

# Dust Particle Counter Manual



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## **Overview:**

This product adopts the principle of laser scattering, can detect the number and quality of 0.3um, 0.5um, 1.0um, 2.5um, 5.0um, 10um particle size dust, the detection of clean room and below clean room levels, temperature, humidity and AQI Grade detector.

It has 999 groups of data records, can view the data curve, with 3.2-inch TFT full-color display, automatic measurement, real-time date and time, rechargeable lithium battery or separate external USB power supply, stable data, etc.

### **Applied to:**

**Class 100 clean room and below clean room inspection**

**Industrial production of electronics, optics, chemicals, food, medicine and health, biological products, aerospace, etc.**

**Filter seal inspection**

**Particle pollution source detection**

## Safety and maintenance

1. Do not use the instrument in a dusty or corrosive gas environment, so as not to reduce the life of the instrument or damage it
2. When the battery icon on the display is empty or red, please charge it in time, and remove the battery if it is not used for a long time.
3. Do not store or use the meter in a high temperature, high humidity, flammable, explosive and strong electromagnetic field environment.
4. For maintenance, use a soft cloth and neutral detergent to clean the case. Do not use abrasives and solutions to prevent the case from corroding and damaging the instrument.

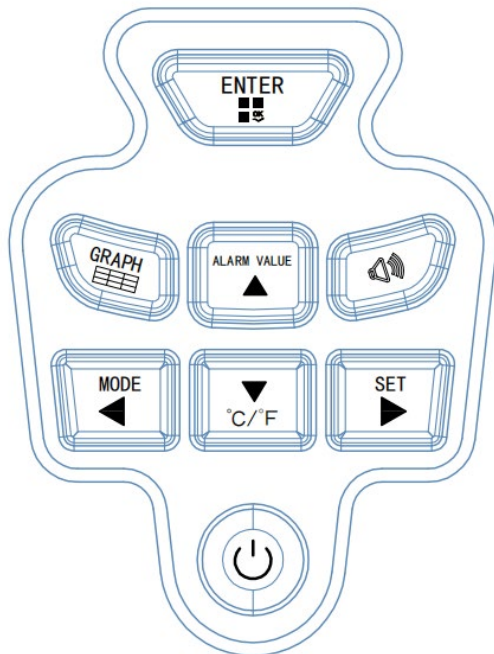
## Structure appearance



### Function:

1. Display screen
2. Operation buttons
3. USB interface
4. Air outlet
5. Battery compartment
6. Air intake
7. Temperature and humidity sensor
8. Support frame nut
9. Note: 1. Do not block the air inlet with objects during the test

## Button function



**1. Power on/off button: short press to power on or off**



**2. OK button:**

- 1) Historical trend interface press this button to exit to the main interface
- 2) The history record interface can enter the page number view
- 3) The function parameter interface can enter the parameter modification
- 4) The alarm value setting can be exited to the main interface



**3. Mode button:**

- 1) Short press to turn on the weighing mode or counting mode
- 2) Shift page position of history record interface
- 3) Parameters can be modified in the function parameter interface
- 4) Displacement value of alarm value setting interface



#### 4. Setting button:

- 1) Short press the history record → function parameter → main interface
- 2) Shift page position of history record interface
- 3) Parameters can be modified in the function parameter interface
- 4) Displacement value of alarm value setting interface



#### 5. Alarm value setting button: 1) Short

press to enter the alarm value setting, press this button again to increase the alarm value

- 2) The number of pages that can be turned up in the historical trend interface
- 3) The number of pages that can be turned up in the history record interface
- 4) The function parameter interface can go up to select parameter items



#### 6. Temperature unit conversion button:

- 1) Short press to turn on the °C or °F unit
- 2) The number of pages that can be turned down in the historical trend interface
- 2) The number of pages that can be turned up in the history record interface
- 3) Function parameter interface can select parameter items down



#### 7. Historical trend button:

- 1) Short press to enter the historical trend interface



#### 8. Sound alarm button:

- 1) Short press to turn on or off the alarm sound

## Operation description:

### 1. Power on or off:

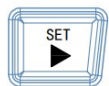
Short press button  to turn on or off

### 2. Counting and weighing mode conversion:

Short press button  to switch between ug/m3 or Piece/L mode

Temperature unit conversion  Short press Button switch °C/°F

### 3. Record data interval time setting



Press during automatic measurement, press the button twice to enter the function parameter interface.



Press button to confirm to enter the modification





Press at this button to select [recording interval] item.









Press mode or set Button to enter time selection.











Press Button to select the required interval time, After the selection is



complete, press  Button twice, Press again  Button to return to the main interface.

## 4. History query

 Press Button once,  Press enter Go to <History>,   Button shift pages,   Button to scroll through the record page,


## 5. Parameter setting

Press the button  twice and press  Enter to <function parameter>, Press the button   can move to select the corresponding parameter item, and the background color of the selected item will turn white,   The parameters can be modified. Exit press  Button, Press again  Button to return to the main interface.

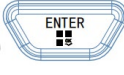
**Backlight:** Press the button   to switch brightness 25%-50%-75%-100%


**Data Clear:** Button to enter the data clearing menu, press again  Button to confirm



clear,  Button exit clear.

**Time Rev:** Button to enter the time setting menu, press again   The button can



be shifted,   The button can modify the time,  press enter Button to

confirm the modification, press again  Button to exit modification, once

again  Button and return to the main interface.

**Auto shutdown:**   Button to select OFF (no automatic shutdown) / 15 minutes / 30 minutes / 45 minutes / 1 hour / 2 hours / 4 hours / 8 hours.

**Record interval:**   Button to enter the recording interval setting,

press   Button to select the time recording interval, press when

finished  Button to exit the interval interface, press again  Button, then

press  Button to return to the main interface

**Language settings:**   Button to switch Chinese/English

**Factory settings:**   Button to enter to restore the original factory

parameter settings.  Press again Button to confirm reset,  Button to exit reset.

After reset, all will be restored to factory parameters.

## 6. Technical specifications

Particle detection range	0.3~10µm
Six-channel particle size	0.3, 0.5, 1.0, 2.5, 5.0, 10um
PM2.5 Range	0 ~ 1000µg/m <sup>3</sup>
PM2.5 Precision	0~100µg/m <sup>3</sup> : ±10µg/m <sup>3</sup> 100~1000µg/m <sup>3</sup> : ±10%
Concentration resolution	1µg/m <sup>3</sup>
Number of particles output range	≤ 2000000 Granule/L
Flow	1 liter/min (2.83L=1L*2.83)
Cleanliness standard	meets the ISO 14644-1 ISO5 level-ISO9 level
Response time	1 second
Boot stabilization time	10 seconds
Temperature measurement range	-10 ~ 60°C
Temperature accuracy	±2°C
Temperature resolution	0.01°C
Humidity measurement range	0 ~ 100% RH
Humidity accuracy	±3% RH
Humidity resolution	0.01% RH
Power supply	3.7V Removable 18650 lithium battery
Charging voltage	5V/USB
Length of work	2000mAh Can work continuously ≥9 hours
Data record	999 groups
Weight	320g
Size	222*80*46mm

## 7. Common problem analysis

1. There is no data to show the number and concentration of particulate matter in the air

Analysis 1: The battery power is too low to start the sensor work

2. Doesn't boot

Analysis 1: If the battery is dead or damaged, use the USB port to supply power. If it can be turned on and there is a change in the power grid in the upper right corner, the battery is dead.

If there is no change, only the OK icon will be displayed.