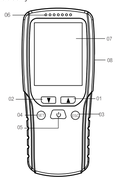
Instructions for DM106A Air Quality Monitor

-Product function :

1. Support PM2.5 / PM1.0 / PM10
2. HCHO formaldehyde test concentration range: 0 ~ 1.999mg / m³
3. TVOC test concentration range: 0 ~ 9.999mg /m³
4. Sound alarm
5. Large screen color LCD display
6. Temperature and Humidity test
7. Low battery alarm
8. Date and Time display
9. Built-in high- capacity lithium battery
10. Screen: If the device has not been operated for 5 minutes,it will enter the black screen protection automatically , if there is no operation within two hours, it will close automatically.



01. Up button:up function operation
02. Down button:down function operation
03. ESC button:exit / cancel
04. SET button:Press the SET button to enter the setup mode / switch / select
05. Power button: On / off, calibration, confirm
06. Air convection hole
07. LCD display screen
08. USB charging port

-What are included :

DM106A Main Unit*1
Charging cable*1
Manual#*1

-Operation description :

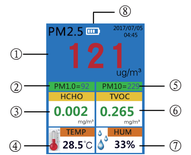
(1) Turn on: press the power button for 3 seconds, DM106A is automatically turned on, the LCD light up.

(2) Shutdown : Hold down the power button for 3 seconds in the boot state,it will be shut down.

(3) Interface 1: Click Power button to switch the interface from 1 to 2.

See below :

Interface 1:



① PM2.5 display area, showing the current PM2.5 value
② PM1.0 display area, showing the current PM1.0 value.
③ Formaldehyde display area, showing the current HCHO value.Formaldehyde detection needs 200 seconds to warm up, When DM-106A is turned on ,it will automatically enter into preheat (200 seconds countdown time)
④ Temperature display area, showing the current temperature, devlation ± 1℃.
⑤ PM10 display area, showing the current PM10 value.

⑥ Toluene display area, showing the current TVOC value.Toluene detection also needs 200 seconds to warm up,in the “200 seconds warm up” time,the LCD displays: ---- , when the “warm up ” time pass,the TVOC value will display on the screen.
⑦ The humidity display area will show the current humidity.
⑧ Battery symbol, power indication and charging indication.

(4) Interface 2: Click “ESC” button to switch the Interface from 2 to 1.

See below :

Interface 2:

Temperature range: -20 to 70℃
Humidity range: 20% to 90%

Temperature and humidity livable environment:
Temperature: 15~25℃
Humidity: 45~65% RH

(5) Press the SET button to enter the setup interface.

See below :

Interface 3 :

1)Press the SET button to select the content which you want to set, press the OK button to enter the setting (The word color you are setting is red). Press the Up / Down button to adjust the datas.
2)Press the power button to save the settings. Press ESC will not save (Press the ESC button twice to return to the main interface).

Formaldehyde calibration method :

Put the device into a place of good air quality , let it aside for 5~10 minutes,Double click the power button when the device stay at interface 1

Note:

The Initial values of Formaldehyde and TVOC are 1.999 and 9.999 ,the device needs manual calibration before working.

Precautions :

1. Any sensor will be subjected by certain external substance when working,so please keep it away from Alcohol, Perfume , Chemical volatile gases, smoke and so on when you check.
2. Indoor air is circulating ,the gases go into sensor vent are different at different time,the amount of formaldehyde in the air may be also different.So It is normal that the detection value is floating up and down.
3. Avoid the fan, heater and other strong directly winds blown vent hole interference test results of the accuracy when use the device. The product should be placed in a relatively stable area of air flow, so that the detection can be accurate.
4. Before you use the device to test the HCHO and TVOC in the bedroom, living room, cloakroom and other space,it is better to seal the windows, doors for 24 hours and then test. in addition,the average content of air is derived from the average value of multiple points test data in the room.

Common problem :

1 Q: the test value has been 0, spray perfume will rise?

A :

Please re-calibrate outdoors. avoid spices, perfume, paint, cigarettes, air fresheners, alcohol and other chemical pollutants when testing, so as not to damage the sensor.

2 Q: Why do I need to calibrate?

A :

Our products work in the form of outdoor formaldehyde-free air sampling as a benchmark, and then get indoor air formaldehyde content as a comparison, so the new machine products for a long time not used, the detection of environmental temperature changes need to change First calibrated and then tested, the value of this calibration for the subsequent detection of the accuracy of a great relevance. Calibration environment must avoid spices, perfumes, paint, cigarettes, air fresheners, alcohol and other chemical pollutants, so as not to damage the sensor.

3 Q: Why PM2.5 readings with the published value on the site is not the same?

A :

Because the location and conditions of the test is difficult to reconcile with the weather station, the weather station in the city there are several sampling points, each sampling point measured data are also very different, the sampling point of the location is strictly required; height 3 to 30 meters, air circulation, can not be close to the chimney, furnace and other obvious sources of pollution. And there are no high-rise buildings, trees or other obstructions that can impede the flow of ambient air around the instrument.

4 Q: Why is the PM2.5 test value changing?

A :

PM2.5 data are changing all the times, with the air, wind, humidity and other environmental factors change, in the room smoking, cooking fumes, car exhaust emissions, coal, chimney, furnace Such as pollution sources will change the PM2.5 value of this area, resulting in differences in the detection data.

5 Q: Why is the product sounding when working?

A :

As PM2.5 detection need to collect a lot of mobile air, in order to ensure accurate detection of the fan needs strong operation, so a little sound is normal.

6 Q: How much range of detection of formaldehyde concentration detector,how many square meters?

A :

1. The principle is less than 50m3 ,the room should be set 1 to 3 points;50 ~ 100m3 Set 3 to 5 points;More than100m3 at least 5 points. On a diagonal or plum blossom evenly distributed.
2.Sampling points should avoid the ventilation, from the wall distance greater than 0.5m.
3.The height of the sampling point: in principle, consistent with the human breathing.Relative height of 0.5m ~ 1.5m between.

7 Q: What is the standard for formaldehyde (HCHO)?

A : ≤ 0.10mg / m3 ("indoor air quality standards" GB / T18883-2002)

8 Q: What is the standard for total volatile organic compounds (TVOC)?

A: ≤ 0.6mg / m3 (GB / T 18883-2002 and GB 50325-2001 Class II civil construction)

9 Q: What is the standard for fine particulate matter (PM2.5)?

Air quality grade	24 hours PM2.5 average value (standard)
Good	0~12
Medium	12~35
Unhealthy for sensitive groups	35~55
Unhealthy	55~150
Very unhealthy	150~250
Hazardous	250~500

Technical indicators :

-Power supply

Battery capacity: 2000mAh polymer lithium battery

Input : 5.0v / 1000mA
Charging temperature: -10 ℃ ~ 45 ℃

-Formaldehyde detection

Test : formaldehyde in the air
Detection range: 0 ~ 1.999mg / m³
Detection Technology: Semiconductor sensor
Adopt Method: diffuse collection
Concentration unit: mg / m³

-TVOC detection

Test : TVOC (containing benzene)
Detection range: 0.000 ~ 9.999mg / m³
Detection time: 5 minutes
Detection Technology: Semiconductor Sensing Technology
Sampling technology: diffusion collection
Concentration unit: mg / m³

-PM2.5 / PM1.0 / PM10 detection

Detection principle: Laser scattering principle
Number of test particles: 2.5um, 1.0um, 10um
Measurement of particle mass: PM2.5, PM10
Detection time: 3 seconds
Detection method: concentration (per liter)
Detection range: 0 ~ 999ug / m³

-Using Environment

Atmospheric pressure: 86Kpa ~ 106Kpa
Relative humidity: 20% to 85%
Detection temperature: -10 ℃ ~ 45 ℃
Storage temperature: -20 ℃ ~ 50 ℃

-Size

LCD size: 2.8 inches
Product Size: 164 * 69 * 44mm
Product weight: 220g

Safety and maintenance :

1. Do not place the product in a concentration of chemical contaminated environment and may damage the product.
2. Do not use the product in an environment that exceeds the normal temperature and humidity, which will affect the measurement accuracy.
3. Do not disassemble the internal unit and the housing.
4. Cleaning is simply wiping with a dry cloth. (Do not use wet cloth)
5. Do not subject the product to strong shock and vibration. (Such as throwing on the ground)
6. Do not breathe directly through the vent hole or block the detection hole, which will interfere with the normal work of the product.
7. Do not let the cloth cover on the instrument.