

## D-CO2GD series Air Quality

Manual



|                                                |       |           |
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## **1. General describe**

It is measure temperature, relative humidity, Carbon dioxide(CO<sub>2</sub>), Volatile organic compounds gas(VOC) monitor device.

It use for indoor air quality detect. LCD display temperature, relative humidity, Carbon dioxide(CO<sub>2</sub>), Volatile organic compounds gas(VOC) and date and time. It can connect to computer via USB port and display state graph on computer. It can set alarm limit by user.

## **2. Notice for use**

Please follow the manual guide to use device.

Do not operate the device around explosive gas, vapor, or dust and water.

Do not operate the device when part of case removed.

Disconnect all the wire before open the case.

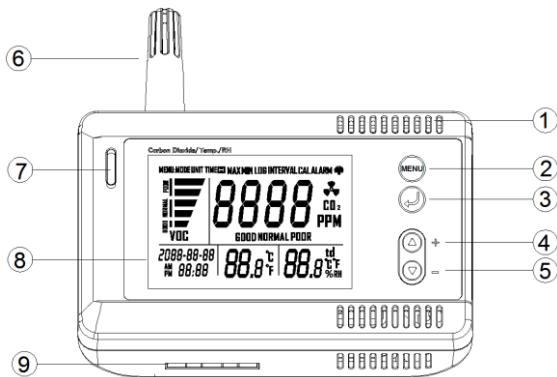
Make sure the rated voltage and rated current is suitable before use relay to connect the external equipment.

Make sure the connection is good between wire and terminal socket.

When real time clock is not work please follow the manual to change the memory battery.

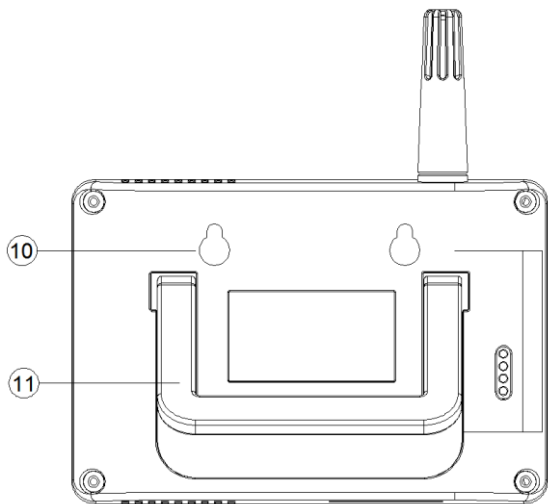
### 3. Panel & connection introduce

Panel introduce:



- ① Vent
- ② "MENU" key pad
- ③ "ENTER" key pad
- ④ "+" add key pad
- ⑤ "-" decrease key pad
- ⑥ Temperature and humidity sensor
- ⑦ Alarm light
- ⑧ LCD display area
- ⑨ SD card socket

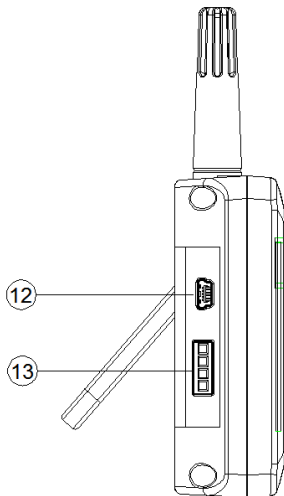
Backside case:



⑩ Hook hole

⑪ Carriage

Socket:



- ⑫ Mini-USB port, use for power input or communication.
- ⑬ Relay output (30VDC 1A MAX.)

## 4. Operate introduce

When press the "MENU" key, it will enter system setting . MENU tree:

```
MENU----- MODE
      |           |----- ALARM
      |           |----- CAL
      |           |----- INTERVAL
      |           |----- HOLD
      |           |----- MAX
      |           |----- MIN
      |
      |----- TIME      |
      |----- UNIT
```

CO2 Alarm setting:

- 1、 Press "MENU" key enter system setting. Press "+" or "-" key and display "MENU:MODE".
- 2、 Press "ENTER".
- 3、 Press "+" or "-" key and display "MENU:MODE--ALARM".
- 4、 Press "ENTER" key
- 5、 Then press "+" or "-" key to set alarm limit. (minimum adjust 100ppm)
- 6、 Press "MENU" key to exit system setting.

CO2 Calibrate:

- 1、 Press "MENU" key enter system setting. Press "+" or "-" key and display "MENU:MODE".

- 2、 Press "ENTER".
- 3、 Press "+" or "-" key and display "MENU:MODE--CAL"
- 4、 Press "ENTER".
- 5、 Then press "+" or "-" key to set calibrate data. (minimum adjust 10ppm)
- 6、 Press "MENU" key to exit system setting.

#### Unit change:

- 1、 Press "MENU" key enter system setting. Press "+" or "-" key and display "MENU:UNIT".
- 2、 Press "ENTER" and display "MENU:UNIT-CAL".
- 3、 Then press "+" or "-" key to set unit
- 4、 Press "MENU" key to exit system setting.

#### HOLD/MAX/MIN mode setting:

- 1、 Press "MENU" key enter system setting. Press "+" or "-" key and display "MENU:MODE"
- 2、 Press "ENTER".
- 3、 Press "+" or "-" key and display "MENU:MODE--H" mean HOLD reading. "MENU: MODE -MAX" meaning maximum reading. "MENU: MODE -MIN" meaning minimum reading
- 4、 Press "MENU" key to exit system setting.

#### Backlight setting:

- 1、 Exit system setting. Press "-" key to enable or disable backlight.

#### Date and time adjust:



- 1、 Press "MENU" key enter system setting. Press "+" or "-" key and display "MENU:TIME".
- 2、 Press "ENTER".
- 3、 Press "+" or "-" key to select adjust option(Year, Month, Date, Hour, Minute)
- 4、 Press "ENTER" and display "MENU:TIME-CAL".
- 5、 Then press "+" or "-" key to set time data.
- 6、 Press "MENU" key to exit system setting.

SD card record: (Disable record function before remove the SD card, or else will lost record data)

- 1、 Exit system setting. Press "+" key to enable or disable SD card record.
- 2、 When finish the record, then disable the SD card record function, Remove the SD card from meter, and insert to computer to open the record files.

SD card interval sample rate setting: (Minimum 1min, maximum 24hour)

- 1、 Press "MENU" key enter system setting. Press "+" or "-" key and display "MENU:INTERVAL"
- 2、 Press "ENTER".
- 3、 Press "+" or "-" key to select adjust option(Hour or Minute)
- 4、 Press "ENTER" and display "MENU:INTERVAL-CAL"
- 5、 Press "+" or "-" key to select adjust sample rate data.
- 6、 Press "MENU" key to exit system setting

## 5. Application:

### Power connection

Connect the power on the rated, wire use 16~22AWG.

### USB connect

Use USB cable connect the mini-USB port at the left side of device and the computer.

When install drivers on the computer, it will recognize a virtual COM port. Use the virtual port communicate to

slaver device.

### Relay output connection and setting

There are 1 channel independent relays. Relay is dry contact common open type.

Rated voltage max 125VAC@0.5A, 30VDC@1A.

When device state is catch the control limit, then relay will action.

## 6. Communication protocol

More detail information please contact us.

## 7. Specification

|               |                       |               |                  |
|---------------|-----------------------|---------------|------------------|
| MODEL         |                       | D-CO2GD-SD-01 | D-CO2GD-SD-B-01  |
| More function |                       | SD card       | SD and Bluetooth |
| DISPLAY       | LCD and touch key pad |               |                  |

|                     |                                                                                                                                                     |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Measurement         | Temperature: -30 ~ 70°C<br>Humidity: 0 ~ 100%<br>CO <sub>2</sub> : 0 ~ 10000ppm<br>VOC: 0 ~ 30ppm (analogy bar)                                     |
| Accuracy            | Temperature: +/- 0.5°C; Humidity: +/- 3%RH; CO <sub>2</sub> : +/- (50ppm + 3%)                                                                      |
| Sensor              | Humidity: capacitance type; CO <sub>2</sub> : Dual channel NDIR sensor                                                                              |
| Respond time        | CO <sub>2</sub> : (T90) < 60s; Temperature and humidity: 1/e(63%)< 10s, 2m/s flow;<br>VOC: 20m <sup>2</sup> Indoor, 10ppm alcohol<1min, smoke <5min |
| USB port            | Support                                                                                                                                             |
| Power supply        | 100-220VAC                                                                                                                                          |
| Limit set           | User setting                                                                                                                                        |
| Relay               | 1 channel (125VAC@0.5A/30VDC@1A)                                                                                                                    |
| Power               | 5W(Max) 3.5W(Average)                                                                                                                               |
| Warm-up             | 2min( first use for 2hours)                                                                                                                         |
| Use environment     | 0 – 50°C, 0 – 95 % (NO condensation)                                                                                                                |
| Protection          | IP40                                                                                                                                                |
| Storage environment | -40 – 70°C 0 – 95%RH                                                                                                                                |
| Size                | 135 * 91 * 36 mm                                                                                                                                    |

## 8. Maintenance

This chapter offers some basic maintenance, include replace the FUSE and battery.

When the meter needs repair, please send it to experienced professionals or the appointed maintenance department for repairing.

### 1 general maintenance

**⚠ To avoid electrical shock or damage the instrument, do not wet the inside of the instrument. Before opening the case, you should check to make sure that all connections to the instrument are disconnect.**

It should use soft cloth but not organic solvents which have corrosive and dissolving effect on the shell of meter to clean the meter, and it should guard against water dropping into the meter.

### 2 Replace the battery

**⚠ To avoid electrical shock or damage the instrument. Before opening the case, you should check to make sure that all connections to the instrument are disconnect.**

Follow these steps to replace the battery when the real-time clock of the instrument can not be powered down to save:

1. Move all connections to the meter.
2. Use a screwdriver to remove the four screws in the back cover.

3. Remove the old battery.
4. Replace the battery of CR1220 3V
5. Mounted on the back cover, use a screwdriver to remove the four screws tight back cover.

## **9. Attachment**

1. Manual
2. USB Cable
3. CD software
4. Power adapter

Technical support:

[techsupport@co2gasdetection.com](mailto:techsupport@co2gasdetection.com)

[WWW.CO2GASDETECTION.COM](http://WWW.CO2GASDETECTION.COM)

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