



TGP SERIES

Carbon Dioxide Detector/Transmitter

Features

- ◆ Real-time detect CO₂ level of indoor environment
- ◆ NDIR infrared CO₂ sensor with Self-Calibration and up to 15 years lifetime
- ◆ Humidity and temperature detection optional
- ◆ Combined temperature and humidity sensor provide the highest accuracy in full range
- ◆ Wall mounting with the external sensor probe with the higher accuracy of measurements
- ◆ Backlit LCD display option can display CO₂ measurement and temperature+ RH measurements
- ◆ Providing one or three 0~10VDC or 4~20mA or 0~5VDC analog outputs
- ◆ Modbus RS485 communication interface makes usage and test more convenient
- ◆ Smart structure with the simple installation and wiring
- ◆ CE-Approval

Typical Applications

- ◆ HVAC systems
- ◆ In BAS to detect the CO₂ level and the data transmittance
- ◆ Ventilation control system

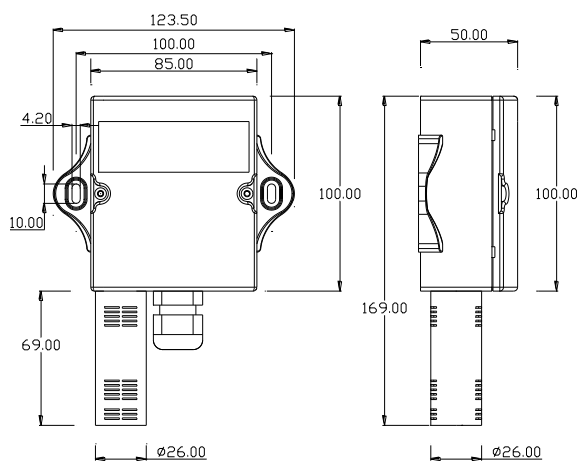
Specifications

CO ₂ Sensor	Non-Dispersive Infrared Detector (NDIR)	
Measurement Range	0~2000ppm (default) 0~5000ppm selectable	
Accuracy	±60ppm + 3% of reading @22°C(72°F)	
Stability	<2% of full scale over the life of the sensor	
Calibration	Self-calibration system	
Response Time	<5 minutes for 90% step change at low duct speed	
Non-linearity	<1% of full scale @22°C(72°F)	
Pressure Dependence	0.135% of reading per mm Hg	
Temperature Dependence	0.2% of full scale per °C	
Temperature & Humidity Sensor	Temperature	Relative Humidity

Sensing element:	Band-gap-sensor	Capacitive humidity sensor
Measuring range	0°C~50°C(32°F~122°F) (default)	0~100%RH
Accuracy	±0.5°C (0°C~50°C)	±3%RH (20%-80%RH)
Display resolution	0.1°C	0.1%RH
Stability	±0.1°C per year	±1%RH per year
General Data		
Power supply	24VAC/24VDC ±5%	
Consumption	1.8 W max. ; 1.0 W avg.	
LCD display	White backlit LCD display CO ₂ measurement or CO ₂ + temperature& humidity measurements	
Analog output	1 or 3 X analog outputs 0~10VDC(default) or 4~20mA (selectable by jumpers) 0~5VDC (selected at place the order)	
Modbus RS485 Interface	19200bps, 15KV antistatic protection.	
Operation conditions	0°C~50°C(32~122°F); 0~99%RH, non condensing	
Storage conditions	0~60°C(32~140°F)/ 5~95%RH	
Net weight	300g	
IP class	IP50	
Standard Approval	CE-Approval	

Dimensions & Mounting

Probe Length	69.00mm
Probe Diameter	Ø26.00mm
Installation Holes	100.00mm



Models Information

Model Name	Model No.	Description
CO2 Transmitter (without LCD)	TGP108	1Xlinear analog output for CO ₂ measurement
	TGP118	1X linear analog output for CO ₂ measurement Modbus RS485 interface

	TGP318	3X linear analog outputs for CO ₂ measurement, temperature & humidity, Modbus RS485 interface
	TGP018	CO ₂ and temperature & humidity detection, with a Modbus RS485 interface
CO ₂ Transmitter (with LCD)	TGP118L	1X linear analog output for CO ₂ measurement Modbus RS485 interface LCD display CO ₂
	TGP318L	3X linear analog outputs for CO ₂ measurement, temperature & humidity, Modbus RS485 interface LCD display CO ₂ and temperature & humidity
	TGP018L	CO ₂ and temperature & humidity detection and LCD display. Modbus RS485 interface.

Postfix description

TGP1XX - Y - 02/05

TGP3XX - Y - 02/05 - Txx

Y: type of output signal

V- 0~10VDC (default)

A- 4~20mA

V5- 0~5VDC (not be changed)

02/05: CO₂ range

02- 0~2000ppm

05- 0~5000ppm

Txx: temperature scaling

T05: 0°C~50°C(32°F~122°F) default (without the postfix indicates the default)

T06: 0°C~60°C(32°F~140°F)

T26: -20°C~60°C(-4°F~140°F)

Wiring Diagram

