

Product specification

1 Product overview

GS241T-H02 composite carbon dioxide, temperature and humidity alarm, Adopt high-precision NDIR carbon dioxide sensor and high-precision digital temperature and humidity sensor chip, used for detection of the indoor environment of the carbon dioxide content, temperature and humidity and display in the screen, when they tested the carbon dioxide, temperature or humidity is beyond the preset alarm value, the product will be in the form of red&yellow&green lights and voice remind users. Avoid excessive CO2 concentration to cause harm to human body, protect the safety of life and property.

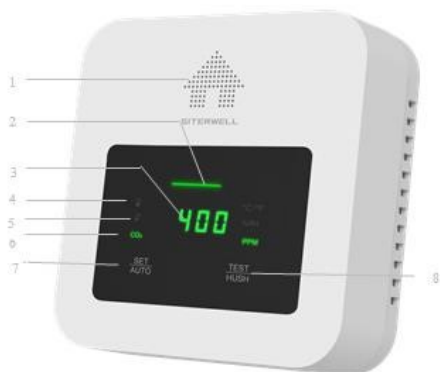
This product is suitable for CO2 concentration, temperature and humidity monitoring in ordinary residence, office and other places. There is a built-in 24-hour automatic calibration algorithm program, do not need manual calibration.

This product cannot be used in industrial environments that may be in high CO2 concentration for a long time, such as workshops and warehouses. The CO2 detector used in industrial environments needs regular manual calibration.

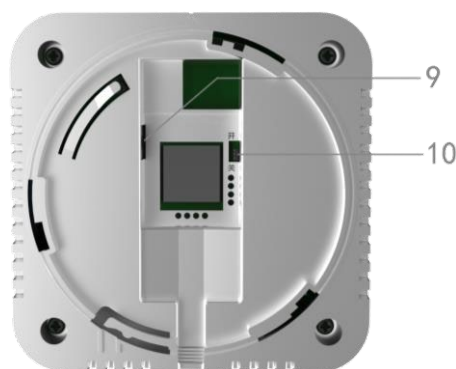
2 Main Features of products

- High precision NDIR carbon dioxide sensor, detection accuracy $\pm(50\text{ppm}+5\%$ reading value)
- High precision ambient temperature detection, detection accuracy $\pm 0.5^{\circ}\text{C}$ or 0.9°F
- High precision ambient humidity detection, detection accuracy $\pm 5\%$ RH
- With red&yellow&green light indicator and voice alarm, realize fast and intuitive abnormal reminder function
- Can choose Celsius or Fahrenheit to display, according to different areas of use habits
- Own display screen, easy to view
- With light intensity detection function, automatically adjust the display brightness
- With touch button, easy to operate
- The backup battery life is more than 12 hours
- It can be placed on the desktop or mounted on the wall
- The service life of the product can reach 10 years

3 Product photographs



(Figure 1)



(Figure 2)

Number	Function	Number	Function
1	Voice export	6	CO2
2	red&yellow&green light indicator	7	SET/AUTO Button
3	Functional indicator light	8	TEST/HUSH Button
4	Temperature	9	Power adapter socket
5	Humidity	10	Backup power switch

(Tab1)

4 Product function and operation description

This product has the function of CO2 concentration detection and alarm, as well as the function of temperature and humidity detection and display. LED displays CO2 concentration, ambient temperature and humidity, and other information, and informs users through voice broadcast.

4.1 Product power supply and startup

Insert the AC power adapter to supply power and turn on the backup power switch. It takes 3 minutes to preheat the product after starting up.

Built-in backup polymer lithium battery, can support AC power after 12 hours of work;

When AC is powered, the traffic light indicator window is always on, while when the backup battery is powered, the traffic light indicator window flashes.

Backup battery low voltage when voice reminder, traffic light indication every 4S bright yellow light.

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4.2 CO2 detection and display function.

The default CO2 alert value of this product is 800ppm and CO2 alarm value is 1500ppm, If users have better suggestions, please discuss with us.

When ≤ 800 ppm, the warning window displays green color (as shown in Figure 3);

When 800ppm ~1500ppm, the warning window shows yellow (As shown in Figure 4);

When ≥ 1500 ppm, the warning window displays red color and emits 65db@1m alarm sound. This function can remind users of the environment in a timely manner to avoid harm to personal health and safety (see Figure 5).



(Figure 3)



(Figure 4)



(Figure 5)

4.3 Temperature detection and display function (as shown in Figure 6). Long press SET/AUTO button for 3 seconds to switch the temperature unit $^{\circ}\text{C}/^{\circ}\text{F}$



(Figure 6)

4.4 Humidity detection and display function (See Figure 7)



(Figure 7)

4.5 Touch button function

SET/AUTO:

Short press -- manually select the display temperature, humidity, CO₂, and automatically scroll display;

Long press --Convert the temperature unit to °C/°F, press for 3 seconds in the temperature display state;

-- On /off CO₂ alarm switch, press for 3 seconds in CO₂ display state; (It is used to turn on or off the CO₂ overrun alarm function)

TEST/HUSH:

Short press -- silence for 10 minutes;

Long press - test alarm.

Key combination function: Within 150 seconds of sensor preheating after product startup, press two buttons at the same time for 3 seconds to switch the voice of different countries (Support English, German, French, Italian, Spanish, Dutch);

4.6 With light intensity detection function, automatically adjust the display brightness.

When AC power supply is normal, CO₂, temperature and humidity are in the normal range, if the ambient brightness is very low (at night, indoor lights are all off), the brightness of the product's display screen and indicator light will automatically decrease to reduce the impact on users' sleep. Normal brightness is displayed when CO₂ or temperature and humidity are detected abnormal.

In the dark at night, the voice do not disturb mode automatically, so as not to disturb the user's sleep.

4.7 Installation method: The installation method of the product is wall installation.

5 Technical specification parameter table

Working voltage	DC5V (Power adapter 5V/1A)
Standby current	≤130mA
CO2 Measuring range	400 ~ 5000 PPM
CO2 Measurement error range	± 50ppm ± 5% Read value (Note 1 and Note 2)
Pressure dependence	+ 1.6 % reading per kPa deviation from normal
CO2 Measure resolution and response time	pressure 1 PPM ; T90 < 120s
Temperature range	-5°C ~ 50°C or 23°F ~ 122°F
Temperature measurement error	± 0.5°C or 0.9°F
Temperature measurement resolution and response time	0.1°C ; T90 < 120s
Humidity measurement range	0.0% ~ 99.9%RH
Humidity measurement error range	± 5% RH
Humidity measurement resolution and response time	0.1% ; T90 < 600s
Backup battery running time	12 Hours
Extreme working environment	Working temperature -5°C ~ 50°C, working humidity 0 ~ 90%RH(no condensation)
Storage environment	Storage temperature -10°C ~ 60°C, storage humidity 0 ~ 95%RH(no condensation)
Product service life	10 Years (End of product service life display "End")
Protection grade	IP40
Environmental protection standard	RoHS
Overall dimensions	99mm*99mm*37mm
Product weight	Net weight 291g

Note 1 In indoor air CO2 detection applications, the accuracy is measured after 24 hours of continuous operation of the equipment.

Note 2: The nominal accuracy of the data at room temperature +25°C and atmospheric pressure 101.3kPa, the device used for calibration and the gas have an uncertainty of ±1%.

6 Appearance of size

(Figure 8)