User Manual

Environmental Carbon Dioxide Monitor V1.4.6

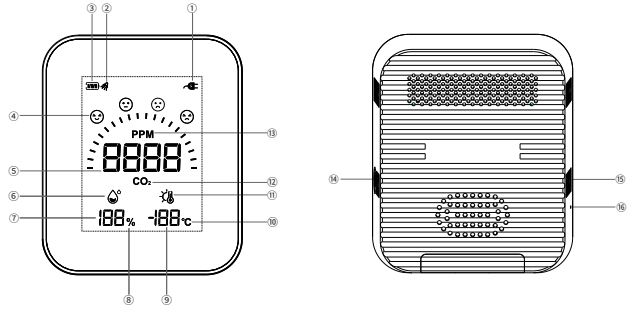
1. Safety instructions

Please read the following information carefully before operating:

(1) The safe working range of ordinary AAA alkaline batteries is -15~50°C. If the meter needs to be used in a lower temperature environment, you must use a suitable battery.
(2) Precision equipment, non-professionals please do not disassemble or repair without authorization.
(3) Please remove the battery if the equipment is not used for a long time.
(4) During operation, the air inlet and outlet can not be blocked to avoid numerical deviation.
(5) Do not use this equipment in a high temperature, high humidity, dusty environment or near a strong magnetic field to avoid inaccurate measurement results or malfunction of the internal circuit.

2. Appearance and LCD display

① USB power supply symbol
② Sound alarm prompt
③ Battery level indication
④ Emotional instructions
⑤ CO2 measurement values
⑥ Humidity Icons
⑦ Humidity measurement value
⑧ Humidity units
⑨ Temperature measurement values
⑩ Temperature units
⑪ Temperature Icons
⑫ Gas types
⑬ CO2 concentration units
⑭ Power button
⑮ USB Interface
⑯ Calibration holes(internal calibration button)



3. Operation

(1) **Power on**: Press and hold the power button for 3 seconds to turn on the equipment.
(2) **Power off**: Press and hold the power button for 3 seconds to turn off the equipment.
(3) **Adjust screen brightness**: Short press the power button to adjust the screen brightness.

4. CO2 over limit alarm

When the carbon dioxide concentration is greater than or equal to 1000ppm, the equipment will sound an alarm for 10 seconds.

(1)Turn on or off the sound alarm function: Press the power button twice within 1 second to turn on (display the symbol) or turn off the sound alarm function. Every time it is restarted, the equipment will turn on the sound alarm function by default.
(2)Turn off the alarming bell: Short press the power button to turn off the alarming bell.

5. Carbon dioxide 400ppm calibration

The aging of equipment parts, or when working in high and low temperature environments, may cause the measurement accuracy of the carbon dioxide sensor to decrease. The user can calibrate its parameters through 400ppm calibration. The specific operation steps are as follows:

(1)Place the equipment outdoors with excellent air circulation, and turn it on for more than 10 minutes;
(2)Press and hold the calibration button in the ⑯ calibration hole with the needle for 5~8 seconds, when "CAL" flashes, release the calibration button; after the calibration is completed, the equipment will automatically return to normal display.

Note: Outdoor carbon dioxide concentration is about 400ppm.

6. Expression indicator and carbon dioxide concentration range comparison table

Expression indicator	Carbon dioxide concentration range
Green ☺	699ppm and below
Yellow 😐	700~999ppm
Orange ☹	1000~1499ppm
Red ☹	1500ppm and above

7. Technical parameters

CO2 Sensor Selection	◌	◌	◌
Resolution	CO2: ±(5% of reading +50ppm) 400~2000ppm, other ranges are shown for reference only	CO2: ±(3% of reading+40ppm) 400~2000ppm, other ranges are shown for reference only	CO2: ±(3% of reading +40ppm) 400~2000ppm, other ranges are shown for reference only
	Temperature: ±1°C(-10~60),±2°C(Other Range) Humidity: ±5%(10~90%, 25°C),±6%(Other Range)		
Measurement Range	Temperature: -20~60°C Humidity: 0~100%RH		
	CO2: 400~10000ppm		CO2: 0~10000ppm
Resolution	Temperature: 1°C; Humidity: 1%; CO2: 1ppm		
Response Time	Temperature: 15 minutes; Humidity: 15 minutes; CO2: about 3 minutes(In an environment with good air cirulation)		
Measurement Interval	Temperature: 1 second; Humidity: 1 second; CO2：4 seconds		
LCD Refresh Interval	1 second		
Operating Temperature	0~50°C		
Storage Temperature	-30~60°C(Without batteries)		
Power Supply	(1)Three 1.5V AAA alkaline batteries/USB powered; (2)Lithium battery direct charge/USB power supply . Customers can choose one of the two options above.		
Power Interface	Type-C; DC 5V/2A		
Protection Class	IP20		
Size	91*76*40mm		
Shell Material	ABS		
Weight	About 140g(Without batteries)		

8. Equipment abnormal description

(1)If the CO2 concentration is Lb, the battery is low and cannot supply power to the device. You need to replace the battery or charge it.
(2)When the temperature exceeds the range of 0~50°C, the carbon dioxide sensor may work abnormally (accuracy is reduced or work is suspended).
(3)When the temperature exceeds the range of -20~60°C, the equipment will automatically turn off.
(4)When the temperature is lower than 5°C, the battery power supply is not effective and the power consumption is fast. Please use the USB power supply.
(5)Lithium battery direct charging model, when the equipment is charged by USB, it is normal for the equipment to get slightly hot. After fully charged, the temperature and humidity display returns to normal.