

BR-Smart



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BLATN

Manufactured by BLATN Science&Technology (Beijing) Co., Ltd.

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MADE IN CHINA



Precautions

■ Precautions for use

- There is a trace amount of chemical gas in the product package. When using for the first time, please place the device in a clean and ventilated environment for **8 hours** of power-on, then restore factory settings before use, it can effectively release the adhesion charge on the surface of chemical coating.
- After the device is turned on, the sensor needs to warm up and start reading. The device can adjust the warm-up time automatically according to the using time interval. The general warm-up time is **1-3 minutes**, and long time unused warm-up time is **3-5 minutes**. To ensure accurate readings, please test more than **20 minutes** to start reading.
- As the formaldehyde sensor basic principle is a chemical reaction, it will be affected by other interference gases, such as alcohols, hydrocarbons, carbon monoxide, ethanol, perfume, cigarettes and cooking fumes, etc..In order to obtain accurate measurement results, please **avoid the interference of human activities during use**, like cooking, smoking, drinking and so on.
- If the device has not been used for a long time, please put it in the clean ventilation place for **2 hours** before use.
- The sensors may drift after prolonged use. User can place the monitor outdoor with clean air environment to recalibrate the sensor.
- Do not use this product for a long period of time in PM2.5 or PM10 greater than 999 µg/m³, formaldehyde concentration greater than 1mg / m³ or TVOC greater than 9.9mg / m³ environment. Long-term exposure to high concentration of air pollution will cause damage to the sensor or the device cannot work properly.

■ About products

- BR-Smart series is equipped with high-precision sensors and circuits, therefore should be kept in a dry, level and shaded location.
- This product should be placed in the space with slow air draft during use. Strong wind maybe affect the results.
- Do not cover the detection port and exhaust vent during use.
- Never place any heavy objects on top of the unit to avoid any damage to the air monitor.
- This product is not waterproof and should avoid contact with water. In case of dropped into water or splashed with any liquid, turn off the power immediately and contact the customer service.
- Never use this product in the rain, snow or wet environment.
- Never insert spines, flammable substances or metal objects into the vent or power supply socket. Electric shock or fire may be caused.
- Keep out of the reach of children, to prevent children from disassembling and swallowing parts.
- Do not attempt to disassemble or repair the product other than by the authorized service shop. Machine fault, electric shock or fire may occur by un-authorized personal. Please call the customer service if you have any questions. BLATN will not be responsible for any losses/damage/injury from unauthorized disassemble or repair.
- Place the machine in a flat and safe surface to avoid accidental dropping.
- Turn off power supply immediately if the machine makes abnormal noises/burnt smell/smoke or on fire and contact the repair center immediately.
- The machine screen does not prompt for charging information when it is turned off for charging, it can be fully charged after **4-6 hours** in the OFF state.

■ About the use

Cross interference

Formaldehyde sensor adopts high precision electrochemical sensor. Due to the electrochemical reaction characteristics of the sensor to the target response, other gas also can produce the following responded characteristics to the gas sensor for interference. Please avoid measuring in the following gas environment, so they may affect the data accuracy.

Gas	Concentration	Formaldehyde sensor
Hydrogen sulfide	100 ppm	3.7 ppm
Ethanol	2000 ppm	76.3 ppm
Formaldehyde	10 ppm	10 ppm
Chlorine gas	10 ppm	0.1 ppm
Sulfur dioxide	20 ppm	0.8 ppm
Hydrogen gas	500 ppm	5.5 ppm
Ammonia gas	50 ppm	0 ppm
Monochloromethane	5 ppm	0.1 ppm
Ethylene oxide	10 ppm	0.5 ppm
Benzene	100 ppm	0.1 ppm
Acetone	100 ppm	0.2 ppm
Methanol	200 ppm	23.9 ppm

- A high value will be displayed when the machine is used for the first time or left unused for a long period of time. The values will return to normal levels after **10-30 minutes**. When the machine is used for the first time, the values will collaborate more quickly if the unit is placed at a location with good ventilation.
- The room should be closed for **12 hours** for better monitoring accuracy before use. Due to the different concentrations of different pollutants in the same space, the air monitor can be take reading at several positions in order to get the most comprehensive measurement.

- During normal operation, the air monitor should avoid contact with alcohol, perfume and high-concentrated hydrogen sulfide, carbon monoxide, sulfur dioxide, hydrogen, smoke and gas. These substances may affect the reading or damage the air monitor.

- Do not directly measure the smoke or other high pollution concentrations of gas; otherwise it will damage the sensor.

Fault description

■ No display

Please check if the battery is charged. If still no display, please contact the service center.

■ Data fault

Change test environment or restart the air monitor. If the problem persists, please contact the service center.

Product packing list

Air quality monitor unit	1X
USB cable	1X
Product Manual	1X

Customer service and warranty clauses

BLATN Science & Technology (Beijing) Co., Ltd. will provide comprehensive after-sales service for our customer

- BLATN air quality monitor provide a 1-year warranty from the date of purchase.

After-sales supplementary terms

The above services do not cover the following items:

- Any unauthorized disassembly and modification of the product.
- Damage caused by falling during usage and transportation.
- Lack of regular maintenance.
- The operation not in accordance with the product manual.
- The fault caused by improper repair by unauthorized service centre.
- Fail to provide warranty cards or invoices.
- The warranty card is modified, or product information is inconsistent with the actual machine.
- The faults caused by unforeseen natural event such as earthquake, fire, war, lightning strikes.
- The faults caused by using other unauthorized parts or accessories.

Notice

BLATN owns the copyright of this product and the product manual. Due to product upgrade, BLATN reserves the right to modify or update this product manual without prior notice.

Before using this product, please read this manual thoroughly, and pay attention to the information relevant with the product installation, use and maintenance. BLATN - Beijing will not be responsible for any personal property damage or injury caused by misuse of this product.

Warranty Card and Certification

Purchase Date	
Serial No.	
Retailer	
Warranty Card Certification	
Inspection Date:	
Inspector:	

Customer Service
service@blatn.com

Product overview

BR - Smart series air quality monitor is manufactured by BLATN Science & Technology (Beijing) Co LTD. It is a real-time air quality monitoring instrument used to detect air quality of indoor environment.

Smart series monitor use high-precision sensor and translate the pollutant concentration in the air directly into intuitive data to provide air quality monitoring information and effective protection for your family health.

Model	BR-Smart HCHO+TVOC	BR-Smart PM+HCHO+TVOC	BR-Smart PM+HCHO+TVOC+CO2
PM2.5	☆	★	★
PM10	☆	★	★
Particle number	☆	★	★
CO2	☆	☆	★
Formaldehyde	★	★	★
TVOC	★	★	★
Date & Time	★	★	★
TF memory card	★	★	★

* Specific testing items are subject to actual purchase functions.

Scope of application

Family indoor environment, office environment, vehicle cab, outdoor environment.

Product appearance



Product specifications

Product name	Portable air quality monitor
Model	BR-SMART
Display mode	TFT color screen
Battery	3.7VDC
Dimensions	65×140×40mm
Weight	220g
Measuring method	

- PM1.0/PM2.5/PM10 detection: light scattering measurement method
Test method: automatic
- Formaldehyde detection: electrochemical sensor measurement method
Test method: automatic
- CO2 detection: NDIR measurement method
Test method: automatic
- TVOC detection: semiconductor sensor test
Test method: automatic

Operating Environment

Temperature range	0 - 50 °C
Humidity range	0 - 90%RH
Pressure	1 standard pressure

Measurement indexes and range

PM1.0/PM2.5/PM10 measurement index	
Measuring range	0-999µg/m³
Resolution	1.0µg/m³
Accuracy	±15% of reading or ±20µg/m³

CO2 measurement index	
Measuring range	400-5000ppm
Resolution	1ppm
Accuracy	±15% of reading or ±45ppm

Formaldehyde measurement index	
Measuring range	0-1.000mg/m³
Resolution	0.001mg/m³
Accuracy	±20% of reading or ±0.03mg/m³

TVOC measurement index	
Measuring range	0-9.999 mg/m³
Resolution	0.001mg/m³
Accuracy	±20% of reading or ±0.3mg/m³

*The accuracy is the larger of the proportional value and the absolute value of the reading. Specific testing items are subject to actual purchasing functions.

Health parameters guide BR-Smart series

Range of air quality data sheets

Condition	Good	Moderate	Unhealthy	Hazardous
Monitoring				
PM2.5 µg/m³	0-12	13-34	35-150	>150
PM10 µg/m³	0-54	55-154	155-254	>254
CO2 ppm	400-700	701-1500	1501-2000	>2000
TVOC mg/m³	0-0.500	0.501-1.000	1.001-1.500	>1.500
Formaldehyde mg/m³	0-0.100	0.101-0.150	0.151-0.200	>0.200

* When detector reading reached a Unhealthy level, a buzzer alarm will be activated.

Methods of use

Startup & shutdown

Startup : Press the power button and hold for 1 second, the monitor will boot up.

Shutdown: In the normal working mode, press and hold down the power button for 1 second to power off the unit.

Detection of indoor PM2.5、PM10、formaldehyde、CO2 and TVOC concentration

After startup, in the testing environment, click the test button on the monitor to begin work, detection of PM2.5、PM10、formaldehyde、CO2 and TVOC concentration in the ambient air will start to work automatically.

* Specific testing items are subject to actual purchase functions.

Battery indicator

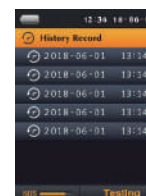
BR-Smart has a battery level display function, the battery power is full when the battery level displays ; please charge when the unit displays .

* For long time testing, pls connect the charger or mobile power.

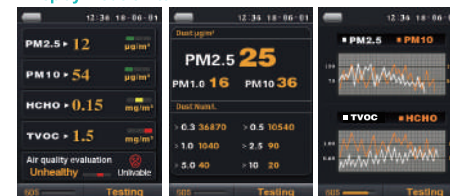
The historical data query

BR-Smart has a historical data query function. Click the historical query button to enter the historical query interface.

- User can press the up and down button and choose to query the historical data.
- Click the test button to view the data.
- Click the return key to exit.



Display mode switch



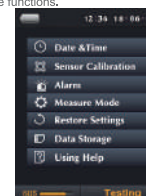
BR-smart start up and enter numerical display interface.

Users can enter Particle Number interface and Data Curve interface by switching the Mode Switch button .

*The number of particles is a non-standard function, and the data is for reference only.
* Specific testing items are subject to actual purchase functions.

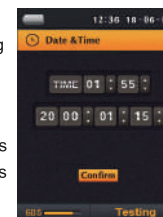
Set up

User click set button to enter setting interface which user can set the system parameters.



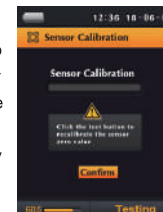
Set the date/time

- After the user enters the setting interface, select time setting and then click the test button to enter the time setting interface.
- User can choose by up and down keys and test and return keys to set the system time.



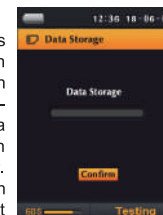
Sensor calibration

The user can calibrate the zero point of the formaldehyde sensor and the TVOC sensor. Place the monitor in the outdoor clean air, the sensor is calibrated automatically within 3 minutes.



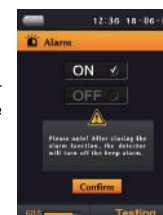
Data storage and export

The system automatically records each test data that displayed on numerical interface and stores it in TF card. The new data automatically overwrites the original data when TF card is full. Users can view TF card storage capacity. After power off the unit, users can remove the TF card and export the data to a PC via card reader.



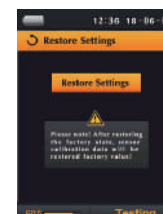
Alarm set

A buzzer alarm and warning sign will display when the measurement exceed the pre set index, the user can turn the alarm on or off in the Alarm Settings.



Restore the factory Settings

Users can restore the monitor to the factory settings. The detector sensor calibration data will be restored to the original factory setting.



Using help

Users who have questions about the use of the monitor can enter the Help menu. If still have question, please contact the customer service.

