

# CARBON DIOXIDE DETECTOR



TSM-CO2-S

TSM-CO2-L

## Applications

- For BAS and HVAC systems
- CO2 detection and transmission
- 6-LED lights indicating six CO2 ranges
- Used in all ventilation systems



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[info@tongdy.com](mailto:info@tongdy.com)

## Product No: F2000TSM-CO2 Series

### Features

- CO2 transmitter in low cost
- NDIR infrared CO2 sensor with Self-Calibration Algorithm and up to 15 years lifetime
- Wall-mounting
- One analog output, 0~10VDC/4~20mA selectable
- Six LCD lights indicate six CO2 ranges with clear real time CO2 level
- Design for HVAC, ventilation systems, offices, schools or other public places.
- Modbus RS485 communication interface with 15KV antistatic protection

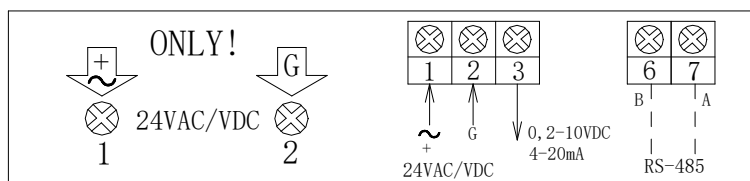
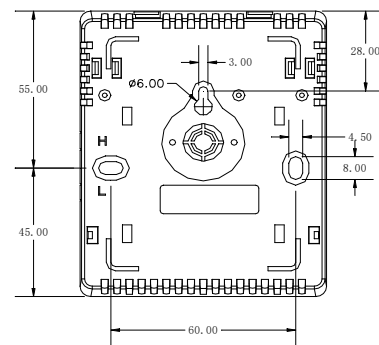
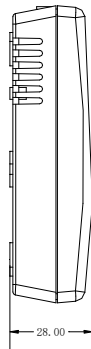
## Specifications

Gas detected	Carbon Dioxide (CO <sub>2</sub> )
Sensing element	Non-Dispersive Infrared Detector (NDIR)
Accuracy@25°C(77°F),2000ppm	±40ppm + 3% of reading or ±75ppm (whichever is greater)
Stability	<2% of FS over life of sensor (15 yr typical)
Calibration interval	ABC Logic Self Calibration System
Response time	<2 minutes for 90% step change
Warm up time	2 hours (first time) 2 minutes (operation)
CO <sub>2</sub> measuring range	0~2,000ppm OR 0~5,000ppm
Sensor life	> 10 years
Power supply	24VAC/24VDC
Consumption	1.5 W max. ; 0.8 W avg.
Analog outputs	0~10VAC or 4~20mA selectable by jumpers
Relay output	1X2A switch load Four set points selectable by jumpers
6 LED lights (just for TSM-CO2-L series) Green/Green/Yellow/Yellow/Red/Red	1 <sup>st</sup> green light on as CO <sub>2</sub> measurement≤600ppm 1 <sup>st</sup> and 2 <sup>nd</sup> green lights on as CO <sub>2</sub> measurement>600ppm and≤800ppm 1 <sup>st</sup> yellow light on as CO <sub>2</sub> measurement>800ppm and≤1,200ppm 1 <sup>st</sup> and 2 <sup>nd</sup> yellow lights on as CO <sub>2</sub> measurement>1,200ppm and≤1,400ppm 1 <sup>st</sup> red light on as CO <sub>2</sub> measurement>1,400ppm and≤1,600ppm 1 <sup>st</sup> and 2 <sup>nd</sup> red lights on as CO <sub>2</sub> measurement>1,600ppm
RS485 interface	Modbus RTU 9600/14400/19200(default), 15KV antistatic protection.
Operation conditions	0~50°C(32~122°F); 0~95%RH, non condensing
Storage conditions	0~50°C(32~122°F)
Net weight	180g
Dimensions	100mm×80mm×28mm
Installation standard	65mm×65mm or 2"×4"wire box
Approval	CE-Approval

## Models Guide

Name	Model	Description
CO2 Transmitter	F2000TSM-CO2-S100-V/A-02	1Xanalog output, CO2 range: 0~2,000ppm
	F2000TSM-CO2-S100-V/A-05	1Xanalog output, CO2 range: 0~5,000ppm
	F2000TSM-CO2-S101-V/A-02	1Xanalog output, RS485 interface (Modbus RTU).
	F2000TSM-CO2-S101-V/A-05	1Xanalog output, RS485 (Modbus RTU)
	F2000TSM-CO2-L101-N-02/05	6 lights indicate CO2 measurements range, Modbus interface
	F2000TSM-CO2-L100-V/A-02/05	6 lights indicate CO2 measurements range, 1x analog output
	F2000TSM-CO2-L101-V/A-02/05	6 lights indicate CO2 measurements range, 1x analog output, Modbus RS485 interface
Accessories	Power adaptor-E	Plug-in power adapter, Input: 100~240VAC ; Output: DC 24V/ 240mA. European plug
	Power adaptor-A	Plug-in power adapter, Input: 100~240VAC; Output: DC 24V 240mA. American plug

## Mounting and Wiring



[https://: www.iaqtongdy.com](https://www.iaqtongdy.com)

[info@tongdy.com](mailto:info@tongdy.com)

office phone: +86 10 59738930

Latin: [www.airetongdy.com](http://www.airetongdy.com)

China: [www.tongdy.com](http://www.tongdy.com)

Address: Building #8, No.9 Dijin Rd, Haidian District, Beijing 100095, China