Carbon Dioxide Transmitter
with Temperature and RH% Option

Model#: G01-CO2-B10C/30C

- ■ **Real time carbon dioxide detection and transmitting**
- ■ **High accuracy Temperature and humidity detection**
- ■ **NDIR infrared CO_2 sensor with patented self calibration**
- ■ **Provide 3xanalog linear outputs for measurements**
- ■ **Optional LCD display of all measurements**
- ■ **Modbus communication**
- ■ **CE-approval**

■ Features

- ◆ Design for real time measuring ambiance carbon dioxide level and temperature +RH%
- ◆ NDIR infrared CO_2 sensor inside with special Self Calibration. It makes CO2 measurement more accurate and more reliable.
- ◆ More than 10 years lifetime of CO_2 sensor
- ◆ High accuracy temperature and humidity measurement
- ◆ Combined both humidity and temperature sensors seamlessly with the digital auto compensation

- ◆ Provide up to three analog linear outputs for measurements
- ◆ LCD is optional to display CO2 and temperature &RH measurements
- ◆ Optional Modbus communication
- ◆ The end user can adjust CO2/Temp. range which correspond with the analog outputs Via Modbus, also can preset the direct proportion or inverse proportion for different applications
- ◆ 24VAC/VDC power supply
- ◆ EU standard and CE-approval

■ Application

- ◆ Building ventilation systems
- ◆ Industry ventilation systems
- ◆ Airport, train station, shopping mall, office, classroom and other public places for air quality measurement and indication
- ◆ Lab., warehouse, and other places to detect CO2+Temp. +RH%

■ Specifications

Carbon Dioxide	
Sensing element	Non-Dispersive Infrared Detector (NDIR)
CO_2 measuring range	0~2000ppm/ 0~5,000ppm optional
CO_2 Accuracy @22℃(72℉)	±40ppm + 3% of reading or ±75ppm (whichever is greater)
Temperature dependence	0.2% FS per℃
Stability	<2% of FS over life of sensor (15 year typical)
Pressure dependence	0.13% of reading per mm Hg
Calibration	ABC Logic Self Calibration Algorithm
Response time	<2 minutes for 90% step change typical
Signal update	Every 2 seconds
Warm-up time	2 hours (first time) / 2 minutes (operation)

	Temperature	Humidity
Measuring range	0℃~50℃(32℉~122℉) (default)	0 ~100%RH
Accuracy	±0.4℃ (20℃~40℃)	±3%RH (20%-80%RH)
Display resolution	0.1℃	0.1%RH
Stability	<0.04℃/year	<0.5%RH/year

General Data	
Power supply	24VAC/VDC
Consumption	1.8 W max. ; 1.2 W avg.
Analog outputs	1~3 X analog outputs 0~10VDC(default) or 4~20mA (selectable by jumpers) 0~5VDC (selected at placing the order)
Modbus communication (optional)	RS-485 with Modbus protocol, 19200bps rate, 15KV antistatic protection, independent base address.
Operation conditions	0~50℃(32~122℉); 0~95%RH, non condensing
Storage conditions	10~50℃(50~122℉), 20~60%RH non condensing
Net Weight	240g
Dimensions	130mm(H)×85mm(W)×36.5mm(D)
Installation	wall mounting with 65mm×65mm or 2"×4"wire box
Housing and IP class	PC/ABS fireproof plastic material, protection class: IP30
Standard	CE-Approval

■ **Models Guide**

G01-CO2-B <u>X</u> 0 C –<u>Y</u> 0 <u>Z</u> –<u>U</u> <u>02/05</u> –T/TH –<u>Txx</u>

X: LCD or no LCD
  1- Without LCD, 24VAC/VDC power supply
  3- LCD display, 24VAC/VDC power supply

C: 24VAC/VDC power supply

Y: analog output quantity
  3-3Xanalog outputs (for CO2, temperature, humidity)
  2-2Xanalog outputs (for CO2, temperature)
  1-1xanalog output   (for CO2)
  0-no analog output

Z: Modbus **communication**
  1-with Modbus communication
  0-no Modbus

U: type of analog output
  V- 0~10VDC (default)
  A- 4~20mA
  V5- 0~5VDC (not be changed)

02/05: CO2 range
  02- 0~2000ppm
  05- 0~5000ppm

T/TH: temperature option/ temperature and humidity option
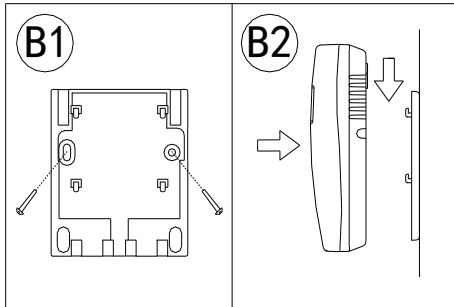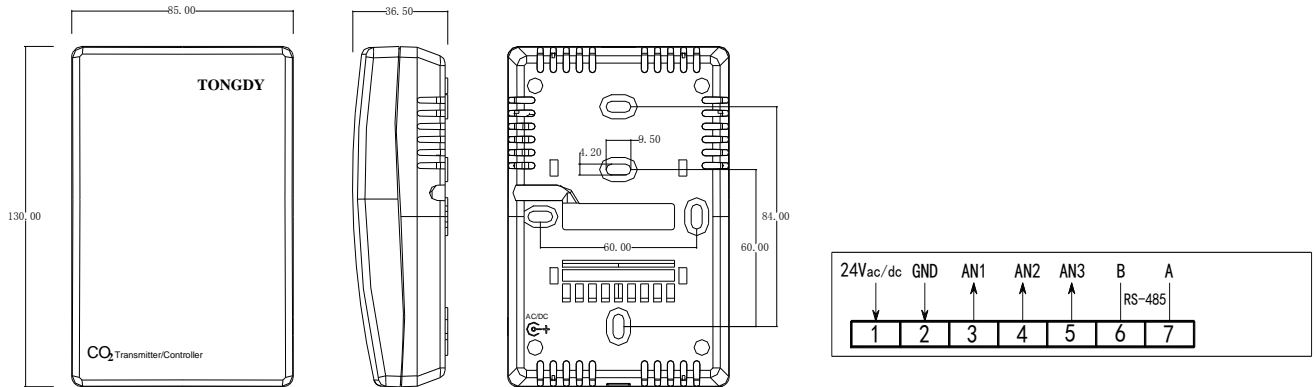
Txx: temperature scaling
  T05:   0℃~50℃(32℉~122℉) default   (without the postfix indicates the default)
  T06:   0℃~60℃(32℉~140℉)
  T26:   -20℃~60℃(-4℉~140℉)

Accessory (selectable at placing the order)
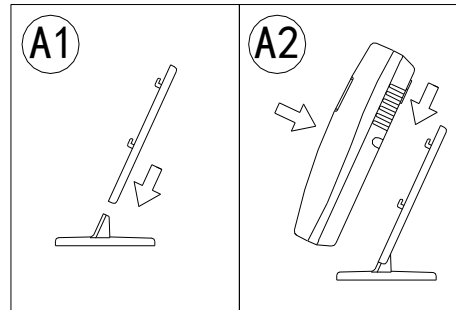**921:** back plate for wall mounting
921+922: desktop bracket

■ Mounting and Dimensions

85.00 — 36.50 — 130.00

TONGDY

CO_2 Transmitter/Controller

24Vac/dc	GND	AN1	AN2	AN3	B	A
1	2	3	4	5	6	7

RS-485

921-Wall mounting plate

921+922-Desktop bracket