

User Manual

V1.0.8

Air Quality and Environment Monitoring Meter

1. Safety instructions

Please read the following information carefully before operating:

(1) The meter can be operated in the environment of -30~65℃, 0~100%RH(non-condensing). The meter may be damaged if used in other environment.

(2) The battery can be used at the temperature of -15~50℃. If you need to use the meter at other temperatures please change the battery.

(3) Please do not disassemble or repair the meter by yourself.

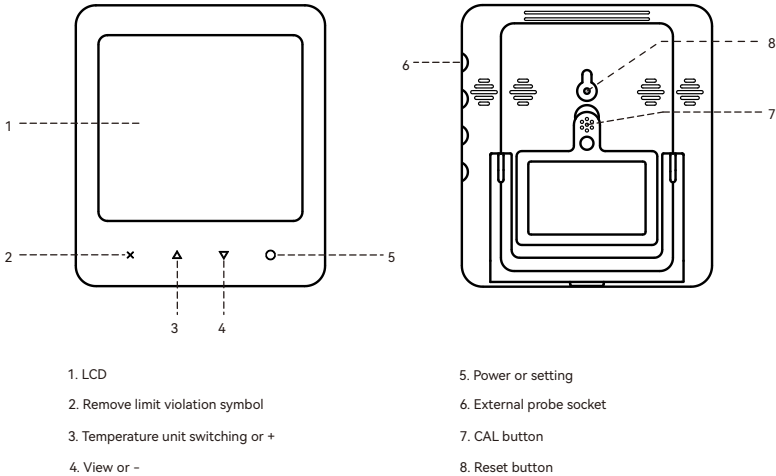
(4) Please remove the battery if the meter is not used for a long time.

2.Product selection guide

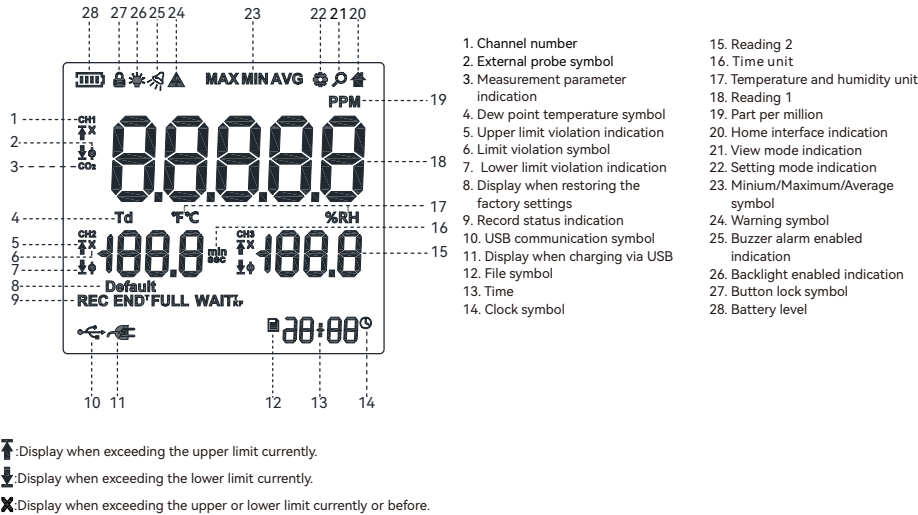
Model No.	A	B
Function		
Temperature	●	●
Humidity	●	●
Carbon dioxide	●	●
Data logging	○	●

●means the product enabled, ○means the product disabled.

3.Appearance



4.LCD Introduction



↑:Display when exceeding the upper limit currently.

↓:Display when exceeding the lower limit currently.

✕:Display when exceeding the upper or lower limit currently or before.

5.Specifications

CO ₂ Sensor Selelction				
Accuracy	CO ₂ : ±3%±100ppm (400~2000ppm,0~50℃) Other range, for reference only	CO ₂ : ±3%±80ppm (400~2000ppm,0~50℃) Other range, for reference only	CO ₂ : ±3%±60ppm (400~2000ppm,0~50℃) Other range, for reference only	CO ₂ : ±3%±40ppm (400~2000ppm,0~50℃) Other range, for reference only
Measurement Range	Temperature:±0.5℃(-10~65℃); ±1.0℃(Other range) Humidity:±5%RH(10%~90%,25℃); ±6%(Other range)			
Resolution	Temperature:-30~65℃(Internal probe) ,-40~125℃(External probe) Humidity:0~100%(Non-condensing) CO ₂ : 400~10000ppm(0~50℃)			
Response Time(t ₉₀)	Temperature:0.1℃; Humidity:0.1%; CO ₂ :1ppm			
Measuring Interval	Temperature:15min(Internal probe); 5min(External probe) Humidity:15min(Internal probe); 5min(External probe) CO ₂ :≥3min			
Memory Capacity	5s			
LCD Refresh Interval	22528 readings (for the model with data logging function)			
Operation Temperature	5s			
Storage Temperature	0~50℃ ^①			
Battery Specification	-30~65℃ (without batteries)			
Power Supply Interface	1.5V AAA(Alkaline batteries)			
Case Material	Micro USB,DC 5V/2A			
Dimension	ABS			
Protection Class	96*108*20mm			
	IP20			

①. When temperature is lower than 0℃ or higher than 50℃, the carbon dioxide sensor will stop working. When temperature is back to 2~48℃, the sensor will return to work. When temperature is out of the range of -40~70℃, the meter will power off.

6.Operation

The meter will self-lock if not any operation within 15 seconds(the icon  will be displayed). Hold the button **O** for 2 seconds to unlock it. You can hear a sound "di" when pressing a button.

6.1 Power on

- (1)The meter will turn on automatically when installing new batteries;
- (2)If the meter has been shut down, hold the button **O** for 3 seconds to turn it on.

6.2 Power off (invalid during logging)

- (1)In home interface, hold the button **O** until "off" shows, then the meter will power off.
- (2)When the battery power is too low or the ambient temperature exceeds the limit operating temperature of the meter, the meter will automatically shut down (this type of shutdown must be powered on again to turn it on.)

6.3 Temperature unit switching(invalid during logging)

Long press the button **Δ** for 2 seconds to switch Fahrenheit and Celsius.

6.4 Dew point display switching

Click the key **Δ** to switch temperature and dew point temperature.

6.5 Time display switching

Click the key **O** to toggle the display between year, month, date and time.

6.6 View the maximum, minimum, average, upper and lower limits

Click the key **▽** to view the values, including maximum, minimum, average, upper and lower limits. In view mode(the icon  will be displayed), it will return to home interface if not any operation within 15 seconds, or you can press **X**, **Δ** or **▽** to go back to home interface. The factory default high and low limits for carbon dioxide, temperature and humidity are listed below:

	Low limit	High limit
Carbon dioxide	400ppm	999ppm
Temperature	-10℃	35℃
Humidity	20%RH	90%RH

6.7 Clear the statistical data (for the model without data logging function)

Long press the key **▽** for 2 seconds to delete the statistical data, including maximum, minimum and average (the MAX/MIX/AVG symbol will flash once). Then it will restart to calculate the maximum, minimum and average values.

6.8 Turn off the audible and visual alarm(buzzer and red backlight)

When the meter is over the limit alarm, tap the "Power and setting"button to turn off the alarm bell and red backlight.

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6.9 Remove limit violation symbol(invalid during logging)

Long press the button **X** for 2 seconds, and the limit violation symbol **X** will be removed after a sound "di".

6.10 Parameter setting(invalid during recording)

In setting mode, you can click the button **O** to enter the next setting, or you can click the button **X** to go back to the previous setting.

(1)**Enter setting mode:**

In home interface, long press the button **O** until the year value flashes, then you will enter the setting mode(the icon  will be displayed). Click the button **O** one by one to set the following parameters: time, alarm duration(audible and visual alarm: buzzer and red backlight, alarm duration gear: off, 5sec,10sec, 30sec, 1min, 3min, 5min, on). When the setting item parameter is flashing press the button **Δ** to increase the value or press the button **▽** to decrease the value. "On" means that the function is enabled all the time, "off" means that the function is disabled.

(2)**Exit setting mode:**

Click the button **O** after finishing the setting, and the meter will save the settings and exit setting mode. In setting mode, if not any operation within 15 seconds, the meter will save the settings and go back to home mode. You can also long press the button **O** for 2 seconds to go back to home interface.

6.11 View the serial number

Long press the button **O** and the button **▽** at the same time for 2 seconds, and the serial number will be displayed on the screen.

6.12 Restore the factory settings(invalid during logging)

Long press the button **X** and the button **Δ** at the same time until showing "DEFAULT" and the icon .

6.13 Reset

Use a suitable object to click the reset button on the back of the meter to trigger a meter reset. This reset operation only by restarts the meter (resetting during the recording process will cause part of data recorded within 5 minutes to be lost).

6.14 Carbon dioxide calibration

(1)**400ppm calibration**

In the running mode, press and hold the CAL button on the back of the meter for 5 seconds, "cAL 400" is displayed, and 400ppm calibration starts. At this time, place the instrument in a ventilated and excellent air quality environment. After 5 minutes, the instrument will automatically perform 400ppm calibration. After the calibration is completed, it will automatically return to the main mode interface. If the calibration is abnormal, the screen will prompt "Err3". At this time, you need to short press the CAL button to exit the calibration. After exiting, you can perform the calibration again until the calibration is successful.

(2)**Exit the calibration**

In calibration mode, you can exit the calibration directly by pressing the CAL button. The calibration will be invalid when exiting directly. You can't exit the calibration by pressing the CAL button when the "CAL" icon has flashed.

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7. Record operation and file description (for the model with data logging function)

7.1 Start logging

Long press the button **▽** for 2 seconds to start logging, and "REC" will be displayed on the screen (For more details, please refer to the status symbol table).

7.2 Stop logging

- (1)Long press the key **▽** for 2 seconds to stop logging, and "END" will be showed on the screen.
- (2)The meter will stop logging when connecting with a computer("END",  ,  will be displayed on the screen).
- (3)When the storage space is full, the "END FULL" sign is displayed, and the recording is automatically stopped.
- (4)If the battery power is too low, it will automatically stop recording, save the data and shut down.

7.3 Description and operation of record files

The record file is based on the serial number of the machine + the year, month, day, hour, minute, and second at the start of the recording as the file name. It can be set to four text formats: dlg, tet, xls, and csv by pressing the key (please refer to the file format logo Chart).After stopping the recording, connect to the computer to generate a recording file in the corresponding format on the disk.

7.4 Delete logging files

- (1)Format the disk by a computer.
- (2)Open the disk on a computer, and remove the logging files.
- (3)Restore the factory settings.

8. Tips and helps

8.1 FAQs

- (1) When all the keys cannot respond, it indicates that the meter is undergoing self-calibrating, please wait and try again after 15 seconds.
- (2) The meter supports the use of external probe. Please insert the external probe into the external probe socket and restart the meter, and the symbol  will be displayed on the screen.
- (3) When the battery symbol flashes or "oFF" shows on screen, it indicates that the battery is low, and the meter will turn off automatically. Please replace the battery timely.
- (4) When the screen shows exception code, please refer to the abnormal code table for the reason. Any questions, please contact with after-sales.

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8.2 Meter prompt comparison table

Abnormal code table

Sensor failed to communicate	-- -- --
Hardware error	Err0
Abnormal supply voltage	Err2
Abnormal carbon dioxide calibration	Err3
Abnormal operation environment of carbon dioxide	StoP
Operation temperature is too high	HI
Operation temperature is too low	Lo
The battery voltage is low (only for carbon dioxide meter)	Lb
Less than 2 recording points	NoNE
Insufficient disk space	FULL

Status symbol table

WAIT 	Wait to start logging
REC	Under record status
END	Stop logging when memory is not full
END FULL	Stop logging when memory is full

File format symbol table

dlg	
txt	
xls	
csv	

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