

# Mini CO2 Monitor User Manual

## Product Overview

Thank you for selecting ZGm053 desktop CO<sub>2</sub> monitor, ZGm053 CO<sub>2</sub> monitor is a mini style, it is smart, compact and easy-to-use. In addition to measuring the CO<sub>2</sub> concentration, ZGm053 can also measure the ambient temperature (**CO<sub>2</sub>+Temp**). This product is developed to detect the presence of CO<sub>2</sub> in ambient air and help people to take care of Indoor Air Quality. ZGm053 can be widely used in the office building, school, exhibition hall, shopping mall, meeting room, fitness center, restaurant and other public places where personal comfort and health is important.

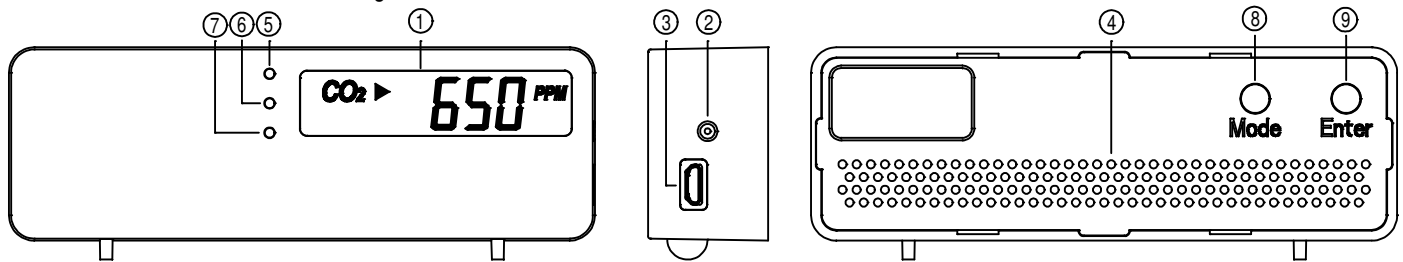
### Features:

- ☑ Three different LED display shows the current Indoor Air Quality
- ☑ It uses dual beam NDIR technology to improve the long term stability
- ☑ A mini desktop CO<sub>2</sub> Monitor
- ☑ The Alarm Level can be adjusted by user

### Warnings:

- ☑ This CO<sub>2</sub> monitor is for home use, not suitable for certifying the test results.
- ☑ Please use standard USB power (such as USB port from PC, port from general AC adapter), otherwise the device will be damaged.

1. LCD Display
2. Calibration Gas Entry
3. Power Inlet
4. Ventilation Slots
5. Red LED Display (>1200ppm)
6. Yellow LED Display (800-1200ppm)
7. Green LED Display (<800ppm)
8. Mode Key
9. Enter Key



### ⚠EMC/RFI

Readings may be affected if the unit is operated within radio frequency electromagnetic field strength of approximately 3 volts per meter, but the performance of the instrument will not be permanently affected.

## Mode Functions

There are several Modes which can be adjusted by user. These modes are ALTI Mode, ALARM 1 Mode, ALARM 2 Mode, RcFS Mode, Temp/CO<sub>2</sub> display rate in sequence.

ALTI	Compensate the pressure changes with appropriate altitude of location when measure		ALARM 1	The first alarm level can be adjusted by user	
ALARM 2	The second alarm level can be adjusted by user		RcFS	Recover the factory setting to cancel customize setting	

### Warm-Up Time: About 60 seconds.

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<ol style="list-style-type: none"> <li>1. About 60 seconds warm-up time when first time power.</li> <li>2. The LCD shows 5 digits in accordance with the order of 5~1 during warm-up.</li> <li>3. The device shows the CO<sub>2</sub> reading after above 5 digits disappear</li> </ol>		

Notes: The display time of Temp and CO<sub>2</sub>: 15sec, 5 sec.

### Temperature (°C/°F):

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<ol style="list-style-type: none"> <li>1. Press Enter to select °C or °F.</li> </ol>		

\*Note: Temp °C refers to Temperature in Celsius; Temp °F refers to Temperature in Fahrenheit. Some time it is convenient to view by pressing Enter Key, but it may not be able to respond if press too quick.

## Caring for product

To ensure you receive the maximum benefit from using this product, please observe the follow guidelines.

1. Cleaning— Disconnect the power before clean. Use a damp cloth, do not use the liquid cleaning agent, such as benzene, thinner or aerosols.
2. Repair—Do not attempt to repair the product or modify the circuitry by yourself. Please contact with the local dealer or a qualified repairman if the product needs servicing.
3. Air diffusion—The ventilation slots on the housing are designed for CO<sub>2</sub> diffusion, so these ventilation slots should not be blocked.

## Specification

**Method** - dual beam NDIR

**Display** - LCD Independent CO2 Temperature readings

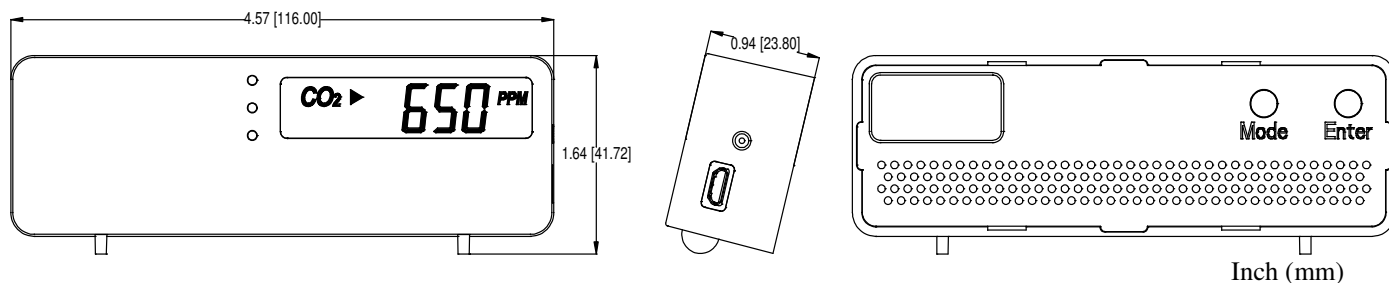
**Sample Method** - Diffusion

### CO2 & Temperature Specification:

<b>CO2 Specification:</b>	
Measurement Range	0-3,000 ppm display
Display Resolution	1ppm at 0~1,000ppm; 10ppm at 1,001~3,000ppm
Accuracy	0~2,000ppm: $\pm 100$ ppm or $\pm 7\%$ of reading, whichever is greater; over 2000ppm: $\pm 10\%$
Repeatability	$\pm 20$ ppm
Temperature Dependence	Typ. $\pm 0.3\%$ of reading per $^{\circ}\text{C}$ or $\pm 4$ ppm per $^{\circ}\text{C}$ , whichever is greater, referenced to $25^{\circ}\text{C}$
Response Time	About 2 min for 63% of step change
Warm-Up Time	About 60 seconds
Zone LED Display	Green: $< 800$ ppm; Yellow: 800~1200ppm; Red: $> 1200$ ppm. 800ppm is the default AL1, 1200ppm is the default AL2
<b>Temperature Specification:</b>	
Temperature Range	$0^{\circ}\text{C}$ to $50^{\circ}\text{C}$ ( $32^{\circ}\text{F}$ to $122^{\circ}\text{F}$ ) display
Display Resolution	$0.1^{\circ}\text{C}$ ( $0.1^{\circ}\text{F}$ )
Display Options	$^{\circ}\text{C}/^{\circ}\text{F}$
Accuracy	$\pm 1.5^{\circ}\text{C}$ ( $\pm 2^{\circ}\text{F}$ )
Response Time	20~30min(device must equilibrate with environment)
<b>Operating Conditions:</b>	
Operating Temperature	$0^{\circ}\text{C}$ to $50^{\circ}\text{C}$ ( $32^{\circ}\text{F}$ to $122^{\circ}\text{F}$ )
<b>Storage Conditions:</b>	
Storage Temperature	$-10^{\circ}\text{C}$ to $60^{\circ}\text{C}$ ( $-4^{\circ}\text{F}$ to $140^{\circ}\text{F}$ )
<b>Power Supply:</b>	
Power Supply	USB or 5 VDC AC/DC adapter, which is not included in package (Please use Standard USB power) DC output range: 5VDC/ 300mA

Notes: CO2 monitor Power consumption: peak current is 200mA. Average current is about 20mA

## Dimension



## Fault Codes & Troubleshooting Guide

This section includes a list of Frequently Asked Questions for problems you may encounter with the ZGm053 CO2 Monitor.

Fault Icon	Description of the fault	Suggested Actions
「Err3」	The ambient temperature has exceeded the operating temperature range $0^{\circ}\text{C}$ to $50^{\circ}\text{C}$ ( $32^{\circ}\text{F}$ to $122^{\circ}\text{F}$ )	This error will clear when the temperature returns to the range between $0^{\circ}\text{C}$ to $50^{\circ}\text{C}$ ( $32^{\circ}\text{F}$ to $122^{\circ}\text{F}$ ).
「Err5」 「Err6」	EEPROM System Problem	Please power on ZGm05 again If the "Err5, Err6" still appears, please contact the Service department for further assistance.
「Err9」	The voltage of USB power is too low, the device does not work	This error will clear when user replaces Standard USB power.