CO2+VOC Monitor and Alarm

Model: G01-CO2-B5 Series

CO2+TVOC+Temperature&Humidity Detection and Monitoring

- **Real time indoor air quality detection and alarm**
- **Monitoring carbon dioxide and TVOC (mix gases)**
- **Temperature and humidity detection and display**
- **Three-color backlit LCD and buzzer alarm**
- **Provide 1xon/off output to control a ventilator**
- **Wall mounting and desktop placed**
- **Excellent performance with easy operation**

■ Features

- Design for real time detection indoor air quality
- NDIR infrared CO_2 sensor with special Self Calibration makes the CO2 measurement more accurate and more reliable.
- More than 10 years lifetime of CO_2 sensor
- More than 5 years lifetime of Semi-conductor TVOC (mix gases) sensor
- Digital compositive temperature and humidity sensor with more than 10 years lifetime
- Three-color (green/yellow/red) LCD backlit indicating optimal/moderate/poor ventilation

- Two alarm ways: buzzer alarm and backlight colours switch
- Provide optional 1xrelay output to control a ventilator
- The touch button for easy operation
- Excellent performance for IAQ detection and monitoring in home and office
- 220VAC or 24VAC/VDC power selectable; power adaptor available; desktop and wall mounting type available
- EU standard and CE-approval

■ Monitoring Focus

✓ Carbon Dioxide (CO2)

Indoor CO_2 level is a universal accepted parameter for the condition of indoor ventilation and air quality.

- Non-dispersive infrared (NDIR) CO_2 sensor with more than 10-year lifetime
- ABC self-calibration technology guarantees reliable CO_2 measurement
- CO_2 range: 0~2000ppm or 0~5000ppm
- Rapid response, high stability and consistency

✓ Mix Gases (TVOC-Total Volatile organic compound）

VOC emitted from building materials, decoration materials and furniture, includes toluene, ammonia, H2S, formaldehyde and other harmful gases. Its necessary to real time detect these harmful gases. But it's costly to use the professional instruments to detect each single gas. Also it's possible to monitor for daily use. These gases exit in air for a

long time and their volatilization level are different in different temperature and humidity, the reliability of such detection by a professional instrument for a single gas is very limited.

This multifunction IAQ monitor uses a mix gas sensor. It has high sensitive to kinds of volatile pollutant gases (VOC) such as ammonia, toluene, formaldehyde and cigarette smoke, alcohol, H2S, and carbon monoxide. So it is very suitable to monitor the general indoor air quality in real time and long term. The mix gases sensor responds quickly to any change of the concentration of such gases. Not only you may open windows for fresh air coming but also the monitor can control a ventilator/air-cleaning devise based on the indication and alarm.

◆ Built in the semi-conductor mix gases sensor

◆ 5~7 years life time

◆ High sensitive to volatile gases like ammonia, toluene, formaldehyde, sensitive to cigarette smoke, alcohol, H2S, etc.

◆ Small volume, lower consumption

✓ **Temperature and humidity**

Switzerland digital temperature/humidity sensor built in with high accuracy and stability. It also has compensation to CO_2 and TVOC which makes the measurements more accurate by minimizing environmental effects.

LCD Display

■ **Application**

G01-CO_2–B5 monitor/alarm is used to monitoring room CO_2 and TVOC, as well as room temperature and humidity. It detects and monitors indoor IAQ level. It provides one on/off output to control a ventilator according with the CO2 or TVOC measurement or according with both of them.

It provides both buzzer alarm and three colors backlit switching alarm.

◆ Hotel, exhibition hall, hospital, shop, restaurant, air port, train station, theater and other public places

◆ House, villa, office, meeting room, classroom and other rooms

◆ All ventilation systems

■ **Specifications**

Monitoring parameters	CO$_2$	TVOC	Temperature	Relative humidity
Sensing element	Non-Dispersive Infrared Detector (NDIR)	Semiconductor mix gases sensor	Digital combined temperature and humidity sensor	
Measuring range	0~5000ppm	1~30ppm	-20~60℃	0~100%RH
Display Resolution	1ppm	5ppm	0.1℃	0.1%RH
Accuracy@25℃(77℉)	±60ppm + 3% of reading	±10%	±0.5℃	±4.5%RH

Life time	15 years (normal)	5～7 years	10 years	
Stability	<2%	——	<0.04℃ per year	<0.5%RH per year
Calibration cycle	ABC Logic Self Calibration	——	——	——
Response Time	<2 minutes for 90% change	<1 minute (for 10ppm hydrogen, 30ppm ethanol) <5 minute (for a cigarette) in 20m^2 room	<10 seconds to reach 63%	
Warm up time	72 hours (first time) 1 hour (operation)			
Electrical Characteristics				
Power supply	100~240VAC 18~24VAC/VDC with the power adaptor available			
Consumption	3.5 W max. ; 2.5 W avg.			
Display and Alarm				
LCD Display	**Green**： CO_2<1000ppm (optimal air quality) TVOC: ▬ or ▬ ▬ (low pollution) **Yellow**： CO_2>1000ppm (moderate air quality) TVOC: ▬ ▬ ▬ or ▬ ▬ ▬ ▬ (medium pollution) **Red**： CO_2>1400ppm (poor air quality) TVOC: ▬ ▬ ▬ ▬ ▬ or ▬ ▬ ▬ ▬ ▬ ▬ (heavy pollution) Two modes selectable: both CO2 and TVOC over the above setpoints(default) Either CO2 or TVOC over the above setpoint			
Conditions of Using and Installation				
Operation conditions	-10~50℃(14~122℉); 0~95%RH, non condensing			
Storage conditions	0~50℃(32~122℉)/ 5~90%RH			
Weight	200g			
Dimensions	130mm(L)×85mm(W)×36.5mm(H)			
Installation	Desktop or wall mount (65mm×65mm or 85mmX85mm or 2"×4" wire box)			
Housing IP class	PC/ABS, protection class: IP30			

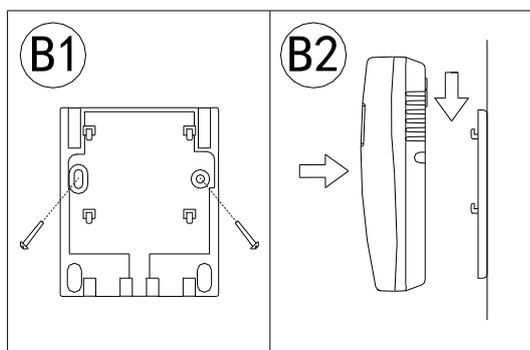## ■ Models Guide

Model	Name	Description	Power Supply
G01-CO2-B530C	CO2, TVOC, temperature and humidity monitor/alarm	Three-color backlit LCD, buzzer alarm	24VAC/VDC, with DC power socket
G01-CO2-B540C	CO2, TVOC, temperature and humidity monitor/controller	Three-color backlit LCD, buzzer alarm; 1 on/off output; a touch key for operation a touch-key for operation	24VAC/VDC

G01-CO2-B540D	CO2, TVOC, temperature and humidity monitor/controller	Three-color backlit LCD, buzzer alarm; 1 on/off output; a touch-key for operation	100~240VAC
921	Wall-mounting plate	Use for wall mounting. See below figure	Just for G01-CO2- B530C
921+922	Desktop Bracket	Can be used for wall mounting type to the desktop type	Just for G01-CO2- B530C
870	Power adaptor	input:100~240VAC output:DC24V/240mA	Just for G01-CO2-B530C

■ Mounting and Dimensions

Wall mount wiring
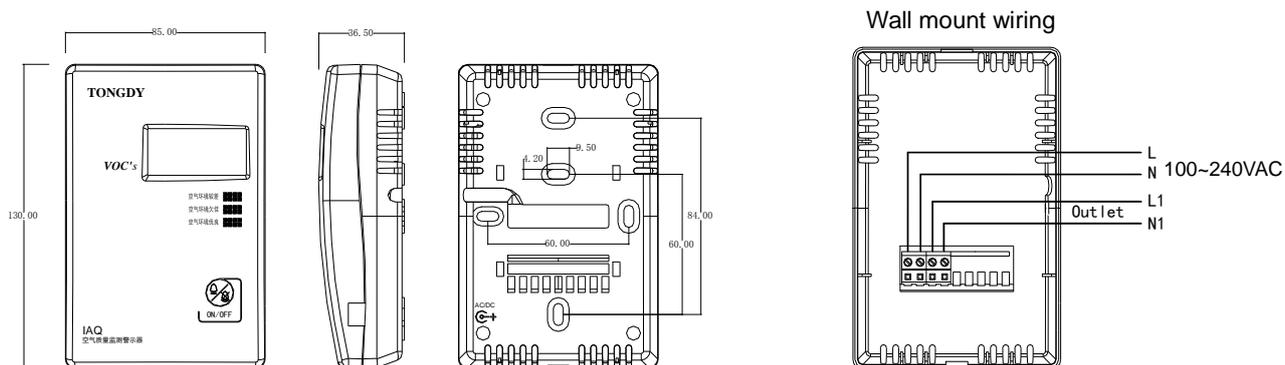
Wall mounting plate-921

Desktop bracket-921+922