × 57 mm
Weight	1000g

WARRANTY AND SUPPORT

WapoRich is committed to providing high-quality products and customer satisfaction.

- **Quality Warranty:** The product comes with a 365-day quality warranty.
- **Technical Support:** WapoRich provides lifetime technical support for the HZ-011-C.
- **Customer Service:** Expect a 24-hour response to any inquiries.

For assistance, please contact WapoRich customer service.

Why WapoRich ?



24Hours

Friendly Customer Service



365 Days

Quality Warranty



99999 +

Lifetime Tech Support

Image: An infographic summarizing WapoRich's customer support commitments: 24-hour friendly service, 365-day quality warranty, and lifetime technical support.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

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Anonymous

Email

you@example.com

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Open the live page

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