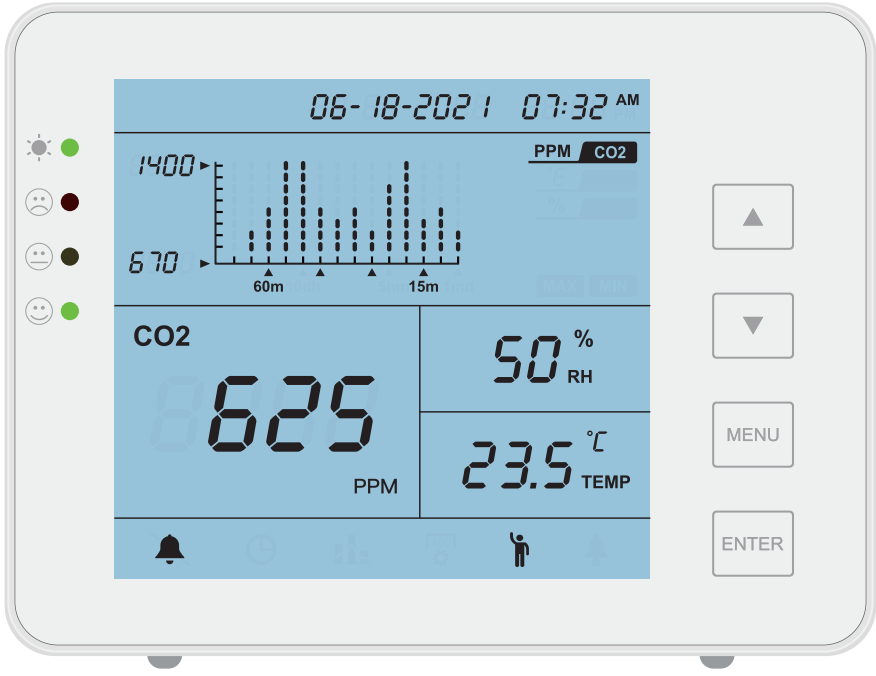
CO2 Monitor-SA1200P-NEW

Instruction Manual



CE RoHS 2.0 REACH

CO2/TEMP/RH

This manual and its contents are only for the operation and use of this product and cannot be used for other purposes.

This manual and its content inevitably contain errors or discrepancies from reality, and are for reference only. If there are discrepancies or doubts, please contact our company.

The functions and specifications are subject to change without prior notice.

contact us

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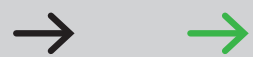
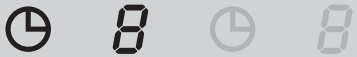
Getting Started

Thanks for purchasing our CO2 Monitor SA1200P with memory and storage. Developed to detect CO2 concentration, temperature and relative humidity in ambient air, this device is smart, compact and easy to use. It automatically records data and can be easily exproted to a computer into an Excel file format.

❖ Table of Contents

Tips

Icons description:

		
Relevant information and page number	Normally on and flashing	press button

explain:

- The button only works when the backlight is on. Click any key to light the backlight.
- Please press quickly and gently, don't press hard, or hold for long.

1 Attention

Please read this manual carefully and keep it properly for future reference.

This device is not intended for workplace hazard CO2 monitoring, nor is it intended as a definitive monitor for human or animal health institutions, life sustenance, or in any medically-related situation.

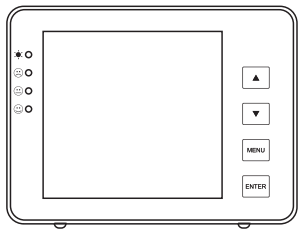
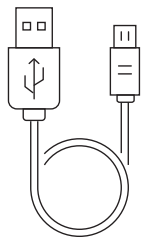
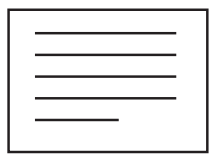
⚠warning

In order to avoid and reduce risks and equipment damage, please：

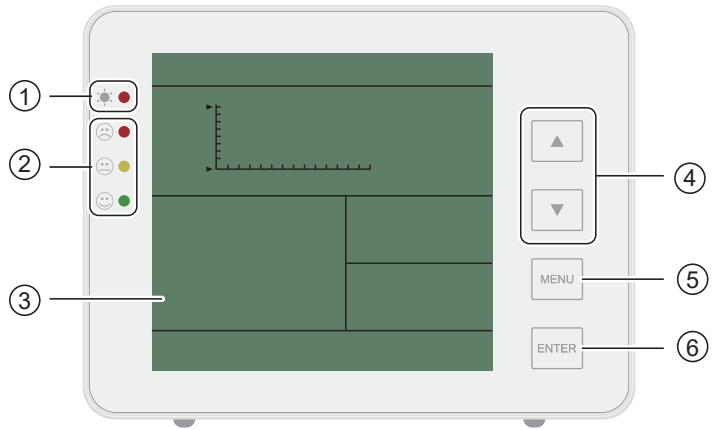
- Keep out of reach for children and use it under adult supervision.
- Do not store, use or set this product in or near inflammable or explosive places.
- Do not touch the device, USB cable, or power adapter with wet hands.

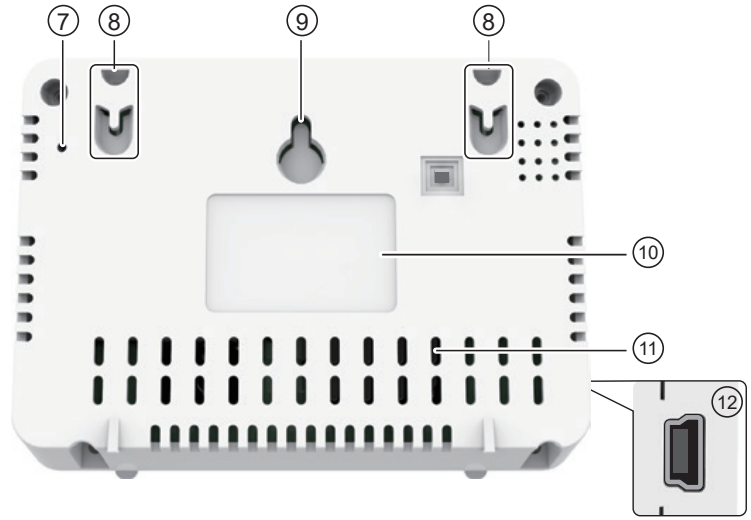
2 Product introduction

1 Packing list

(a) CO2 Monitor Unit	
(b) USB Cable for Power	
(c) User’s Manual	

2 Name





① Power indicator light (Green LED)
- It is always on when the power is on and flickers when charging

② Tricolor indicator → 8

③ LCD Display → 6-7

④ UP/DOWN Buttons
- Used to toggle selection or adjust values

⑤ MENU Button
- Activate the menu bar and exit

⑥ ENTER Button
- Determine the menu items and set values in the selection

⑦ Hole for Buzzer

⑧ Hole for Rope
- Use for hanging the device on the wall

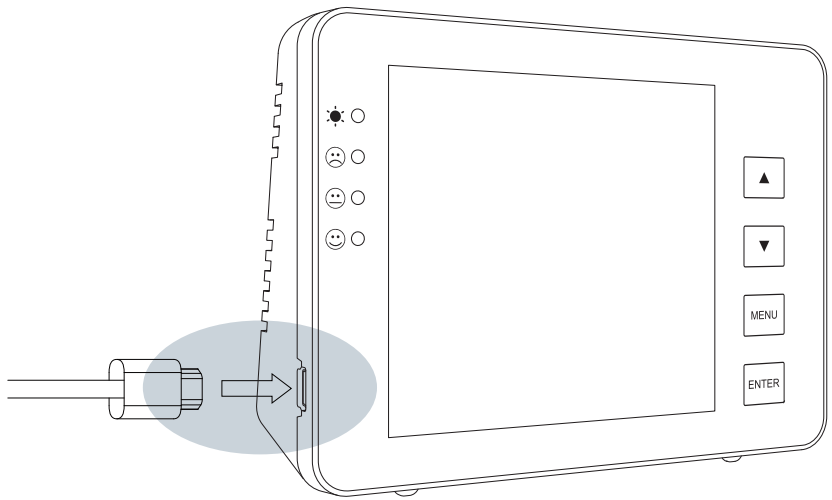
⑨ Hole for Screws
- Use for wall-mounted

⑩ Label ⑪ Vent ⑫ USB Port

3 How to use

1. Initial setup

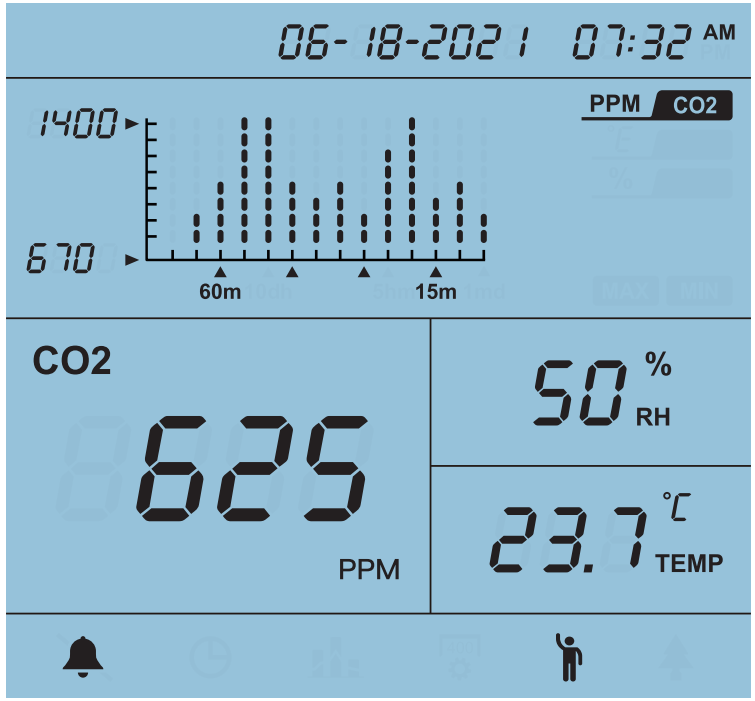
- When first unboxing, plug the included USB cable into the unit and the other end into USB power source.



If successfully connected, three things will happen while booting up:

1. 4 LEDs flash one by one
2. The interface will display low alarm point, high alarm point.
3. Main display shows a countdown from 30.

- Once the countdown is complete, your product is ready to use. No initial setup or calibration is needed.



Power supply:

1. Direct power from power adapter and USB cord.
2. Computer USB port and purchased regular and qualified cell phone charger.

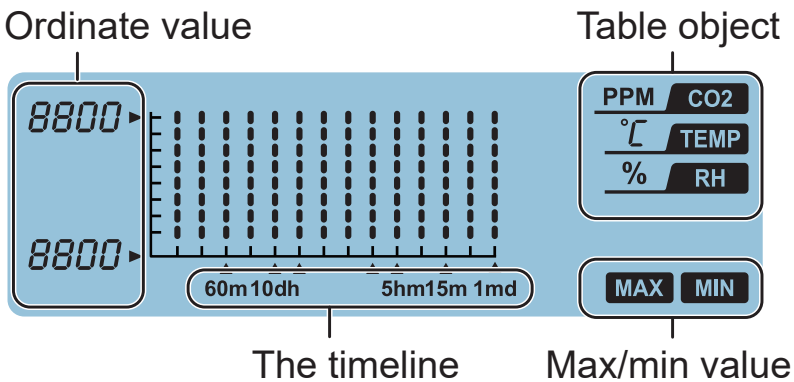
2 LCD display

(a) Date/time

Displays the current date and time

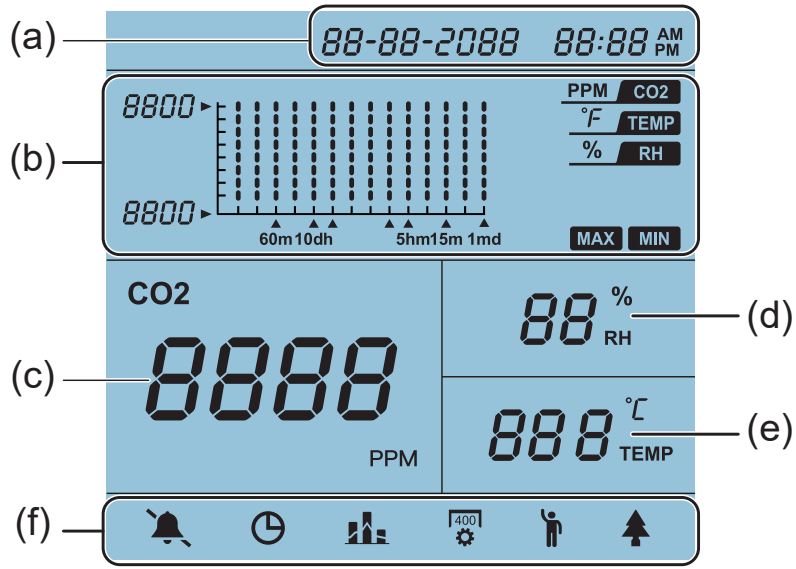
(b) Chart

Display the curve of CO2, temperature and humidity



(c) CO2 Reading area

Displays the current CO2 concentration



(d) Humidity Reading area

- Displays the current humidity
- Display Lo and HI , indicating low / high alarm point

(e) Temperature Reading area

Displays the current temperature

(f) Main Menu options

Buzzer	Calibration
Date / time	Human mode
Chart	plant mode

3 Alarm

（1）Buzzer sounds

When the buzzer icon displays an audible alarm will sound if the CO2 level exceeds preset CO2 alarm value; means MUTE.

（2）Light tips

- Human model

Red LED on	: CO2 reading ≥ High alarm point
Yellow LED on	: Low alarm point < CO2 reading < High alarm point
Green LED on	: CO2 reading ≤ Low alarm point

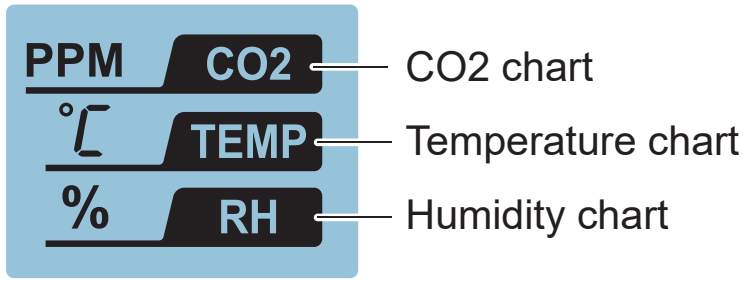
- Plant model

Red LED on	: CO2 reading ≤ Low alarm point
Yellow LED on	: CO2 reading ≥ High alarm point
Green LED on	: Low alarm point < CO2 reading < High alarm point

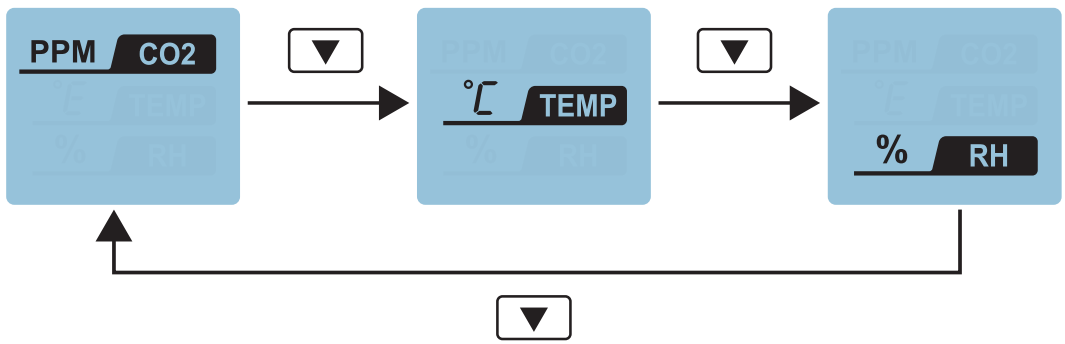
※ Mode switching and high / low alarm point setting →14

4. The chart to use

(a) Switching table objects

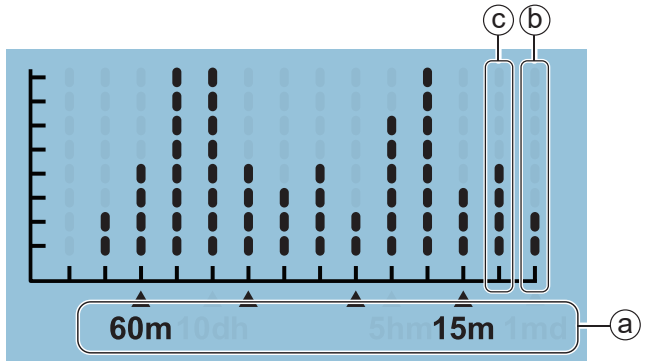


- Press the ▼ to switch between different views.



※ The instrument default CO2 chart, when switching to temperature or humidity chart, no operation for a period of time will automatically jump back to CO2 chart.

(b) Switching the timeline and view the max/min value



ⓐ **m**: minute; **h**: hour; **d**: day
On this timeline, one column represents 3 minutes.

ⓑ Indicates the data within 5 minutes from the current time

ⓒ Indicates the data generated within the last 5 to 10 minutes based on the current time

- If necessary, you can press ▲ to switch the timeline. The time period represented by each column in the chart can be switched between 1 minute, 5 minutes, 1 hour and 1 day, and the minimum and maximum values can also be switched.

  ※ The default timeline is one minute per grid. When you switch to another timeline, after no operation for a period of time, it will return to the default.

- You can view the maximum and minimum values of CO2, temperature and humidity from startup to current period.

  Method: Press ▲ to switch MAX / MIN, press ▼ to switch PPM CO2 / ℃ TEMP / % RH and CO2 the value appears in the corresponding display area.

(c) View the data in each column of the table →13

4 How to set up

1 Restore factory defaults

In detection panel , hold ENTER until an audible beep is heard.

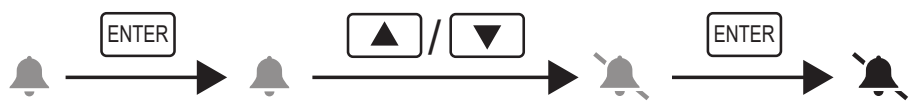
2 The menu Settings

- Press MENU once to activate the menu bar, press ▲ / ▼ to cycle and switch function options.（Blinking Indicates the selection status）
- When ▲ blinks, press MENU to exit the menu bar.

※ The menu bar automatically exits after no operation is performed for a period of time.

(a) Alarm

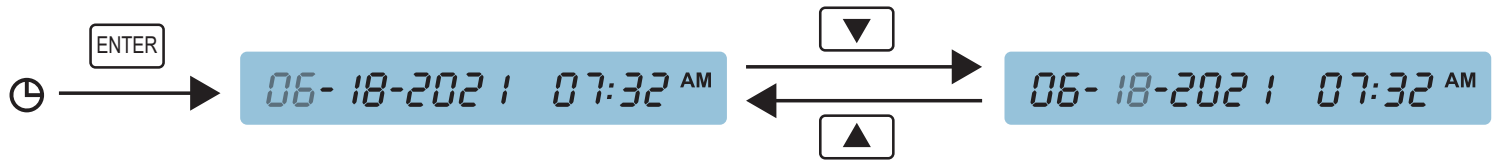
- When 🔔 / 🔕 blinks, press ENTER to enter Settings, press ▲/▼ to switch, and press ENTER to complete.

Example: 

(b) Set the time

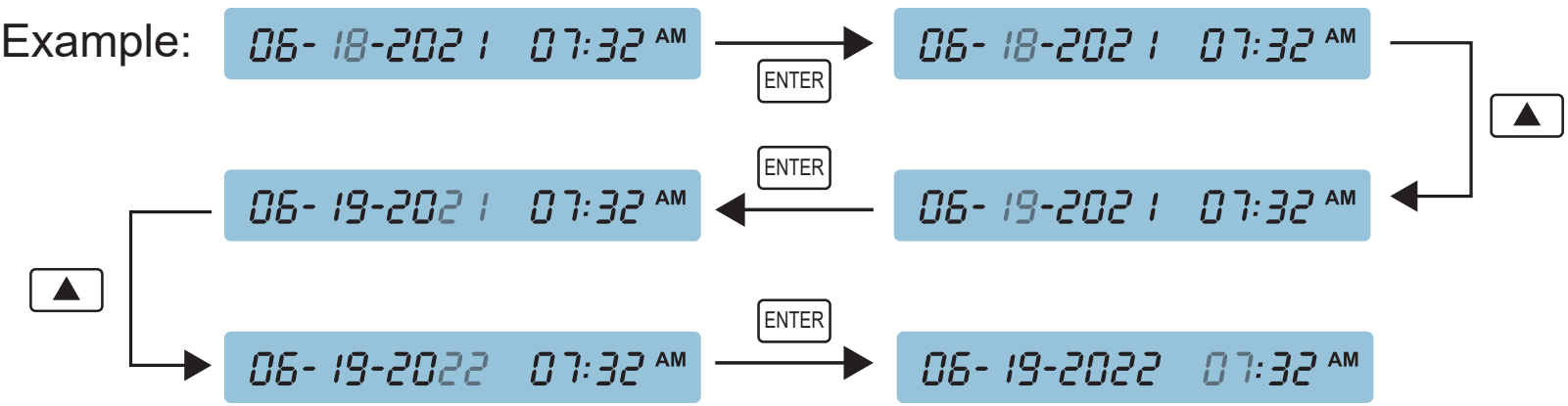
- When ◷ blinks, press [ENTER] to enter the choice, press [▲] / [▼] to switch Options.

  Example:



- When an item blinks, press [ENTER] to enter the setting, press [▲] / [▼] to adjust the value, press [ENTER] to switch to the next item, press [MENU] to exit.

Example:



If ***AM*** and ***PM*** are blinking at the same time, press [ENTER] to set the mode to 24 hours.

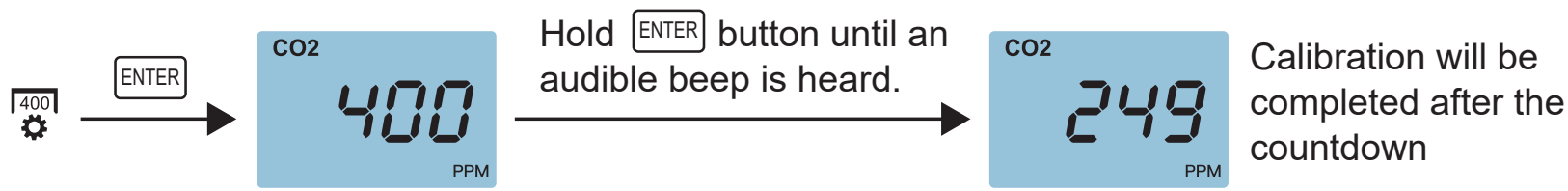
(c) View the data in each column of the table

When blinks, press ENTER to view the table, press ▲ to select the columns of the chart and ▼ to toggle the timeline.

- Data for each column of the chart will be displayed in the CO2, temperature and humidity display area.
- Press MENU or no operation for a period of time will exit.

(d) Calibration

Before calibration, run this device for at least 20 minutes with window open or in outdoor environment with backup battery to reach an atmosphere with 400ppm CO2. Wait till the CO2 reading is stable, then follow below steps for calibration.After calibration,leave it 10 minutes before normal use.



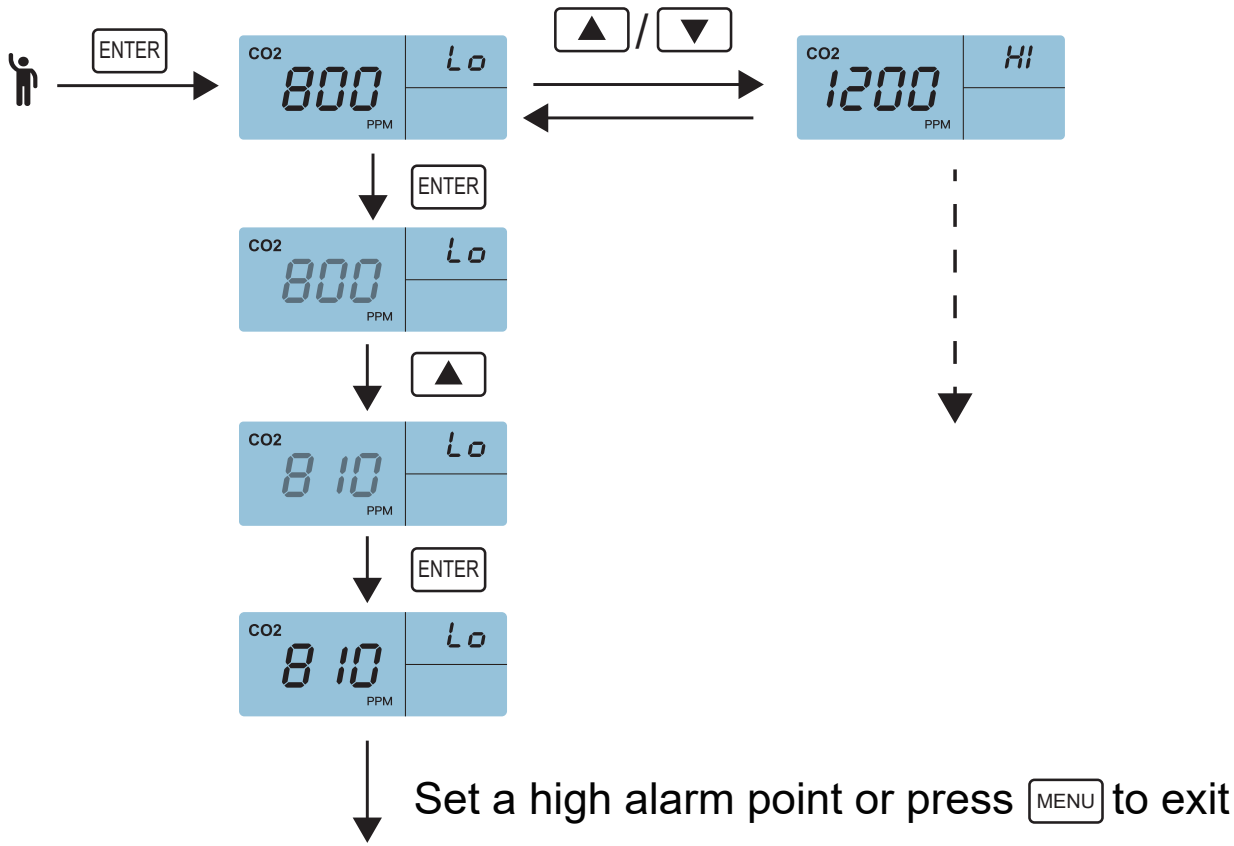
※ Make sure it's fully charged before calibration.

(e) Human/Plant model

Check interface menu bar displays human mode or plant mode

- When or blinks, press ENTER to set this mode, then set high/low alarm point.

Example:



5 Specifications

CO2 Measurement	
Measuring range	(0-5000)ppm
Display resolution	1ppm (0-1000); 5ppm (1000-2000); 10ppm (>2000)
Sensor lifetime	10-15 years
Accuracy	(0~3000)ppm: ± (50ppm + 5% of reading) (＞3000)ppm: ± 7% of reading
Repeatability	20ppm at 400ppm
Temp compensation	±0.1% of reading per ℃ ±2 ppm per ℃, referenced to 25℃
Response time	＜2 min for 63% of step change or ＜ 4.6 min for 90% step change
Warm-up time	<30 seconds
Temperature Measurement	
Operating temperature	32°F ~ 122°F (0°C ~50°C)
Accuracy	±2°F / ±1°C
Display resolution	1°F / 0.1°C
Response time	<20 minutes (63%)

RH Measurement	
Measuring range	5~95%
Accuracy	±5%
Display resolution	1% Main interface display， 1% Max/Min display
Data storage capacity	2GB
Operating Temperature	32°F ~ 122°F (0°C ~ 50°C)
Storage Temperature	-4°F ~ 140°F (-20°C ~ 60°C)
Operating & storage RH	0-95%(non-condensing)
Operating Voltage	DC(5±0.25)V
Dimension	120*90*35mm
Weight	170g

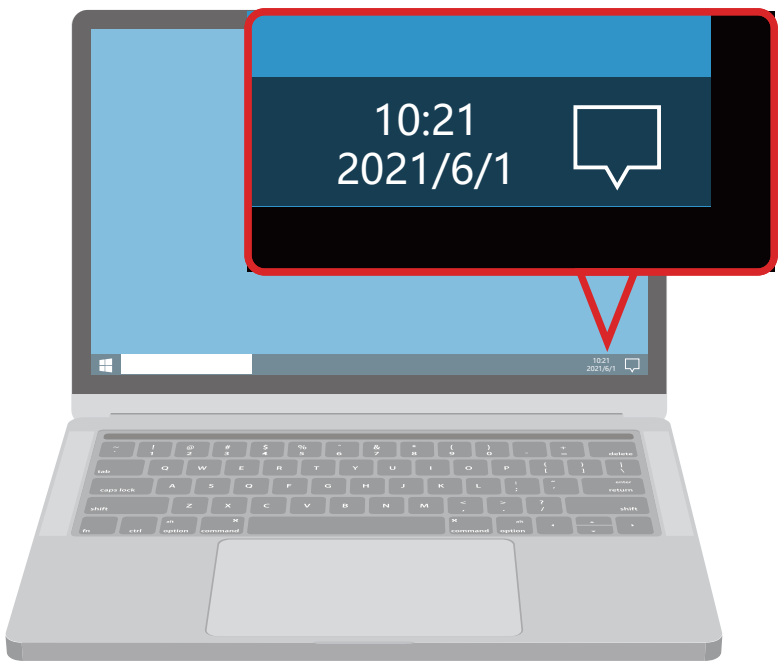
※ Typical test conditions: Ambient Temp: 73 ± 6°F, RH=50%~70%, Altitude= 0~10 meters

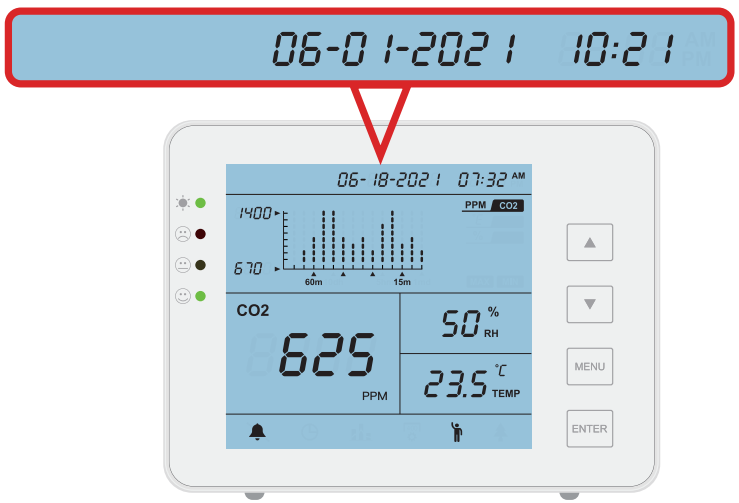
6 Operation mode

You can log in to http://www.shiantech.com/dash/dash-board/ to learn more

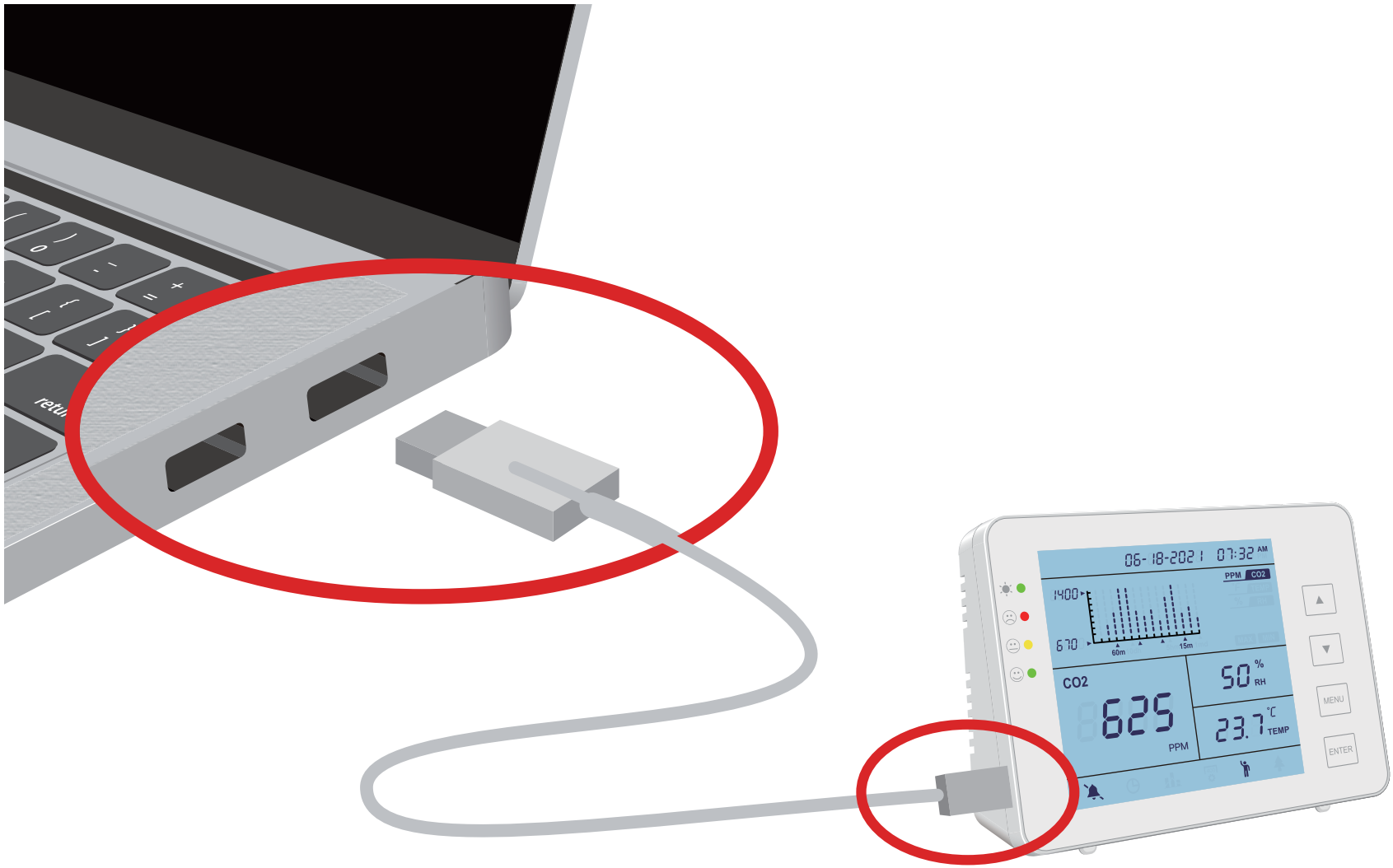
1 Set the time and date of the CO2 Monitor and synchronise it with your computer.

※ This step is important in order for your CO2 Monitor to be able to correctly record when each sample is received.

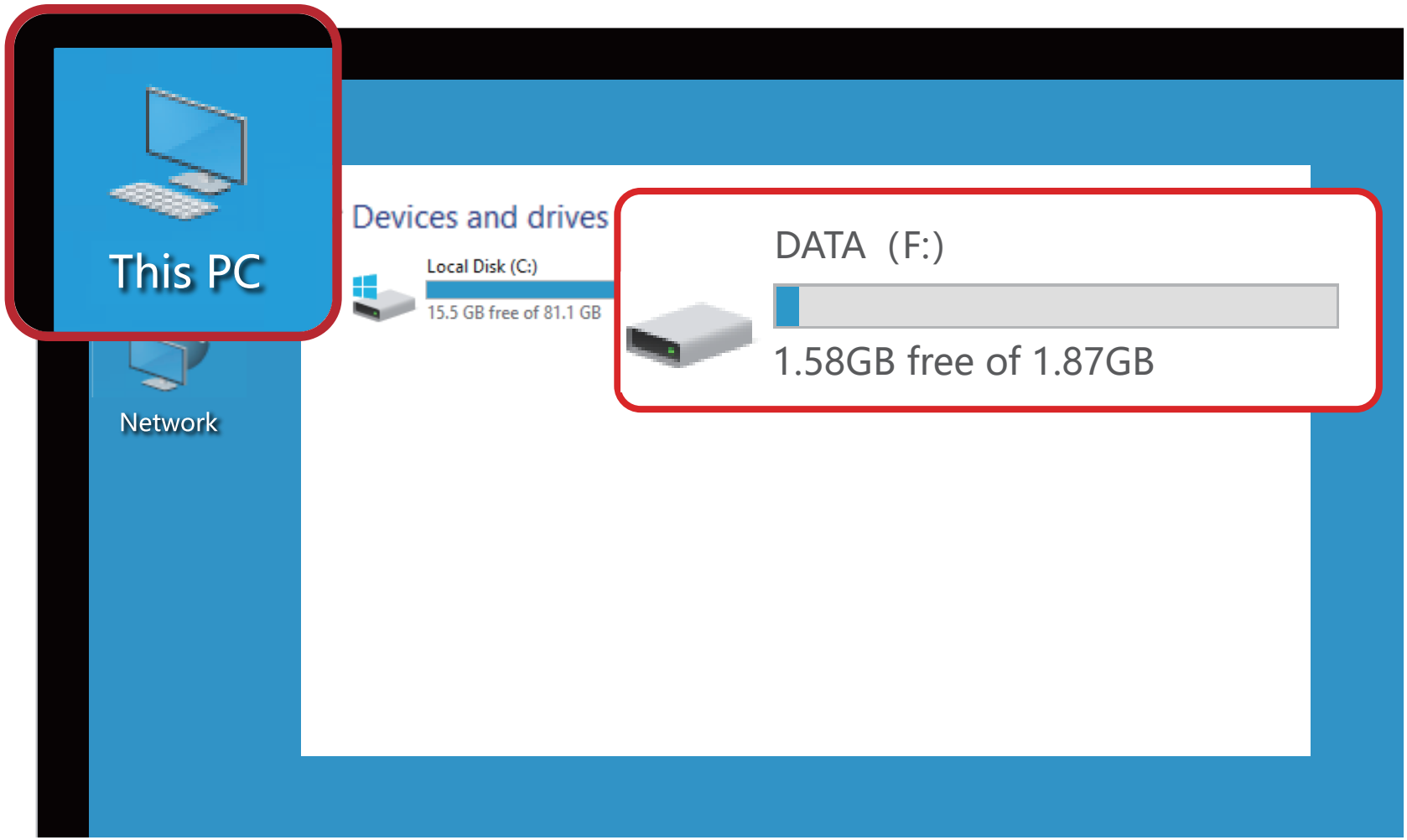




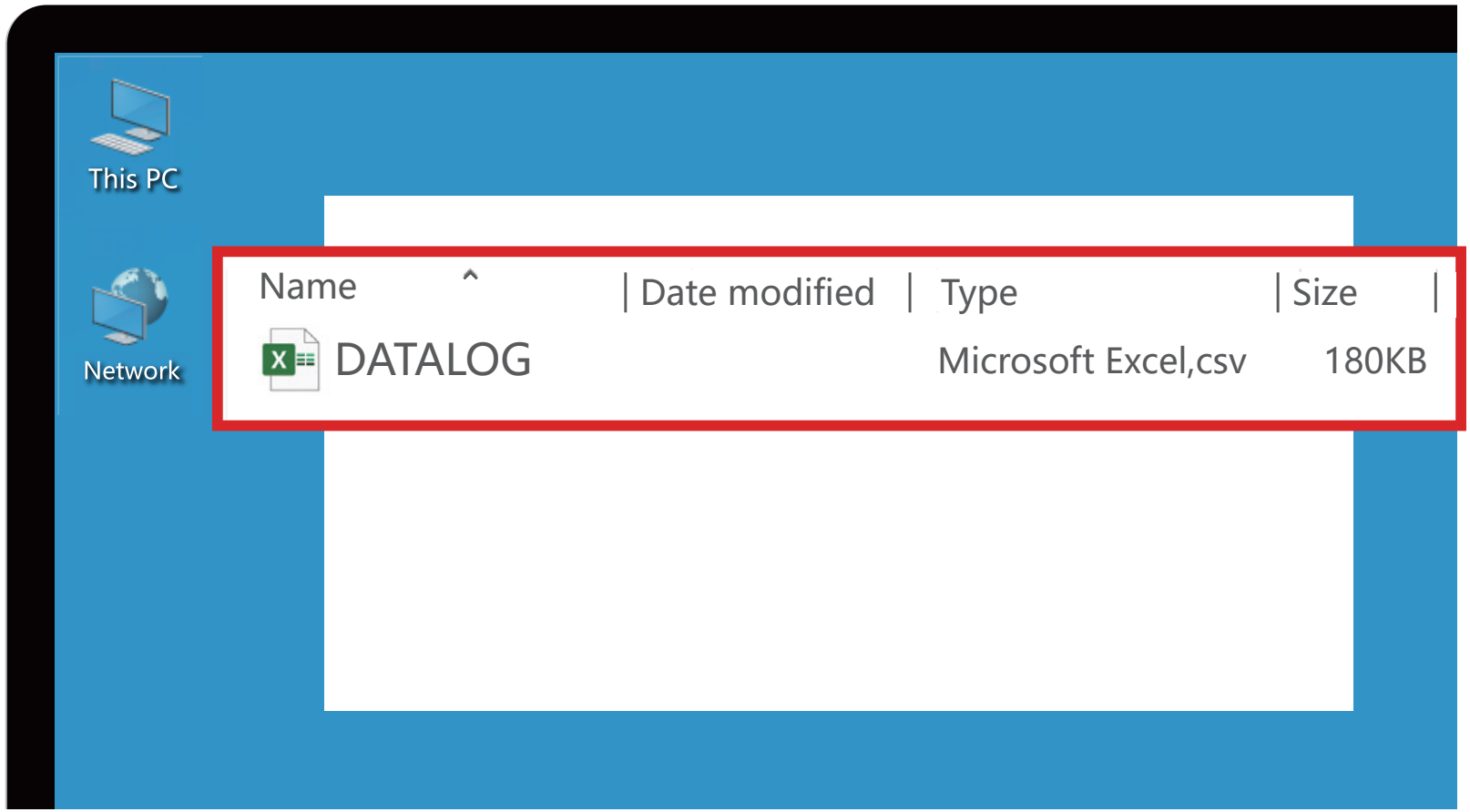
2 To check the recorded data, connect the CO2 Monitor to your computer with the provided USB cable.



3 Double-click ‘My computer’ and select the USB drive (DATA).

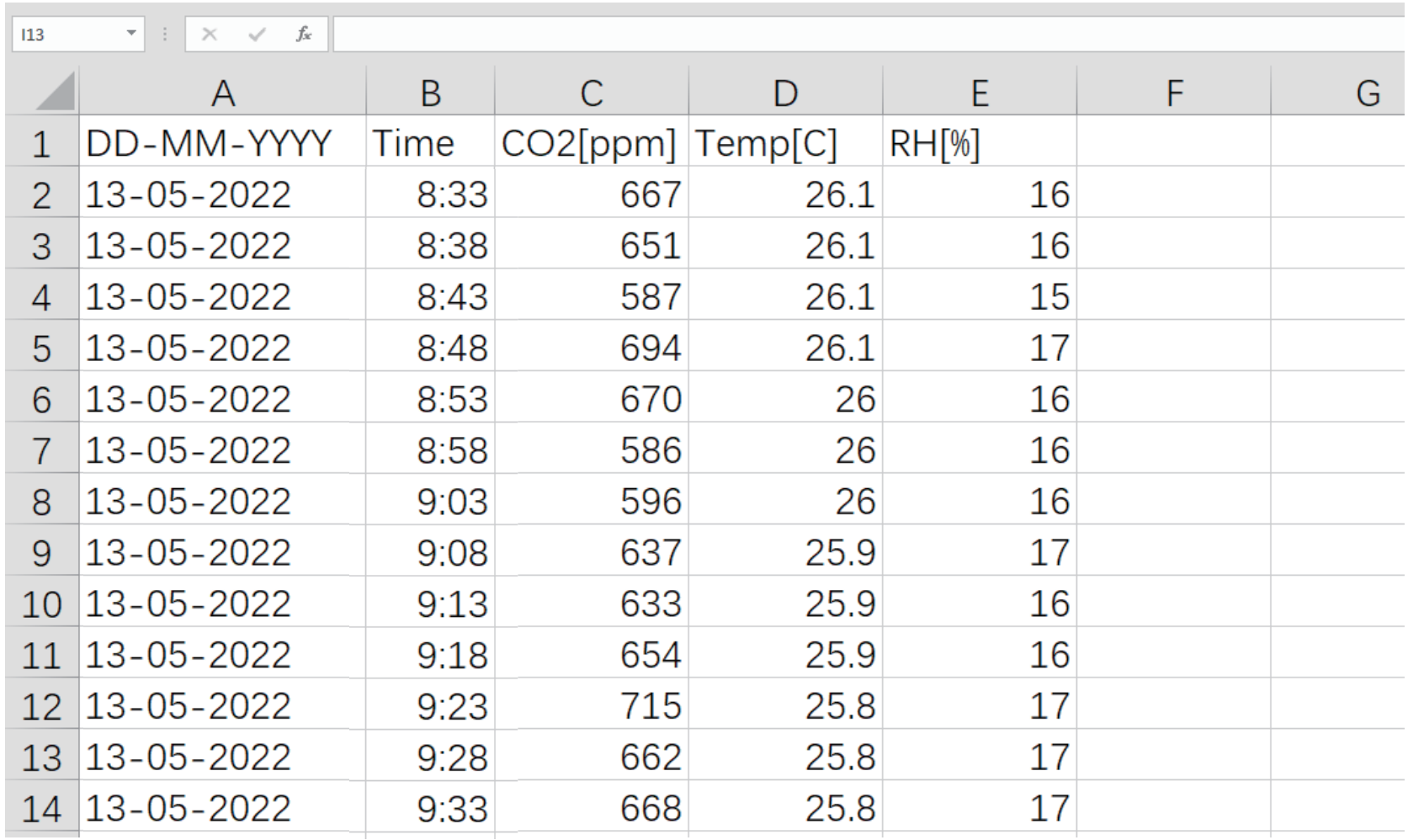


4 Find the file, copy it to a folder on your computer, open it and re-save it in Excel format, now you can analyse and edit the file.



5 Open the file.

The file is shown in the figure below



	A	B	C	D	E	F	G
1	DD-MM-YYYY	Time	CO2[ppm]	Temp[C]	RH[%]		
2	13-05-2022	8:33	667	26.1	16		
3	13-05-2022	8:38	651	26.1	16		
4	13-05-2022	8:43	587	26.1	15		
5	13-05-2022	8:48	694	26.1	17		
6	13-05-2022	8:53	670	26	16		
7	13-05-2022	8:58	586	26	16		
8	13-05-2022	9:03	596	26	16		
9	13-05-2022	9:08	637	25.9	17		
10	13-05-2022	9:13	633	25.9	16		
11	13-05-2022	9:18	654	25.9	16		
12	13-05-2022	9:23	715	25.8	17		
13	13-05-2022	9:28	662	25.8	17		
14	13-05-2022	9:33	668	25.8	17		

6 log in to http://www.shiantech.com/dash/dash-board/ to learn more.

(a): Upload the copied files from the instrument
(b): Select time precision for chart display
(c): View the instructions