Air Quality Monitor

Instruction Manual



23-02-V2 / 1306-WiFi

PROTECT YOUR AIR

The CO2 Monitor is an advanced, multifunctional CO2 monitor that combines high-quality air sensors to allow real-time monitoring of carbon dioxide (CO2), temperature and humidity and on its digital LED display.

HOW TO USE

Plug in the CO2 monitor and power the power button to turn it on.

Note: If your CO2 monitor does not turn on, please first allow it some time to charge.

Set CO2 alarm threshold

The CO2 alarm's default threshold is 1000 PPM (which is above the easiest range). It is recommended to keep the CO2 alarm set at this 1000 PPM threshold to ensure the highest probability of maintaining optimal indoor CO2 levels (below 1000 PPM).

Step 1: Press the **" Set Button "** once quickly.
The CO2 value will start flashing.

Step 2: Press the**" Upper Button "** and **" Down Button "** to increase or decrease the CO2 alarm threshold to your desired level.

Step 3: Press the **" Set Button "** to finish setting the CO2 alarm level.

CO2 ALARM

The CO2 monitor was designed with a built-in CO2 alarm.
This CO2 alarm beeps when the CO2 levels surpass the threshold (which you can set). The purpose of the CO2 alarm is to notify you right away so the appropriate action can be taken immediately to improve CO2 levels (i.e., by opening a window / door or stopping the activity causing the high reading).

Close / Open alarm sound

Long-press **" Down Button "** button and hear a **"di"** sound to open / closealarm sound. (Factory default CO2 alarm threshold is 1000PPM) After you set CO2 alarm threshold well, when CO2 value more than CO2 alarm threshold and keep rising, thedevice would beep sound. For example, you set CO2 alarm threshold to 1500ppm, once CO2 value more than 1500ppm and keep rising, the device would beep sound.

No alarm when the CO2 value drops

If you have elected to keep the CO2 alarm on, please be aware that the CO2 alarm will stop beeping automatically even when CO2 levels are still above your specified threshold if the CO2 levels are decreasing.

Adjust screen brightness

After turn on. the device auto access the interface whichcan show CO2 current value, temperature and humidity. In this state, press **" Upper Button "** to increase screen brightness; Press **" Down Button "** to decrease screen brightness.
(with 7 level for brightness)

Installation Notes

1) The positioning sticker is attached to the position to beinstalled.
2) Punch a 6mm hole at the 2 marked positions of thepositioning sticker and drive the rubber plug into the hole.
3) Drive in the screws, and pay attention to about 4mm exposed. Then hang the CO2 meter up.
4) Connect one end of the USB cable to the USB poweradapter, and the other end (round connector) to thepower input port on the side of the device(input voltage: DC5V 1A / 2A)

Working method

Under normal working conditions, don't do any settings,just plug USB port to the power adapter and the DC round head into the device. You can test the current CO2value and temperature and humidity in real time.

Automatic / Manual Calibration

Automatic Calibration: During the first use, please Turn on device and keep more than 24 hours, the device will automatically calibrate.
(Do not power off and restart halfway when calibration)

Manual Calibration: Long-press **" Upper Button "** and hear a **" di "** sound, the CO2 value will start flashing. The flashes will stop automatically and finish calibration after flashing lasts for 5 minutes.
(Do not operate halfway when calibration)

PARAMETERS AND INTERPRETATION OF READINGS

How toingterpret readings

	Green	Yellow	Orange	Red
CO2	400 - 1000	1001 - 2000	2001 - 3000	3001 - 5000
CO2 Level Indicator	☺	😐	☹	☹
Temperature	18°C - 26°C 64°F - 79°F	18°C - 26°C 64°F - 79°F	< 18°C < 64°F	> 26°C > 79°F
Humidity	30% - 60%	30% - 60%	< 30%	> 60%

PARAMETERS

	Measurement Range	Measurement Method	Resolution	Measurement Accuracy
CO2	400 - 5000 PPM	Infrared (NDIR)	1 PPM	± 50 PPM or 5%
Temperature	14°C - 50°C 57°F - 122°F	Semiconductor	1°C 1.8°F	± 2°C ± 3.6°F
Humidity	20% - 85%	Semiconductor	1%	± 4%

UNDERSTANDING THE METRICS

1.CARBON DIOXIDE (CO2)

Definition:
Carbon Dioxide is a gas which is colorless, tasteless, and important for plant photosynthesis.

Impact on Health:

Too much CO2 may cause drowsiness, reduced cognitive function, and poor decision-making. CO2 is generally allowable up to 1000ppm. Readings above 2000ppm, it can cause dizziness, tinnitus, or even suffocation.

Possible Causes of High Reading:

- Poor ventilation and recycled indoor air (Note: A newer home may trap and accumulate higher levels of CO2 as newer homes are constructed to be more air tight)
- Cooking (especially using the oven) and use of certain appliances
- Soil build-up / mold (which releases CO2)

Tips to Improve:

- Increase air circulation. It is imperative that a room or building has proper ventilation to ensure lower, healthy levels of CO2. Outdoor air typically contains CO2 levels between 400 - 450PPM (although certain areas may have less healthy outdoor air and be above this).

Add plants to your home:

- This helps to reduce CO2 and increase oxygen which can have the effect of making you feel less drowsy. Some recommended indoor plants for improving air quality in your home are Areca Palm, Philodendron, Rubber Plant, Peace Lily,Dracaena, Snake Plant, Boston Fern, Aloe Vera, English Ivy and Spider Plant.

Use filters and air purifiers:

- To improve indoor air quality, it is highly recommended to use not only a standard pleated or HEPA furnace filter, but also an air purifier in the areas in which you spend the most time; perhaps your home office or bedroom.

2. TEMPERATURE

Definition:
Measurement of the heat or cold of the environment.

Impact on Health:
Issues with your respiratory and circulatory systems.

Tips to Improve:
Temperature inside the home is typically a controllable element. It is advised to adjust temperature slowly rather than allow drastic changes.

3. HUMIDITY

Definition:
Humidity is the level of water vapor in the atmosphere.

Impact on Health:
With an increase of humidity by 35% or more, formaldehyde emissions will increase and remain suspended in the air.

Possible Causes of High Readings:

- Humid outdoor weather
- Activities which release steam / moisture into the air such as drying laundry, taking a hot bath or shower, or boiling water / liquid

Tips to Improve:

Utilize dehumidifiers to control levels of humidity. It is recommended to keep humidity in your home around 50% in the Summer and about 30% in the Winter.

Tips

Tip 1: Strange Readings? Do This:

1. Turn the device off for some time and then turn it on back on again (effectively allowing the monitor to reset).
After continuous use for extended periods, the device may simply need to be reset.

2. Open a window or bring the device outdoors to allow the CO2 sensor to exhaust any accumulated fumes and to allow the readings to adjust back down to more normal levels.

Tip 2: Not Using It? Turn It Off:

For the most consistently accurate readings and longest product life, it is recommended to turn the CO2 monitor off while it is not in use. This will preserve the battery, sensor, and fan.

Tip 3: Open a Window:

Often the quickest and most practical way to get readings back in to the desired range is to simply open a window to ventilate more clean outdoor air into your home. This obviously does not apply if you are located in a Wildfire area or any other area with compromised outdoor air quality.

Tip 4: Cooking Impacts Air Quality:

Cooking often releases increased amounts of unhealthy pollutants in to the air including but not limited to CO2, PM2.5 and 10, and VOCS. Furthermore, how and what you cook determines the types of pollutants which will be released into the air.

CONSIDERATIONS & PRECAUTIONS

- **Sampling Frequency**
The sampling frequency of the CO2 monitor is 1.5 seconds. This means that your CO2 monitor is providing you with updated readings every 1-2 seconds. Please note that, in order to provide constantly-updated, real-time readings, it contains a continuously running mini fan which gives off a very slight buzzing sound.

- Upon turning off the CO2 monitor, you will see a brief "H:01" appear on the screen. This is normal. This is not an error message.

- This air CO2 monitor is meant to be used indoors and kept dry at all times. It is strongly recommended to store in a cool, dry place.

- **DO NOT** expose to sunlight or use in an extremely polluted, dusty, or smoky environment for prolonged periods as doing so may damage the sensors over time.

- **DO NOT** cover the air intake areas during use to avoid inaccurate measurements.

- **DO NOT** use chemicals or solvents to clean the product as residual fumes will skew air quality readings.

- **DO NOT** put water or other liquids on or near the product to avoid electrical damage.

- **DO NOT** allow unauthorized modification or repair of this product.

- **DO NOT** take apart or disassemble this monitor. Doing so may damage the product and will invalidate the warranty.

PRODUCT SPECIFICATIONS

Item	Wall mounted CO2 Monitor
Power Source	Rechargeable Lithium-Ion Battery
Battery Capacity	2000 mAh
Charging Input	AC 100-240V, 5V USB Connection
Product Size	270 X 90 X 35mm
Display Method	LED Screen
Atmospheric Pressure	12.5 PSI - 15.4 PSI
Sampling Time	1.5 Seconds
Operating Temperature / Humidity	-10 - 50°C (14°F-122°F) / 20% - 85%, Non Condensing
Storage Temperature / Humidity	-10 - 50°C (14°F-122°F) / 20% - 85%, Non Condensing
Detection Temperature	-10 - 50°C (14°F-122°F)
Product Weight	320g (11.29oz)

WARNING:
While this product can reduce your risk of harm by increasing your awareness of air quality, it can in no way guarantee your health or safety. Please instead take a comprehensive approach to living healthy and do not depend on this monitor alone to improve your health or save your life.

LEGAL DISCLAIMER:
The use or misuse of this CO2 monitor is conditioned upon the user's agreement that in no event shall the manufacturer, importer, reseller, or distributor of this monitor be liable for any direct, indirect, punitive, incidental, special consequential damages, to property or life, whatsoever arising out of or connected with the use of this carbon dioxide monitor.

Product List

Device	x1
Manual	x1
Positioning sticker	x1
USB cable	x1
Screw	x2
Rubber stopper	x2





How to connect your device to an Android or Apple iOS smartphone via Tuya Smart App

1. Download and install the Tuya Smart App through the Google Play Store or Apple App Store.Or to scan the below f.1 to download the Tuya APP, then registration and login it.

2. Turn on the air quality monitor by long pressing the Power button.

3. Connect your phone to a WiFi network and open Bluetooth function, and open the Tuya Smart App. As below (Picture 2), and click Auto scan, Then it can auto search DM1406C_LAN and clicket to enter main interface.