ZG1583RUD 3 IN 1 CO_2 Monitor (CO_2+Temp.+RH) Operating Instructions

Device Overview

Thank you for selecting ZG1583RUD desktop CO_2 monitor. ZG1583RUD CO_2 monitor is smart, compact and easy-to-use. In addition to measuring the CO_2 concentration, ambient temperature and the relative humidity (**CO_2+Temp.+RH**), ZG1583RUD can log these data on Micro SD card. This device is developed to detect and log the presence of CO_2 in ambient air and helps people to take care of Indoor Air Quality. ZG1583RUD 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 healthy are important.

Features:

☑ Three different LED displays show the current Indoor Air Quality

☑ Press MUTE button for alarm on/off.

☑ Built in the LCD Backlight for easy reading in the dark.

☑ Data (CO_2/Temp./RH) can be logged on Micro SD card.

☑ User can download the PC software to check the CO_2/Temp./RH history.

Warnings:

☑ Please take off the AC power adapter and store it well when this CO_2 monitor left idle for long.

☑ This CO_2 monitor is for home use, not suitable for certifying the test results.

☑ If use this CO_2 monitor for testing, ZG1583RUD does not guarantee the test results.
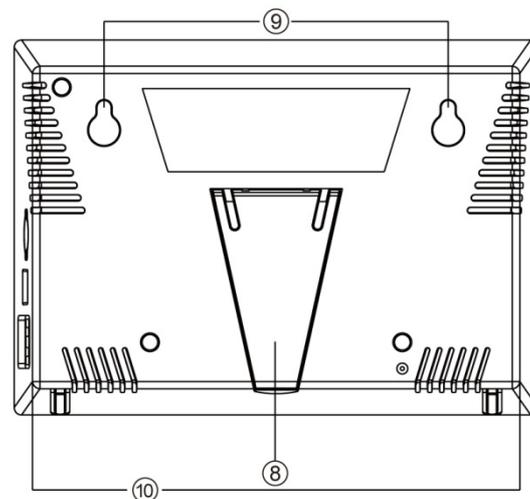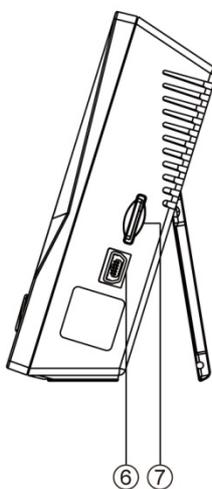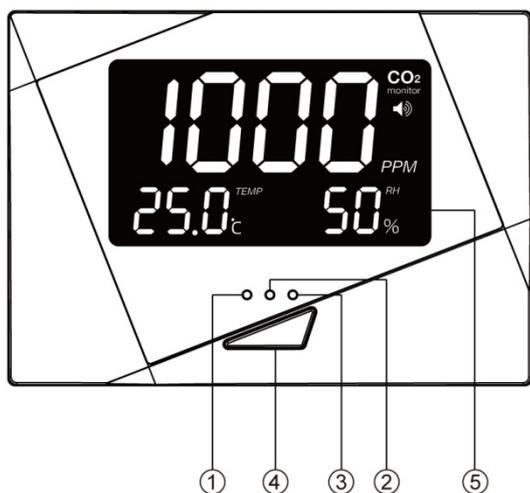
1. Green LED Display (<800ppm)	**5. LCD**	**9. Screw Position**
2. Yellow LED Display (800-1200ppm)	**6. Power Inlet (Mini USB Socket)**	**10. Ventilation Slots**
3. Red LED Display (>1200ppm)	**7. Micro SD Card**	
4. Mute Button	**8. Housing Stand**	

⚠ **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.
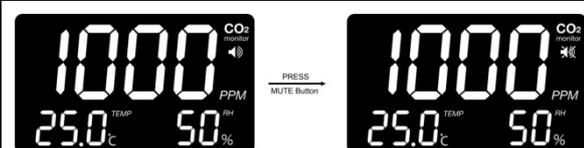
Note: Under the electromagnetic field of 3V/m, the reading will not meet the specification.

Warm-Up Time: 1 MIN.
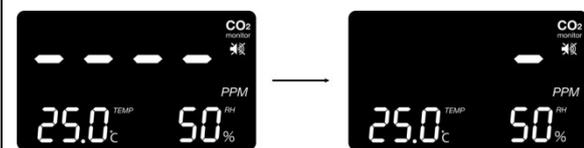
1. After power on, the bars on the LCD are decreasing by degrees and keep flashing during warm-up (1 min).
2. The MUTE button is disabled during warm-up.
3. The device shows the CO_2 reading after warm-up.

Using the MUTE function:

Press MUTE button to select buzzer on/off. If the "MUTE" function is off, while CO_2 concentration exceed the alarm level (>1200 ppm), there will be a buzzer.

Note: The device setting with alarm is buzzer on when power on first time, user can set the alarm on/off under MUTE function.

How to log CO_2/Temp./RH data?

Method 1: The device needs to connect with PC always for data logging function:
1. Firstly, connect ZG1583RUD to PC. Please download the software from http://www.zyaura.com/support/support_software.htm.
   And then, proceed to install and operate the compressed file in order to log data.
2. The data are preserved in "year" folder, the name of document is <Day>.CSV.
   Please visit the website (http://www.zyaura.com/support/support_software.htm) for more details

Method 2: Data is stored on Micro SD card, the device does not need to be connected with PC while logging.
1. Connect ZG1583RUD to PC and install the software in the same way as step 1 of Method 1.
2. Execute the software, and then click「Date Memory Device (DMD)time/day synchronizing with PC」from the「Setting」menu.
   A message will pop up when set date and time for ZG1583RUD successfully.
3. Disconnect with PC, and power on the ZG1583RUD by AC adapter in 5min. If the device is idle for more than 5min, the setting of Date and Time may go wrong.
4. ZG1583RUD begins to measure and log the CO_2/Temp./RH on the SD card.
5. The data are preserved in "year" folder, the name of document is <Day>.CSV on the SD card.

Safety Instructions

Warning: Your safety is very important to us. To ensure to use the device correctly and safely, we would like to draw your attention to read the warning and entire User Manual before using the device. These are important safety information and should be observed at all times.
1. Please handle the device lightly, do not subject the device to impact or shock.
2. Do not immerse the device in water. Water can cause electric shock, fire or malfunction which may result in damage.
3. Do not keep the device under the hot and moisture environment. Keep the device away from the heat source or near water.
4. Please use only the included power adaptor. Improper power adaptor or power sources can cause serious damage to the device, or result in injury or death to the user.

Caring for device

To ensure you receive the maximum benefit from using this device, 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 device or modify the circuitry by yourself. Please contact with the local dealer or a qualified repairman if the device needs servicing.
3. Air circulation---The vents allow the air circulation liquid for measurement of the CO_2 concentration and the ventilation should not be blocked.

Specifications

Method – Dual Beam NDIR
Display – LCD Independent CO_2, RH and Temperature readings
Sample Method – Diffusion or flow through (50 ~200 ml/min)

CO_2 & Temperature Specification:

CO₂ Specification:	
Measurement Range	0-3,000ppm
Display Resolution	1ppm at 0~1,000ppm; 5ppm at 1,001~2,000ppm; 10ppm at 2,001~3,000ppm
Accuracy	Under 25°C: ±80ppm or ±5% of reading ($\leqq$ 2000ppm); ±7% reading (>2000ppm)
Repeatability	±20 ppm @ 400ppm
Temperature Dependence	Typ. ±0.2% of reading per °C or ±2 ppm per °C, whichever is greater, referenced to 25°C
Response Time	About 2min for 63% of step change
Warm-Up Time	1 min. at 22°C
Zone LED Display	Green: <800ppm; Yellow: 800~1200ppm; Red: >1200ppm
Temperature Specification:	
Temperature Range	0°C~50°C
Display Resolution	0.1°C
Display Unit	°C
Accuracy	±1°C When the fan blows to the device directly, the accuracy of temperature is ±1.5°C
Response Time	20~30 minutes (case must equalize with environment)
RH Specification:	
Measurement Range	20%~90% RH
Display Resolution	1%RH
Accuracy	±5%RH@23°C
Response Time	<5 min for 63% of step change
Operating Conditions:	
Operating Temperature	0°C~50°C
Humidity Range	0~95% RH non-condensing
Storage Conditions:	
Storage Temperature	-20°C~60°C

Data Logger:

Sampling Inteval	5 seconds
Internal Data Logger with RTC	Default 16G Micro SD card, user can replace this card.
Capacity	Logging of CO_2, RH, and temperature, can log more than 10 years if sampling interval = 5 seconds and Micro SD Card is default 16G.
Setting and Reading	User should set the date and real time at PC with ZG View software, then power on the ZG1583RUD in 5 min.

Power Supply:

| Power Supply	USB or 5 VDC from external AC/DC adapter which is included in package (Use specified AC adapter only)
DC Output Voltage	5 VDC
AC Input Voltage & Frequency	100 ~ 240 VAC, 0.2A 50 / 60 Hz

Communication interface:

Version	USB 2.0 low speed function
OS	Windows XP, Windows 7

Installation Instruction

1. You can use ZG1583RUD on the table (please pull out the Housing Stand ⑧) or hang it on the wall.
2. Please note the following when hanging it on the wall.
   Choose a suitable location to install ZG1583RUD, fix the screws to the wall.
   Please see 「**Dimension**」 section to check the distance between the screws.

Dimension
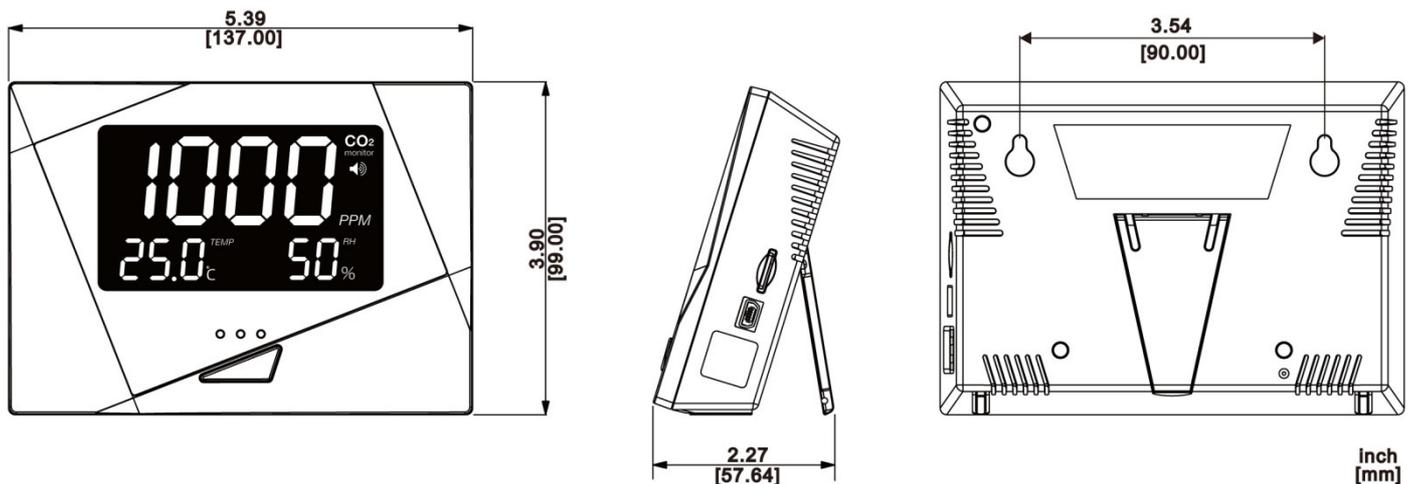
Fault Codes & Troubleshooting Guide

This section includes a list of Frequently Asked Questions for problems you may encounter with the ZG1583RUD CO_2 monitor.

Fault Icon	Description of The Fault	Suggested Actions
「Err3」	The ambient temperature has exceeded the operating temperature range 0°C~50°C (32°F~122°F)	This error will clear when the temperature returns to the range between 0°C~50°C (32°F~122°F).
「Err5」 Err6	EEPROM System Problem	Please reconnect AC adapter to ZG1583RUD CO_2 monitor. If the "Err5, Err6" still appears, please contact the Service Department for further assistance.