# SR-516A manual

## Instruction Manual Overview

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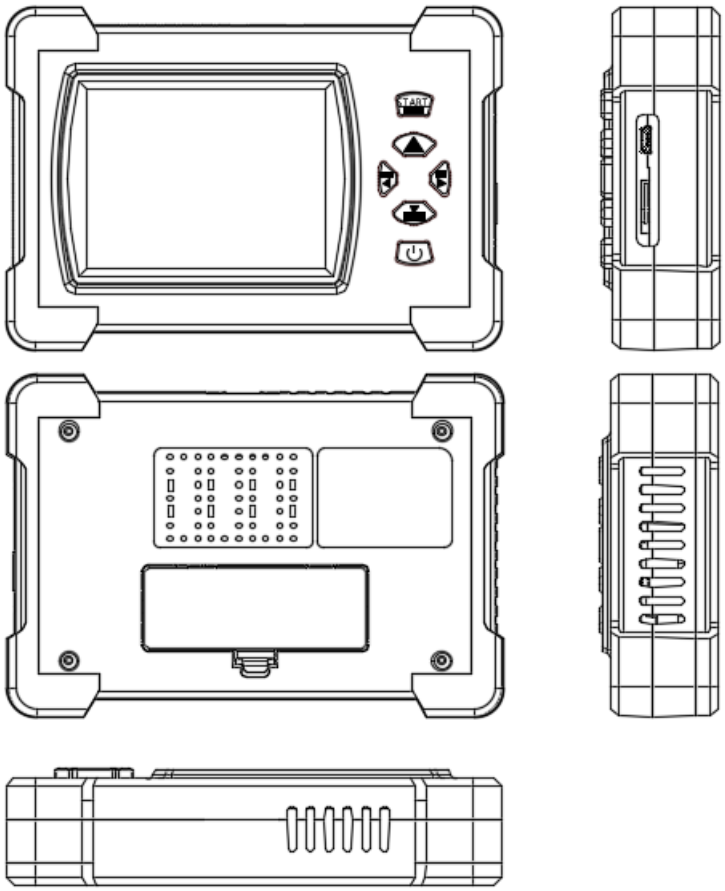
## Overview:

1. This product through the laser scattering principle, can detect 0.3um, 0.5um, 1.0um, 2.5um, 5.0um, 10um particle size dust quantity concentration, temperature, humidity and AQI level of the detector.

2. With data recording 999 groups, 3.2-inch TFT full-color display, automatic and manual measurement, real-time date and time, rechargeable lithium battery or separate external USB power supply, sensor life ≧ 8000 hours, data stability and other features Applications in.
3. Electronics, optics, chemical, food, medicine and health, biological products, aerospace and other industrial production Household, public places, schools, agriculture Micro-pollution source detection.

## Safety and Maintenance

1. Please do not place 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 of the display is empty or red, please charge it in time, and remove the battery when it is not used for a long time.
3. Do not store or use the instrument in high temperature, high humidity, flammable, explosive and strong electromagnetic field environment.
4. Please use soft cloth and neutral cleaner to clean the shell, do not use abrasive and solution to prevent corrosion of the shell and damage instrument.




## Function:

**1. Display screen**

**2. Operation keys**

**3.USB interface**

**4.Airflow window ①**

**5. Label sticker**

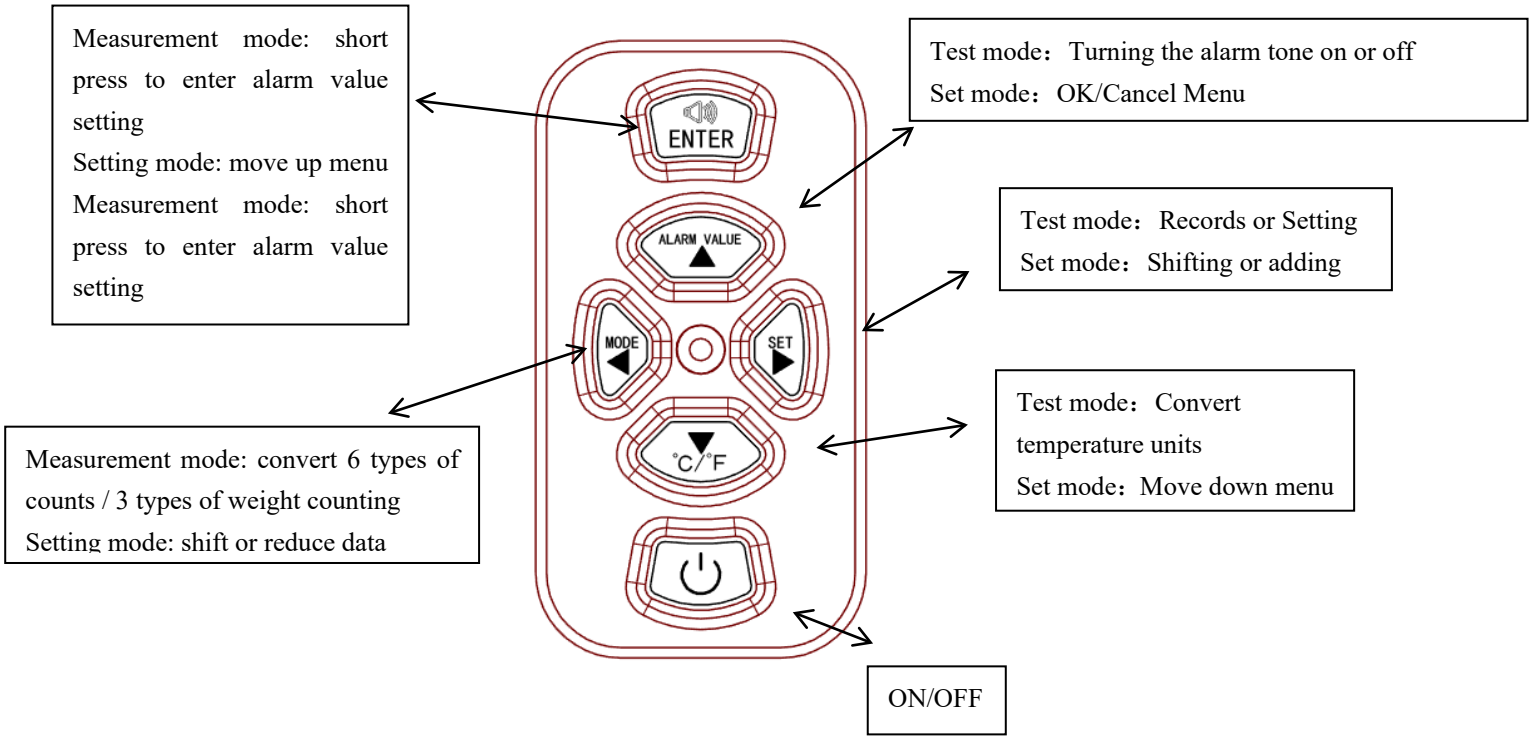
**6. Battery compartment**

**7. Airflow window ②**

**8. Airflow window ③**

**Note: 1. Do not block the airflow window with objects when testing**

## Button function




# Operation Description

## Power on or off


Short press the button once to turn on or off the phone

## Test Data

Short press the button once to set the PM2.5 value alarm, press the up, down, left, and right keys to adjust the value change

## Counting and weighting mode conversion

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

## Temperature unit conversion

Short press the button once to switch °C/°F

## History search

Press the button 1 time and press 

Go to <Records>, left and right keys to shift, up and down keys to modify the record page.

## Parameter Setting

Press button 2 times and press 

When you enter <Setting>, press the up and down keys to move to select the corresponding parameter, the background color of the selected item becomes white, and the left and right keys can modify the parameter.

## Backlight settings

Left and right keys can switch brightness

25%-50%-75%-100%

## Clear records

Left and right keys to enter the data clearing menu, press the left key again to confirm clearing, right key to exit clearing.

## Time modification

Left and right keys to enter the time setting menu, press left and right keys again to shift, up and down keys to modify the parameters.

Press to confirm changes and return to the main settings menu.

## Auto-off time

Left and right keys to select OFF (no auto-off) / 15 minutes / 30 minutes / 45 minutes / 1 hour / 2 hours / 4 hours / 8 hours.

## Record interval

Left and right keys to enter, press up and down keys to select the appropriate time interval.

## Language setting

Left and right keys to switch Chinese/English.

## Restore factory settings

Left and right keys can enter to restore the original factory parameter settings, press the left key again to confirm the reset, and the right key to exit the reset.

# Technical Specification

| Parameters | Indicators |
|---|---|
| Unit Particle Measurement Range | 0.3/0.5/1.0/2.5/5.0/10um |
| Counting efficiency | 0%@0.3 um 98%@>=0.5 um |
| Effective amount of particulate matter mass concentration Program (PM2.5 standard value) | 0~500Ug/m3 |
| Particle mass concentration maximum amount Range (PM2.5 standard value) | ≥1000 Ug/m3 |
| Particle mass concentration resolution | 1 Ug/m3 |
| Accuracy | ±10%@100~500 Ug/m3<br>±10 Ug/m3@0~100 Ug/m3 |
| Operating temperature range | 10~+60 ℃ |
| Operating Humidity Range | 0~99% |
| Storage Temperature Range | 40~+80 ℃ |
| Temperature measurement range | 20~60℃ |
| Temperature Measurement Accuracy | ±1℃ |
| Temperature Resolution | 0 01℃ |
| Humidity measurement range | 0~100%RH |
| Temperature Accuracy | ±2%RH |
| Humidity Resolution | 0.01%RH |
| Power supply battery | Built-in removable 3.7V/18650 cylindrical battery or external 5V USB power supply |
| Operating Current | 180mA |
| Battery life | ＞9hours |
| Charging time | 3hours |
| Auto power off | Settable (factory default 15 minutes auto shutdown) |
| Record groups | 999group |
| Weight | 235g |
| Size | 140*134*33mm |

# Analysis of common problems

**Problems**

- The number and concentration of particulate matter in the air quality.
- Data is not accurate

**Analysis**

1. Particulate matter data has a certain spatial and temporal nature, sampling do not in the air flow velocity fluctuations or particulate matter changes obviously, if necessary, you can sample data multiple times
2. No data display of the number of particles in the air and concentration quality

**Problems**

- Manual mode when not pressed sampling
- Battery power is too low to start the sensor work
- Temperature and humidity are not accurate

**Analysis**

1. Temperature and humidity sensor sampling window with debris, dirty

**Problems**

1. Ventilation window is blocked by something
2. Do not turn on

**Analysis**

1. The battery is dead or damaged, powered by USB socket, if you can turn on and the upper right corner of the power grid has changed, is the battery is dead, such as no change only shows OK icon. Indicates that the battery has been damaged.
2. The battery +/- polarity is reversed, it should be noted that one end of the battery without a protruding contact point is the "-" pole, and the end with a protruding contact point is the "+" pole. Can refer to the following chart