

# CO2 Indicator/Controller

Model #: TON-0007

## User Manual

### Specifications

Power supply	24VAC/VDC
Consumption	1.5 W Max ; 0.8 W avg
CO2 sensor	Infrared Sensor with lifetime of 15 years ABC Logic Self Calibration (default: effective)
CO <sub>2</sub> measuring range	0~2,000ppm
Accuracy@25℃(77℉),2000ppm	±40ppm + 3% of reading or ±75ppm (whichever is greater)
Response time	<2 minutes for 90% step change
Warm up time for each turning-on	2 hours (first time) 2 min (operation)
6 LED lights	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
On/Off output for control CO <sub>2</sub> level	<240VAC/30VDC 3A switching current (resistance load),
Operation conditions	0~50℃(32~122℉); 0~95%RH, non condensing
Storage conditions	0~50℃(32~122℉);
Dimensions	100mm×80mm×28mm (H X W X D)
Net weight	180g
Installment standard	65mm×65mm (2"×4") wire box
Housing and protection class	PC/ABS fire proof material with IP30
Standard approval	CE-Approval
Version	TSM-CO2-1A1R-ST02_65 (SE)

### Mounting and Wire Connection

- ◆ Notice the supply power voltage of the detector: 24VAC. Do not install the detector on voltages higher than marked on the detector.
- ◆ Firstly, prepare a flat head screwdriver and put it inside of the hole on the top of the detector housing following step 1, and then open the cover from step 2 to step 4 in next page fig.1.
- ◆ Mount the wall plate first, dimensions see next page fig. 2.
- ◆ Connect wires to terminal strips, (see fig. 3).
- ◆ Follow step 5 to step7 in fig. 4 to close the cover.



Fig.1 open the cover

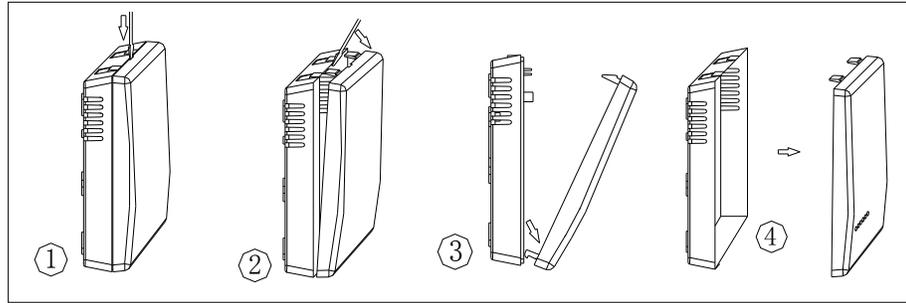


Fig.4 close the cover

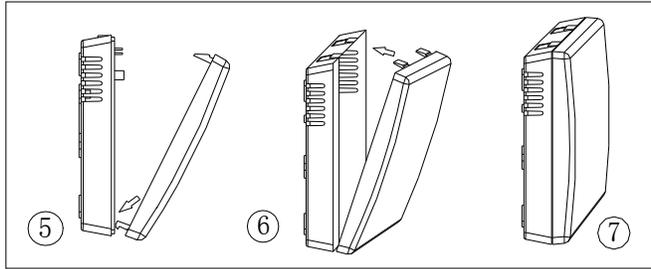


Fig.2 wall plate

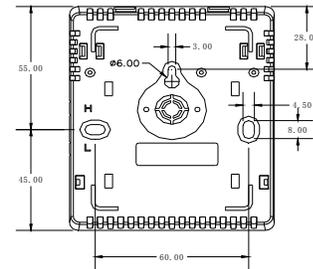
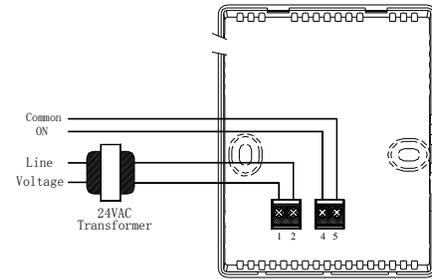


Fig.3 wiring diagram

Connection Terminal		Function	Electrical Data
1	G+	Power (+)	24VAC/VDC +
2	G0	Power ground (-)	24VAC/VDC
4	Ventilator	Relay output	<240VAC/30VDC 3A switching current (resistance load)
5	Common		



### Select CO2 level to Control the Relay

The CO2 level for control the relay turning on has been set to 1200ppm.

If you need to change the CO2 level, open the cover after switch off, you may see two jumpers (J4 and J5) on the top of the circuit board and under the CO2 module. Take off the CO2 module, you can select the CO2 level to control the relay on /off by jumpers as below table.

Jumper	CO2 level	Relay turns on /turns off
J4-disconnect; J5-disconnect	800ppm	CO2>900ppm,the relay on; CO2 <700ppm,the relay off
J4-connect; J5-disconnect	1000ppm	CO2>1100ppm, the relay on; CO2 <900ppm, the relay off
J4-disconnect; J5-connect	1200ppm <b>(default)</b>	CO2>1300ppm, the relay on; CO2 <1100ppm, the relay off
J4-connect; J5-connect	1400ppm	CO2>1500ppm, the relay on; CO2 <1300ppm, the relay off

**Important Instructions:**

1. Don't shake or hit the CO2 unit too much in shipment or in mounting to protect the internal infrared CO2 sensor from any damage and excursion of infrared receiver.
2. When open the cover of the CO2 unit, you'll see one PCB board mounted over another bigger PCB board. This upper small PCB board is loaded with CO2 sensor. Don't uninstall the CO2 module without instruction from our engineers, in order not to cause any damage to the CO2 sensor.

Please note: the pins on the CO2 module which connect with the bigger PCB board have direction. Wrong connection will cause the CO2 module and processor damaged.



131 Business Center Drive  
Ormond Beach, FL 32174  
(386) 872-765 Sales  
(386) 256-4910 Support  
[www.CO2Meter.com](http://www.CO2Meter.com)  
[Sales@CO2Meter.com](mailto:Sales@CO2Meter.com)