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Dust particle counter

SISCO-PC-HZ011C

Overview:
This product is designed based on the principles of laser scattering, Wi-Fi, touch color screen, and RS485 communication.
1. Detection of the number and mass of particles with diameters of 0.3um, 0.5um, 1.0um, 2.5um, 5.0um, and 10um, as well as the classification of cleanroom levels at the hundred-class and below.
2. PM2.5/PM10
3. RS485 communication interface
4. Doodle APP mobile connection for remote monitoring
5. Temperature and humidity detection
6. Records 10,000 sets of data
7. Time and date
8. LED lighting
9. Speaker alarm
10. Multiple selectable alarm items
11. Data export to USB flash drive or PC
12. SD memory card expansion
13. Automatic shutdown without operation

Applicable to:

Class 100 cleanroom and below cleanroom testing

Electronic, optical, chemical, food, pharmaceutical, health, biological products, aerospace and other industrial production

Filter seal testing

Source detection of particulate pollution

Safety and maintenance

1. Do not place the instrument in a dusty or corrosive gas environment for use, so as not to cause a reduction in the life of the instrument or damage.
2. When the battery icon on the display is empty or red, please charge it in time, and take out the battery if it is not used for a long.
3. Do not store or use the instrument in high temperature, high humidity, flammable, explosive and strong electromagnetic field environment.
4. Maintenance: Please use a soft cloth and neutral cleaner to clean the housing. Do not use abrasive agents and solutions to avoid corrosion of the housing and to the instrument.

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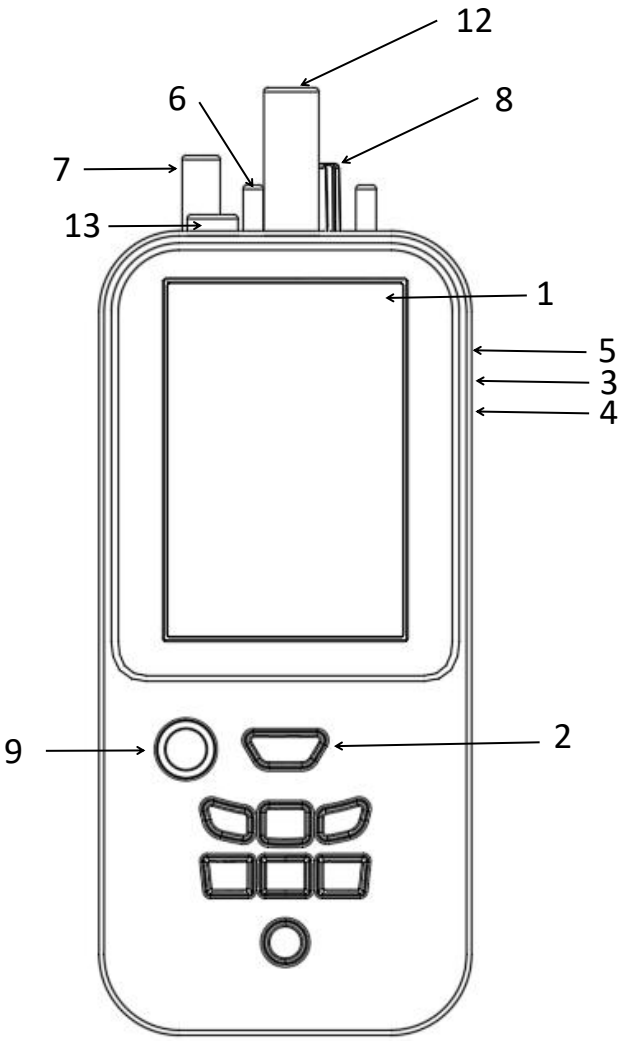
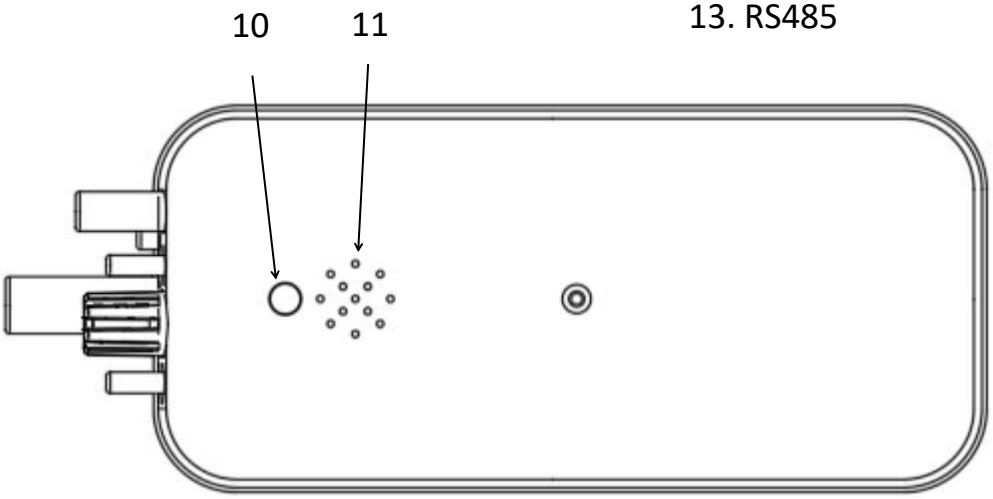
Appearance structure



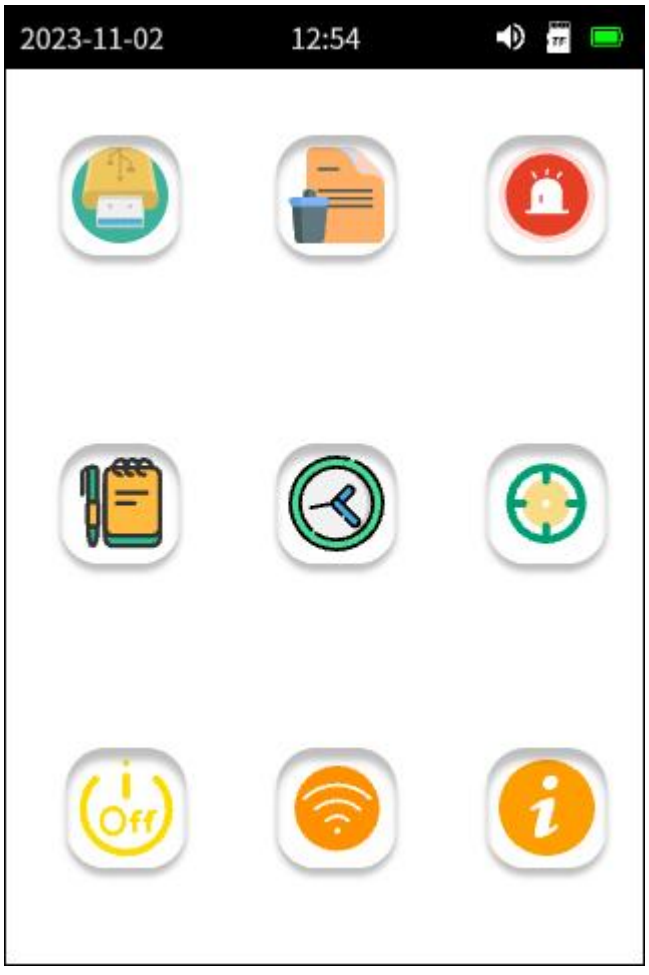
1. 4 inch touch screen
2. Operation button
3. TYPE-C Interface
4. USB interface
5. Memory card slot
6. Vent hole
7. WIFI antenna
8. Humidity and temperature sensor
9. Alarm light and one-time test start button
10. Lighting lamp (rear)
11. Speaker
12. Air pump sampling port
13. RS485



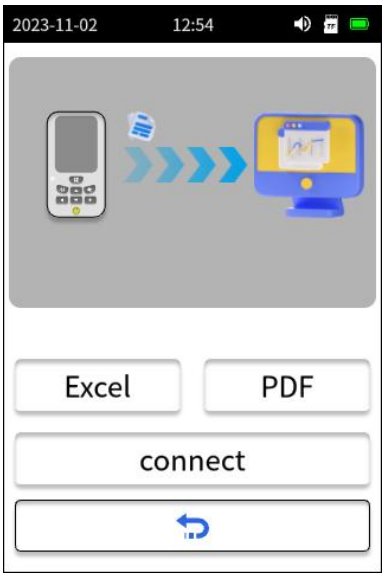
Particle number interface

Particle weight concentration interface

Parameter setting interface

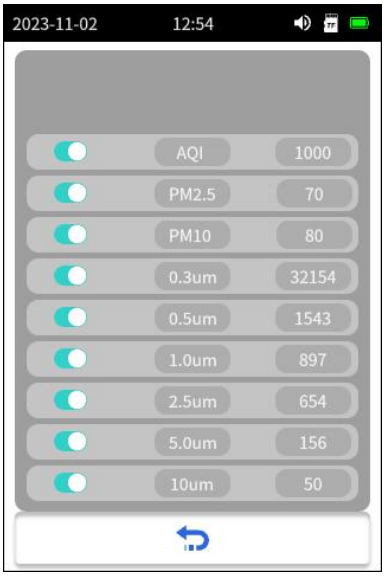


Data export interface

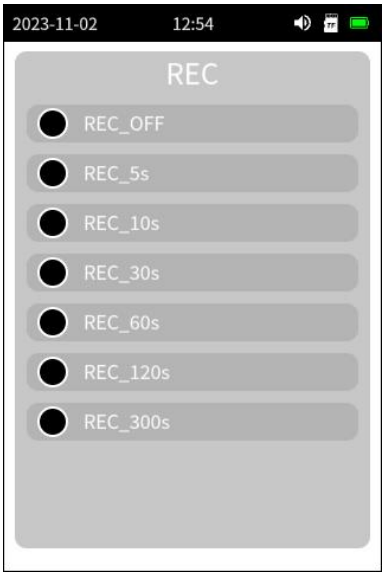


Data deletion interface

Alarm settings interface



Record time setting interface



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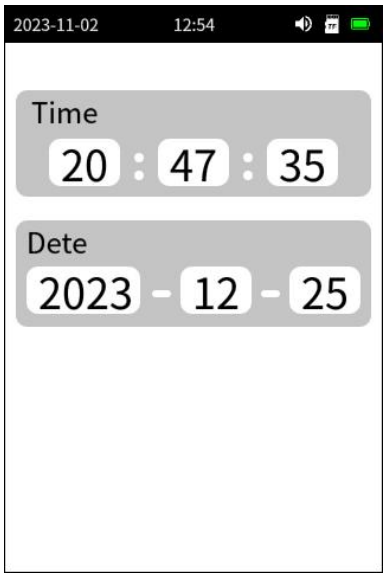
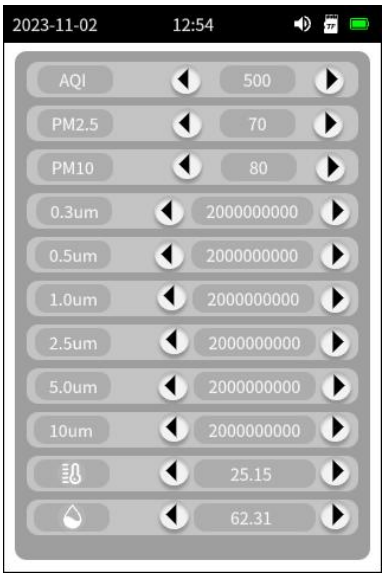
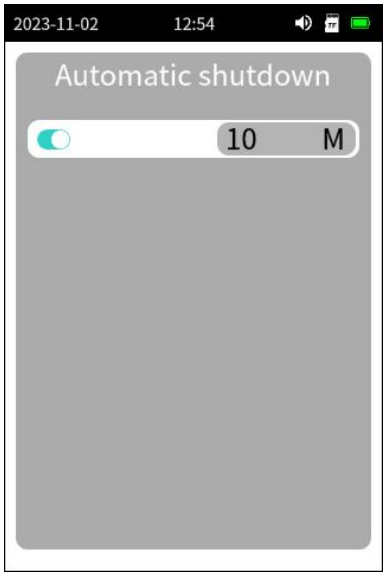
Time and date setting interface



Calibration settings interface

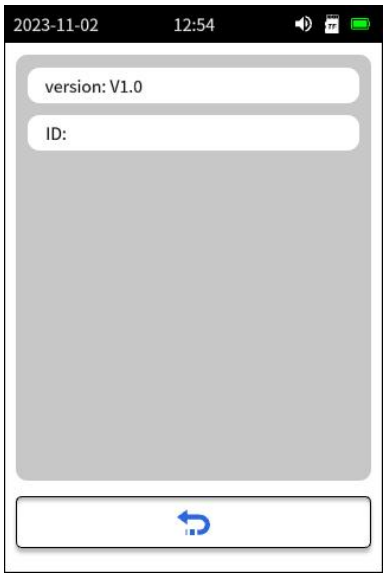


Auto-shutdown settings interface



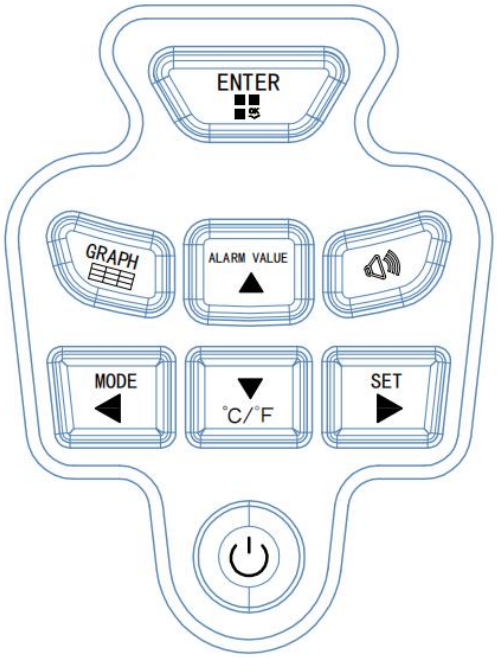
WiFi settings interface

About device information interface



Note: 1. Do not block the intake port with an object during testing.
The zero calibration can stop the air pump, which can achieve the data zero operation, and switching from continuous measurement to single measurement can stop the air pump operation to achieve zeroing.

Button function



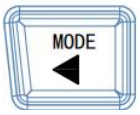
Single measurement start button: short press to start single measurement and enter the

countdown

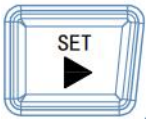
Long press to turn on or off the LED lighting

 1. Power button: short press to power on or off (in the settings interface, press back to exit);

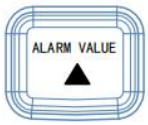
2. Set button: Set the function interface to enter or confirm the modified item.



3. Pattern button: 1) Short press to switch between particle number/weighing mode.



4. Settings button: 1) Short press to enter the settings interface.

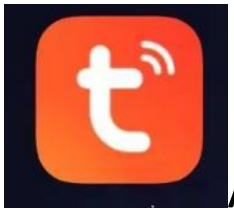


5. Alarm value setting button: 1) Short press to enter the alarm value interface setting

6. Temperature unit conversion button: 1) Short press to turn on the unit of ℃ or ℉.

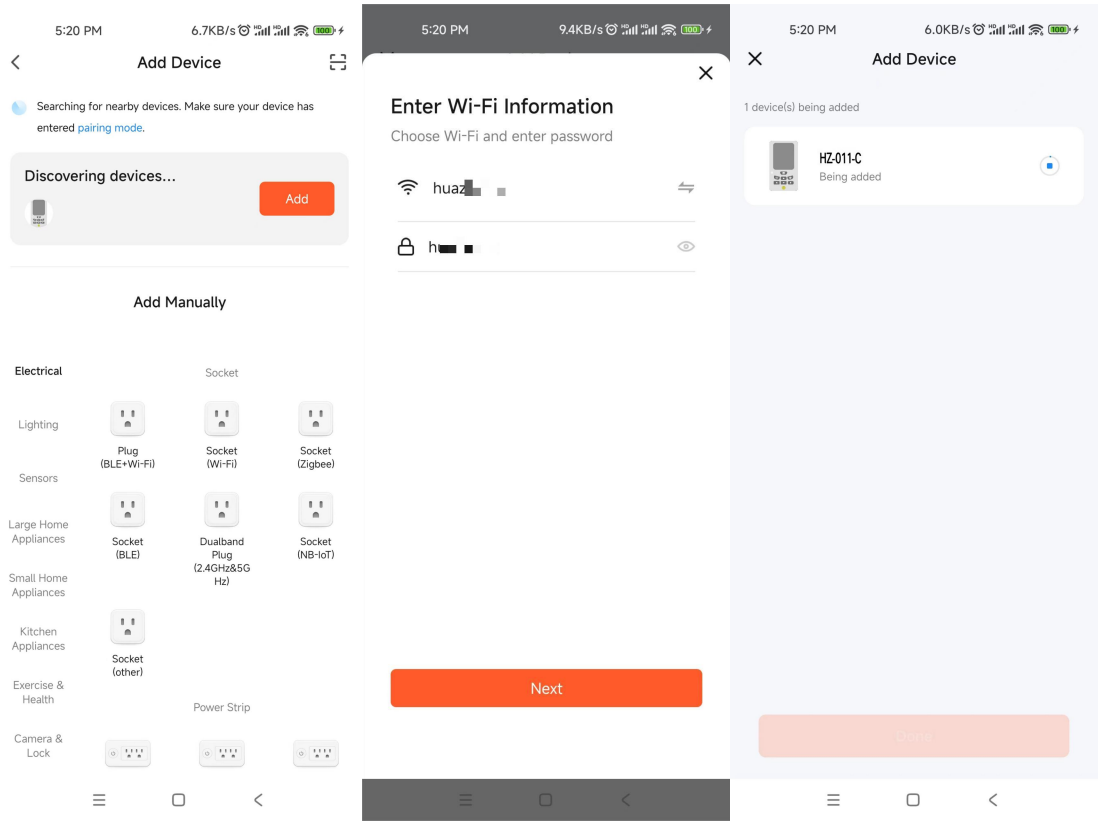
7. History trend button: 1) Short press to enter the historical data trend interface.

8. Sound alarm button: 1) Short press to turn on or off the alarm sound.



APP application use

Download the Doodle Smart APP software from the mobile app store, open the "Doodle" smart App, the software automatically searches for the WIFI picture one, the App detects the WiFi click "Add". Picture two: Connect automatically by entering the WiFi name and password, picture three complete automatic connection, picture four "Finish" picture five enter the App test interface.



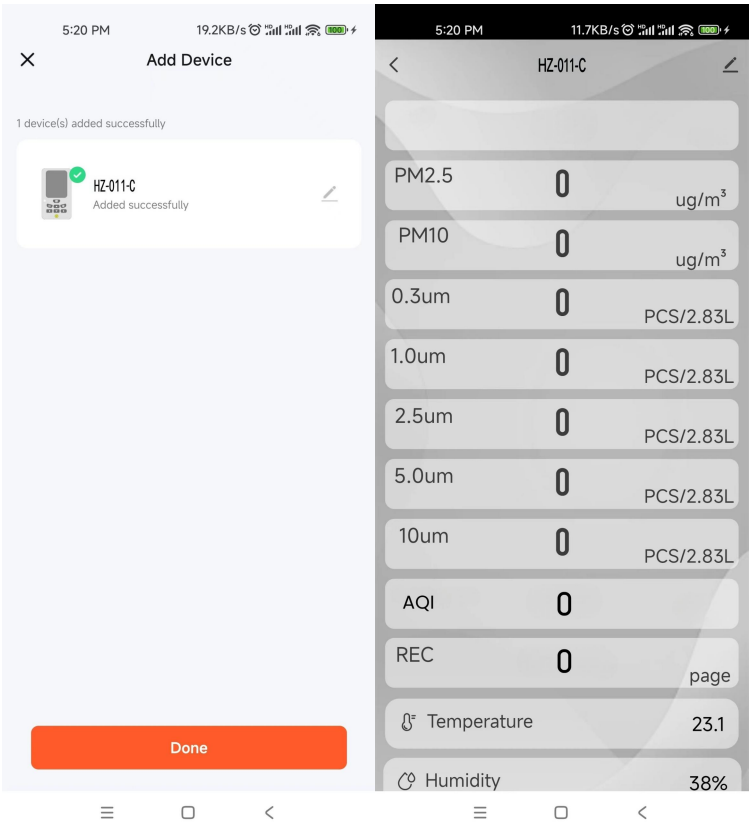


Table of air cleanliness levels in cleanrooms (areas)：

Cleanliness level	Maximum particle concentration limit（个/m³）		Maximum particle concentration limit/50L	
	≥0.5um	≥5um	≥0.5um	≥5um
100 level	3520	29	176	1.45
1000 level	35200	293	1760	14.65
10000 level	352000	2930	17600	146.5
100000 level	3520000	29300	176000	1465
300000 level	10560000	87900	528000	4395

1000000 level	35200000	293000	1760000	14650

Technical specifications

Six-channel particle size	0.3，0.5，1.0，2.5，5.0，10um
PM2.5/PM10 range	0～1000μg/m³
PM2.5/PM10 Precision	0~100μg/m³：±10μg/m³　100~1000μg/m³：±10%
concentration resolution	1μg/m³
Particle number output range	≤2000000PCS/L　≤2000000000PCS/m³
Particle precision	≤±10%
Traffic	0.1ft³（2.83L/min）
Cleanliness standard	ISO 14644-1 ISO5 Level-ISO9 Level
Response time	1s
Temperature measurement range	-10～60℃
Temperature accuracy	±2℃
Temperature resolution	0.01℃
Humidity measurement range	0～100%
Humidity precision	±3%
Humidity resolution	0.01%
power supply	3.7V 18650 Lithium-ion battery*3
Charging voltage	5V/USB
Working hours	≥10 hour
Data record	10000 group
Weight	1000g
Size	231*87*57mm

ISO 14644-1:1999 Cleanrooms and associated controlled

environments/Part 1

Air cleanliness grade

Table of Comparison between Integral Grade of Air Purity in Cleanroom

and Clean Area and Traditional Classification：

ISO levelN	Maximum concentration limit for particles greater than or equal to the particle size of concern（个/m³）						
	0.1um	0.2um	0.3um	0.5um	1um	5um	
ISO 1 Level	10	2					
ISO 2 Level	100	24	10	4			
ISO 3 Level	1000	237	102	35	8		
ISO 4 Level	10000	2370	1020	352	83		
ISO 5 Level	100000	23700	10200	3520	832	29	
ISO 6 Level	1000000	237000	102000	35200	8320	293	
ISO 7 Level				352000	83200	2930	
ISO 8 Level				3520000	832000	29300	
ISO 9 Level				35200000	8320000	293000	

Common problem analysis

1. No data display for the number and concentration of particulate matter in the air
Analysis 1: Measurement not turned on Analysis 2: Battery power too low to start the air pump
2. Does not turn on
Analysis 1: Battery is out of power or damaged. Use USB port power it. If it turns on and the battery indicator in the top right corner changes, it indicates that the battery is damaged
2: Battery polarity /- reversed. Please pay to whether the " " and "-" on the battery and PCB silkscreen match correctly
3. Hangs
Analysis 1: Screen display pauses, processing speed is too fast, or operations are too frequent. This can be resolved by removing the battery to interrupt the power supply