



CO₂ Duct Transmitter

With Temperature and RH% Detection

Model: TG9XX8

- Real time detection carbon dioxide of the air duct
- Detection high accuracy temperature and relative humidity
- Smart sensor probe with extendable probe may be easily installed into any air duct
- With the water-proof and porous film around the sensor probe
- Up to 3xanalog linear outputs for measurements
- Optional Modbus RS485 interface
- With or without LCD display
- CE-approval



Features

- ◆ Designed for real time detecting carbon dioxide, temperature or relative humidity in air ducts.
- ◆ NDIR infrared CO₂ sensor inside with special Self Calibration and up to 15 years' lifetime. It makes CO₂ measurement more accurate and reliable.
- ◆ Combined temperature and humidity digital sensor provide a high accuracy measurement in full range.
- ◆ Provide up to 3 analog outputs (0~10VDC or 4~20mA or 0~5VDC) for CO₂ temperature and relative humidity.
- ◆ Optional Modbus RS485 communication interface.
- ◆ 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.
- ◆ With LCD or without LCD selectable
- ◆ LCD display real-time measurements of CO₂, temperature and relative humidity.
- ◆ Simple and smart design and installation of sensor probe with a water-proof and porous film
- ◆ Extendable probe meets more air duct systems
- ◆ 24VAC/VDC power supply.
- ◆ EU standard and CE-approval.

Detection Focus

✓ Carbon Dioxide (CO₂)

Indoor CO₂ level is a universal accepted parameter for the condition of indoor ventilation and air quality.

A time period can be preset from 1 to 24 hours, e.g. 5 hours, then the monitor can display CO₂ average level during this period, which provides an objective and true data for the measurement of the air quality in a certain space.

- ◆ Non-dispersive infrared (NDIR) CO₂ sensor with more than 10-year lifetime
- ◆ ABC self-calibration technology guarantees reliable CO₂ measurement
- ◆ CO₂ range: 0~2000ppm/0~5000ppm optional
- ◆ Rapid response, high stability and consistency



✓ **Temperature and humidity**

Combined digital temperature and humidity sensor with high accuracy and stability. It also has compensation to CO₂ and air quality which makes the measurements more accurate by minimizing environmental effects.

Typical Applications

- ◆ Building management for office areas and residential
- ◆ Ventilation control system

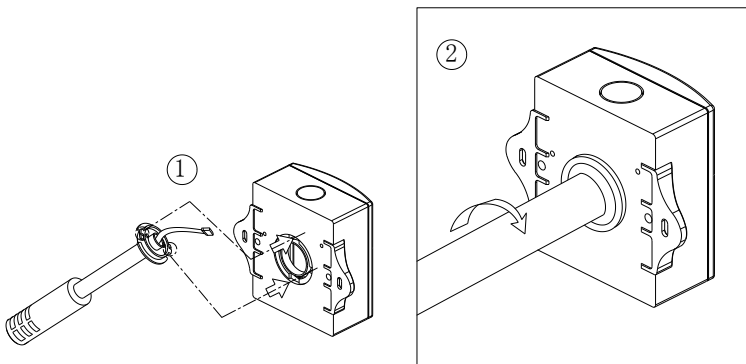
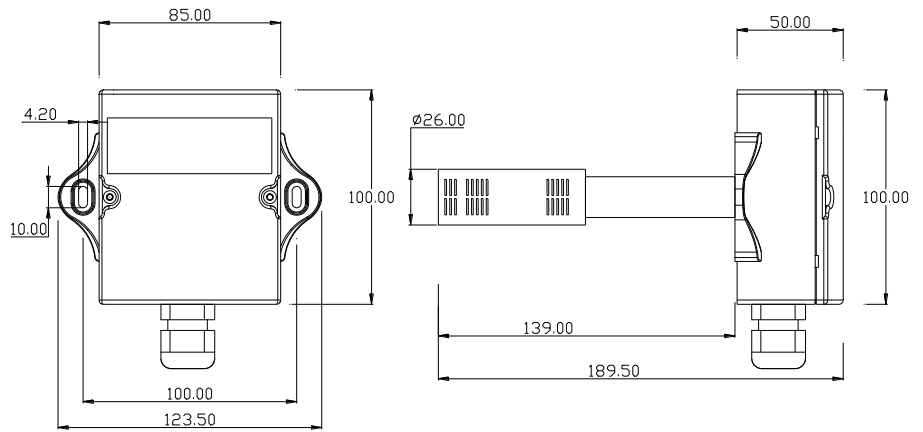
Specifications

Monitoring parameters	CO ₂	Temperature	Relative humidity
Sensing element	Non-Dispersive Infrared Detector (NDIR)	Digital combined temperature and humidity sensor	
Measuring range	0~2000ppm(default) 0~5000ppm (selectable in the order)	0°C~50°C(32°F~122°F) (default)	0~100%RH
Display Resolution	1ppm	0.1°C	0.1%RH
Accuracy@25°C(77°F)	±60ppm + 3% of reading	±0.5°C (0°C~50°C)	±3%RH (20%-80%RH)
Life time	15 years (normal)	10 years	
Calibration cycle	ABC Logic Self Calibration	—	—
Response Time	<2 minutes for 90% change	<10 seconds to reach 63%	
Warm up time	2 hours (first time) 2 minutes (operation)		
Electrical Characteristics			
Power supply	24VAC/VDC		
Consumption	3.5 W max. ; 2.5 W avg.		
Outputs	Two or three analog outputs 0~10VDC(default) or 4~20mA (selectable by jumpers) 0~5VDC (selected at place the order)		
Modbus RS485 interface (optional)	RS-485 with Modbus protocol, 19200bps rate, 15KV antistatic protection, independent base address		
Conditions of Using and Installation			
Operation conditions	0~50°C(32~122°F); 0~95%RH, non condensing		
Storage conditions	0~50°C(32~122°F)/ 5~80%RH		
Weight	320g		
Installation	Fixed on the air duct with 100mm installation hole size		
IP class of the housing	IP50 for no LCD IP40 for with LCD		
Standard	CE-Approval		

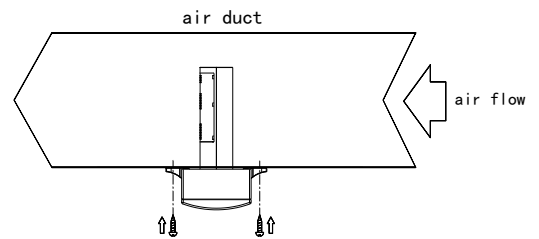
Dimensions & Mounting

Duct mounted

Probe Length	139.00mm
	can be extended to 139+70mm
Probe Diameter	Ø26.00mm
Installation Holes	100mm



Install or move the probe



The air flow direction

Models Information

TG9X₁X₂8L-Y02/05E-Tab

- X₁:** analog output
 - 3- 3Xanalog outputs for CO₂ + Temperature + Humidity
 - 1- 1xanalog output for CO₂
 - 0- no analog output
- X₂:** Modbus interface
 - 1- with Modbus interface
 - 0- no Modbus interface
- 8:** CO₂ sensor code
- L:** LCD display
Non-required option. No L indicates no LCD
- Y:** default output type
 - A- 4~20mA
 - V- 0~10VDC (default)
 - V5- 0~5VDC (can't be changed to another output by jumpers)

- 02/05:** CO2 measurement range
 - 02- 0~2000ppm (default)
 - 05- 0~5000ppm
- E:** extended duct probe up to 209mm
 - Non-required option. No **E** indicates the standard probe length of 139mm
- Tab:** temperature scaling
 - T05:** 0°C~50°C(32°F~122°F) (default)
 - T06:** 0°C~60°C(32°F~140°F)
 - No this item indicates no output for temperature measurement.

Shipping Information

Indiv. Ctn. Dim	185mm × 130mm × 110mm
Master Ctn. Qty	20
Master Ctn. Dim	44cm(L) X32cm (W) X32cm (H)
Master Ctn. Wt. (volume weight)	15.0KG

Wiring Diagram

