

3 IN 1 CO2 Transmitter

Model: G01-CO2-B30C-301

User Manual



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Specification

Sensing Element	Carbon Dioxide : Non-Dispersive Infrared Detector
CO ₂ Measurement Range	0~2000ppm
CO ₂ accuracy (@ 25°C condition)	±40ppm + 3% reading
CO ₂ display resolution	1ppm
Stability	<2% of FS over lifetime (15 years) of sensor
Calibration	ABC Logic self-calibration
Response time	<2 minutes for 90% step change
renewed signal	Every 2 sec
Temperature Sensor	NTC 5K thermistance
Tem measurement range / accuracy	-20~60°C/ ±0.5°C @25°C
Temperature display resolution	0.1°C
Humidity sensor	HS series capacitive sensor
Humidity measurement range (RH)	0~100%RH
Humidity measurement accuracy	±3%RH (40%RH~60%RH, 25°C)
Humidity display resolution	0.1%RH
Tem calibration	Self-compensation
Warm time	48hours(First time or using again after power off for a long time) 5min (operational)
Control output	3 x 0~10VDC or 4~20mA analog outputs (selectable by jumpers)
3 colours backlit LCD	Green: CO ₂ measurement≤ 1000ppm Yellow: 1000ppm< CO ₂ measurement≤1400ppm Red: CO ₂ measurement>1400ppm
Power supply	24VAC/VDC
Consumption	1.8 W max. ; 1.2 W average.
Work condition	0~50°C (32~122°F); 0~95%RH, non condensing
Storage condition	-40~70°C (-40~158°F)
Net weight	210g
Dimensions	130mm×85mm×36.5mm
Installment standard	Wall mounting 65mm×65mm 或 2"×4" wire box
Housing	PC/ABS fire-proof, IP30 protection
certificate	CE

Version: V. K30_16

Important Safety Information

- ◆ Always cut off power before mounting, removing, and cleaning the alarm.
- ◆ Notice the supply power voltage of the transmitter: 24 VAC/VDC.

Mounting and Wire Connection

- ◆ Install the transmitter in the position of 1.2-1.3m high from the ground or the position where you need to collect the measurement data. Do not mount it behind the door, in the corner or near heat source, diffuser or any steam source, in direct sunlight; also do not mount it near the garbage bin, gas oven to prevent the evaluation error of the alarm.
- ◆ See the dimension in figure 2.
- ◆ Follow the step 1-3 in figure 1, power off and put the screwdriver into the groove at the bottom of the transmitter, press the lock lightly, separate the face cover from the back cover.
- ◆ Fix the mounting board on the wall with the bolt. Connect the electricity wire to the terminal (see figure 2 and table 1). Make sure the connection is correct.
- ◆ Follow the step 4 and 5 in figure 1 to close the cover

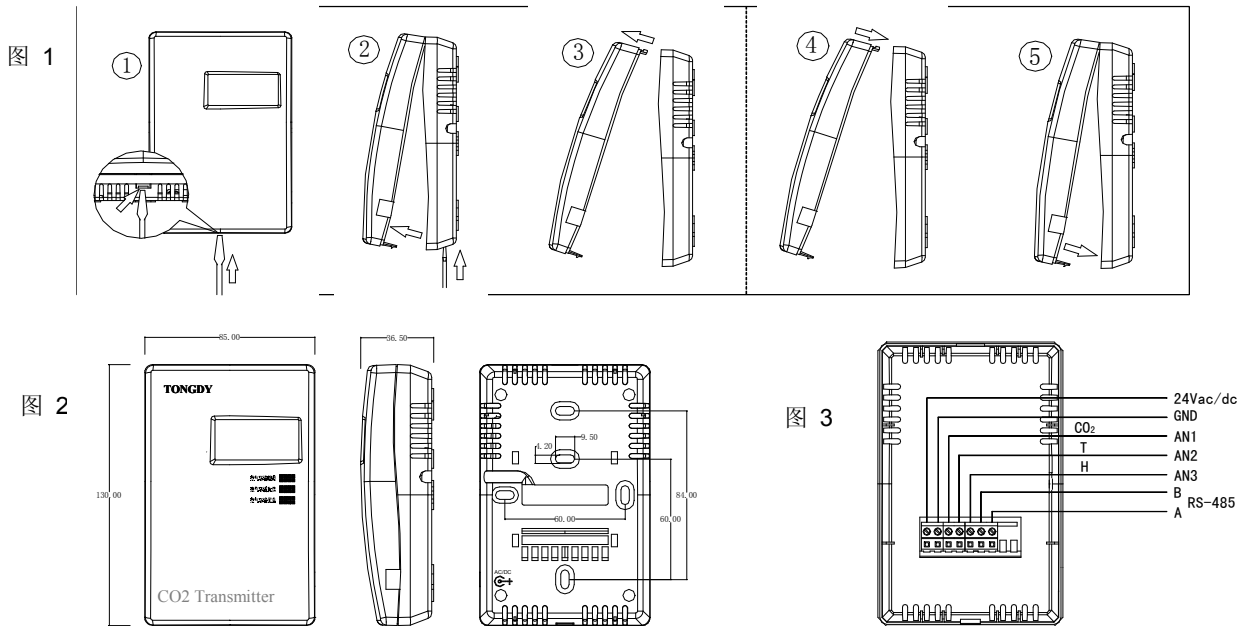


表 1

Connection Terminal		Function	Electrical Data
1	G+	Power (+)	24VAC/24VDC +
2	G0	Power ground (-)	24VAC/24VDC
3	OUT3 (CO ₂)	Analog output (+)	0~10VDC correspond to 0~2000ppm(default)/4~20mA correspond to 0~2000ppm
4	OUT2 (Tem)	Analog output (+)	0~10VDC correspond to 0~100%RH(default)/4~20mA correspond to 0~100%RH
5	OUT1 (Hum)	Analog output (+)	0~10VDC correspond to -20~60°C(default)/4~20mA correspond to -20~60°C
6	- (B) (R)	Modbus RS485 interface	
7	+ (A) (T)		

Analog output selection

- ◆ The analog outputs are 0~10VDC(default).If you want to change it to the current outputs , please follow the below steps.
- ◆ power off and remove the face cover, you can see a set of short-circuit block jumper S1~S6 in the middle of the right PCB board. When you block the up two pin of the S1-S6, the analog output is voltage output; when you block the down two pin of S1-S6, the analog output is current output.
- ◆ There is a set of short-circuit block jumper J1-J4 in the top of the PCB board. As you put the J1 connection, the analog output is 2-10VDC or 4-20mA, as the J1 is disconnected, the analog output is 0-10VDC or 0-20mA .
- ◆ The J2, J3 and J4 are just for manufacture test, the default is disconnection. Don't change it!

Operation & notice

- ◆ When power on, there is a red light on through the middle of the end of the face cover, that means the transmitter is working on. Then the measured temperature and humidity are appeared on the upper line. The 10 sec. is started to count down until 0 and back to display CO2 measurement.
- ◆ After the count down, the analog output activated.
- ◆ In case of initial power on or used again after power off for long time (like one month), the CO2 measurement will be stable after 24 hours at least.
- ◆ Don't shake or hit the transmitter fiercely to prevent damaging the CO2 sensor when transport or mount the transmitter
- ◆ When checking the analog output, don not breath to the transmitter directly. The breath will affect the CO2 measurement. The correct manner is connect a extended data cable to the transmitter, when the measurement become stable after 10 min from the moment of power on, then check the analog output by extended cable.

Advanced setup by RS485 communication interface

Menu Display	Parameter	Range of setup	Default
-1	RS485 communication address	1~255	1
-2	RS485 Communication rate	1-4800bps, 2-9600bps, 3-14400bps, 4-19200bps, 5-38400bps	5
-3	RS485 check-bit / stop-bit	0- no check, one stop bit; 1- no check, two stop bits; 2- odd check, one stop bit; 3- even check, two stop bits	1
-4	CO ₂ calibration set point	0~2000ppm	0
-5	Temperature calibration set point	-40.0~100.0°C/-40.0~212.0°F	50
-6	Humidity calibration set point	0.0~100.0%RH	50.0
-7	CO2 analog output 0V/4mA correspond to CO2 level	0~2000ppm	0
-8	CO2 analog output 10V/20mA correspond to CO2 level	0~2000ppm	2000
-9	Temp analog output 0V/4mA correspond to temp. level	-20~100°C	-20
-10	Temp analog output 10V/20mA correspond to temp. level	-20~100°C	60
-11	Humidity analog output 0V/4mA correspond to humidity level	0~100%RH	0
-12	Humidity analog output 10V/20mA correspond to humidity level	0~100%RH	100
-13	Boundary of green and yellow backlight	0~2000ppm	1000
-14	Boundary of yellow and red backlight	0~2000ppm	1400
-15	Celsius and Fahrenheit selection	0-celsius, 1-fahrenheit	0
-16	Warming time	1~600	120
-17	The maximum limit of CO2 measurement set point	1~9900	2000
-18	CO2 zero point calibration allowed	0~1	0
-19	CO2 signal point calibration allowed	0~1	0
-20	CO2 signal point calibration object	1~2000	400
-21	CO2 ASL calibration	0~5000 feet	0
-22	CO2 calibration	±200ppm	0
-23	Temperature calibration	-3°C~3°C/ -6°F~6°F	0
-24	Manual humidity calibration	-9~9% RH	0