Carbon dioxide detector

◆Overview:

The carbon dioxide detector detects the carbon dioxide gas of the onsite environment through absorption principle of infrared light sources.

The product has the characteristics of temperature and humidity tendency chart, 999 groups of data record, 3.2″ TFT full color display, alarm setting, data record of time interval measurement, real–time date and time, chargeable lithium battery or separate external USB charging, use life of sensor $\geqq$ 8000 hours and stable data.

Test data export PDF file

【 1 】

The application field of carbon dioxide detector:

1.Public site

The densely populated place such as meeting room, classroom, exhibition hall, hospitals, department stores, bars, hotel, air port, railway station and entertainment hall, etc. the carbon dioxide detector may be used for ventilation control and environment quality monitoring So, it is used to guarantee body health.

2. Agriculture

The carbon dioxide may be used for plant photosynthesis. Therefore, it is widely used for agriculture. The air fertilizer with proper concentration may improve output of agricultural crops. When the concentration of carbon dioxide is not sufficient, air fertilizer may be used. It will give great help for whether the vegetable growth or improvement of vegetable.

3. Animal husbandry

The air quality concerns healthy growth of animals. If the air is turbid for a long time and the concentration of carbon dioxide is high and ventilation is not provided, the animal will get ill or epidemic disease may burst out. Therefore, installation of carbon dioxide detector at livestock farm may prevent occurrence of animal epidemics.

4. Industry

The carbon dioxide detector is widely used in the Industry such as wastewater treatment, factory building, workshop, temperature, cleaning room, production safety and all types of Industries. Especially, it is very necessary to monitor the carbon dioxide in borehole operation. The carbon dioxide detector is used generally in metal processing, paper pulp and paper making, cleaning and solvent extraction as well as lower temperature cleaning and carbon dioxiderelevant Industry.

◆Safety and maintenance

1.Please do not use the meter under a dusty or corrosive gas environment so as not to result in shorter service life or damage.

2.When the battery icon on the display screen is blank or red, please charge the battery in a timely manner. When it lies idle for long, it is required to take out the battery.

3.Please do not store or use the meter under a high temperature, high humidity, flammable, explosive and strong electromagnetic field.During the care of it, please use soft cloth and neutral cleaning agents to clean the housing. Never use abrasives or solution so as not to cause corrosion to the housing and damage to the meter.
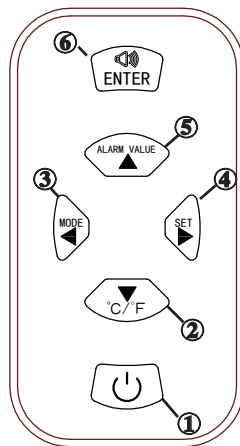
◆Appearance structure
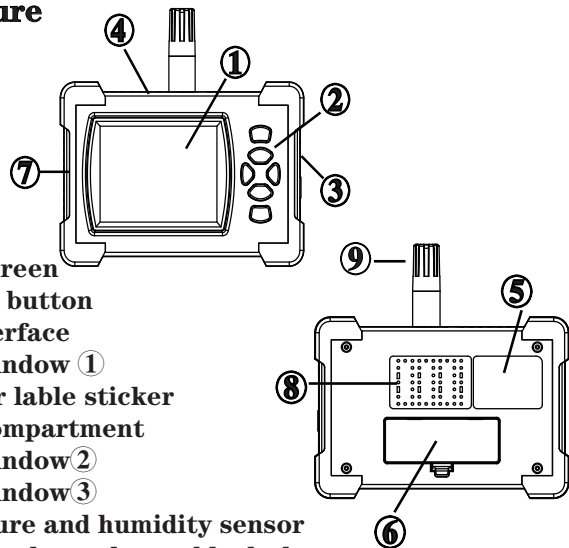
Functions：①.Display screen
②.Operation button
③.3.USB interface
④.Airflow window ①
⑤.ID lable or lable sticker
⑥.Battery compartment
⑦.Airflow window②
⑧.Airflow window③
⑨.Temperature and humidity sensor

Caution: 1. During a test, please do not block the airflow window with any matter.

◆Button functions

①:ON/OFF

②:Test mode: to convert temperature units
　　Set mode: Move Down menu

③:Measurement mode:Historical trend/PDF data Export
　　　　Set mode: shift or reduce data

④:Test mode: Records or Setting
　　Set mode: to shift or add data

⑤:Measurement mode: alarm setting interface.
　　　　Set mode: Move Up menu

⑥:Measurement mode: open or close the alarm sound.
　　Set mode: Set mode: shift or reduce data

◆**Operation description:(Warm prompt: don't operate or calibrate the equipment parameters at will to prevent error in data detection or inaccuracy).**

◆**Power on or off**
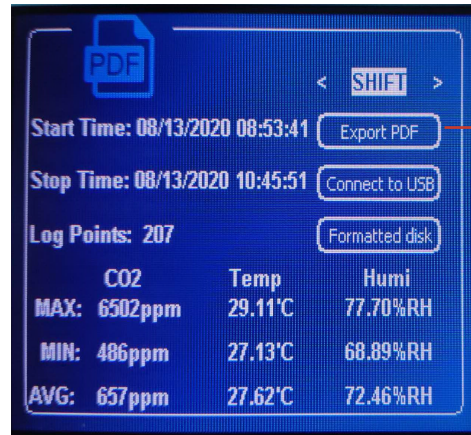
Shortly press the ⊕ button once for power on or off.

◆**Historical trend pattern**

Press the [MODE] button to switch to the historical Trend interface, press the [MODE] button again to switch to the PDF data Export interface, and press the [MODE] button to exit
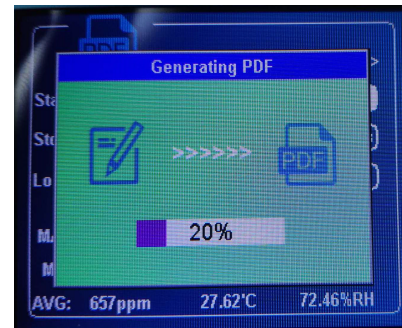
◆**PDF data export mode(not su... ◀**
Press the [MODE] button twice to enter PD... xport mode

1. Press the [C/F] button to move to (Export PDF) and press the [ENTER] button to Export data

◆PDF data export mode(not support)
Press the [MODE] button twice to enter PDF data export mode

2. Press the [C/F] button and move it twice to Connect to USB. Press the [ENTER] button and the computer displays the data storage disk. Click it to view the PDF data file,To exit, press the [⏻] button

Please connect the device to the computer through the data cable
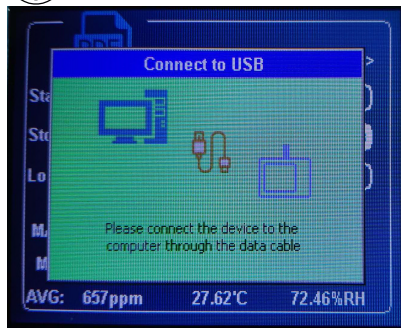
【 8 】

◆PDF data export mode(not su...)
Press the [MODE] button twice to enter P... export mode

3. Press the [C/F] button to move to (Formatted Disk) Press the [ENTER] button to confirm deletion, exit the interface press the [ALARM VALUE] button to move to (SHIFT) press the [MODE] button back to test mode

Formatted Disk

Formatting complete

Yes   No

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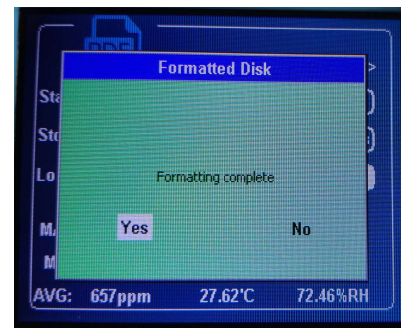
◆Open or close of the alarm sound

At the measurement mode, after the set alarm value is overdue, press ⏻(ENTER) key once to open or close the alarm sound.

◆Alarm value setting

Press the (ALARM VALUE ▲) button, the left and right (MODE ◄) (SET ►) buttons can move the number, the upper and lower (ALARM VALUE ▲) (°C/F ▼) buttons can add or subtract the number, press the ⏻(ENTER) button to save and exit the setting after the setting is completed

◆Data record interval time

Press (SET ►) key twice to enter the function parameter setting. Press the ⏻(ENTER) button,Press the (ALARM VALUE ▲)(°C/F ▼) button to select corresponding parameters. Press the (MODE ◄) (SET ►) button to set parameters. Press the ⏻(ENTER) buttonto determine and return,Press the (SET ►) button to exit parameter Settings and return to the test interface

◆Historical record inquiry:

Press the (SET ►) button once, and press the ⏻(ENTER) to go to <Records>, with the left and right buttons for shifting, and up and down buttons to revise the record pages.

◆Parameter settings:

Press the [ENTER] button twice, and press the [SET] to go to <Setting >. Press the Up and Down button to be able to move to select the corresponding parameters. The background color of the character of the selected option turns into white. The Left and Right button can be used to modify the parameters.
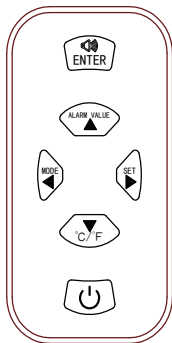
◆1.OFF Backlight :

The left and right buttons can be used to switch screen time

OFF – 1 min – 5 min and 10 min – 30 min – 1 hour

◆2.Record interval:

The left and right buttons can be used to modify the record interval:

off–10sec–30sec–1min–5min–10min–30min–1hour

◆3.Brightness :

The left and right buttons can be used to modify the backlight brightness

Close – 25% – 50% – 75% – 100%

◆4.Data Clear:

The Left and Right button can be used to go to the data clearance menu.

Press the Left button once again to confirm the clearance and use the

Right button to quit clearance.

◆5.MaxMinMode:

Left and right buttons on or off

◆6.Time/Data:

The Left and Right button is used to go to the time setting menu. Press

the Left and Right button once again to shift. The Up and Down button

can be used to modify parameters. Press the ⏻ENTER to be able to confirm

the modification and return to the main set menu.

◆7.Auto shutdown:

The Left and Right button is used to select OFF (without automatic

power off) at /15 minutes/30 minutes/45 minutes/1 hour/2 hours/4 hours

/8 hours.

◆8.Calibration:

press left and right key to enter the calibration preparation and enter 600 seconds for count down. Press the (SET) key to exit and cancel the calibration. (Note: For operation of the step, it should be done in a 400PPM environment which does not change within 600 seconds).

◆9.Reset:

The Left and Right button can be used to enter the Restore to Factory Setting. Press the Left button once again to confirm the reset, and the right button to quit the reset.

After reset, all parameters will be restored to factory parameters.

◆Technical Specifications

Convention

Parameter	Indicators	Unit
	SR–510A	
Carbon dioxide concentration measurement scope	0–9999	PPM
Resolution ratio of carbon dioxide concentration	1	PPM
Accuracy	± 10% of readings of ± 40PPM	PPM
Working temperature range	–10~+60(–14~140℉)	(℃/℉)
Working humidity range	0~99%	%
Storage temperature range	–40~+80(–40~176℉)	(℃/℉)
Temperature measurement range	–20~60(–4~140℉)	(℃/℉)

Temperature measurement accuracy	± 1	(℃)
Temperature resolution	0.01	(℃/℉)
Humidity measurement range	0~100%	%RH
Temperature accuracy	± 2%	%RH
Humidity resolution	0.01	%RH
Supply battery	Built in with demountable 3.7V/18650 cylinder battery or externally connected 5V USB power supply	Volt
Working current	180~300mA	mA
Battery service life	2200mAh capable of continuous work at >9 hours	Hour
Charging duration	3 hours	Hour
Auto power off	Capable of being set (with factory default as automatic power off in 15 minutes)	minute
Record groups	999 groups	pieces
connection	USB communication	
Net weight	173g	g
Size	140*134*33mm	mm

◆Carbon dioxide concentration level

400–450PPM：usual outdoor air level

450–700PPM：The typical value of living space with good ventilation.

700–1000PPM：The living environment with poor ventilation.

1000–2000PPM ： insufficient oxygen makes people sleepy and the air that may cause complaint.

2000–5000PPM：The stagnant, old and muggy air. The phenomenon of headache, drowsiness with distraction, declination of attention, tachycardia and slight nausea.

Above 5000PPM: may cause serious anoxia or lead to perpetual cerebral injury, coma or even death when exposing in air.

400　450　700　1000　2000　5000　Above5000
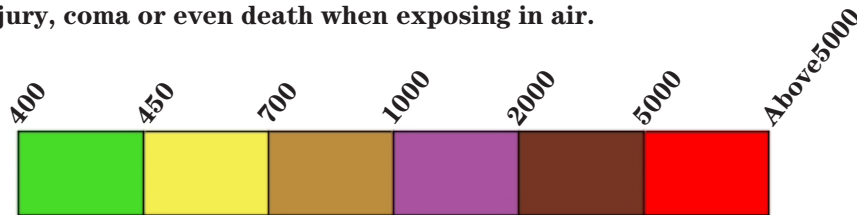
◆Analysis of commonly seen troubles

1.The carbon dioxide concentration data in the air is not accurate.

Analysis 1: The concentration content of the environment is not stable. At the time of measurement, place the device in the same place for a period of time.

Analysis 2: There are sundries, dirt at the sampling window of carbon dioxide sensor. The air flow ventilation window is blocked.

Analysis 3: the carbon dioxide sensor has deviation. It needs to calibrate the equipment again.

2. Incorrect temperature and humidity

Analysis 1: Analysis of existence of impurities or dirt or filth at the sampling window of the temperature and humidity sensor

2: The ventilation window has been blocked by something.

3. Date and time is not accurate

Analysis 1: caused by too low button battery level inside the equipment

4. Failure in power on

Analysis 1: The battery has no power or is damaged. Use the USB socket for power supply. If power can be on, and if there is change any change in the power check, it indicates that there is no power in the battery. If there is no change, the OK icon is displayed only indicating the battery has been damaged.

2: Battery +/– polarity is mounted reversely. It is required to note that the non–protruding contact at one end of the battery must be "–" polarity, and that the protruding contact at one end must be "+" polarity. The following figure can be referenced.

5. The upper computer cannot be connected with the instrument

Analysis 1:Replace the USB interface

　　　2:Testing with another computer may not be compatible or some kind of software conflict to make it impossible to connect