

CO₂ Detector - Duct Mount

With Temperature and RH% Detection

HDM-TG9XX8 Series



Product Detail

- Real time detection of carbon dioxide in the air ducts
- High accuracy temperature and relative humidity measurement
- Smart extendable probe for easy installation
- Water-proof and porous film around the sensor probe
- Up to 3 x analog linear outputs
- Optional Modbus RS485 interface
- With or without LCD display
- CE-approval

Features

- + Designed for real time detection of carbon dioxide, temperature or relative humidity inside air ducts
- + NDIR infrared CO₂ sensor with auto calibration and v up to 15 years sensor life
- + Digitally compensated temperature and humidity sensor provides 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
- + With or without LCD selectable
- + LCD displays real-time measurements of CO₂, temperature and relative humidity
- + Simple and smart probe design incorporates a water-proof but porous membrane for reliable functioning
- + Extendable probe suitable to various air duct systems
- + 24VAC/VDC power supply
- + EU standard and CE-approval

Application

- + Building ventilation control systems
- + Industrial ventilation control systems
- + Airport, train station, shopping centre, office, classroom and other public places for air quality measurement and indication

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Detection Parameters

Carbon Dioxide (CO₂)

Measurement of indoor CO₂ levels is a universally accepted parameter for the indoor air quality in order to control ventilation. Ampcontrol CO₂ duct monitoring range provides class leading features such as:

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

Temperature and Humidity

Ampcontrol IAQ range uses combined digital temperature and humidity sensor with high accuracy and stability.

Built in digital compensation to CO₂ and air quality sensors makes measurements more accurate by offsetting environmental effects.

Specifications

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 (Not configurable by user - select at time of ordering)	0~50°C default	0~100%RH
Display Resolution	1ppm	0.1°C	0.1%RH
Accuracy @ 25°C	±60ppm + 3% of reading	±0.5°C	±3%RH (20-80%RH)
Life time	15 years (normal)	10 years	
Calibration cycle	Auto 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		
Power Consumption	3.5 W max. ; 2.5 W avg.		
Outputs	Two or three analog outputs 0~10VDC (default) or 4~20mA (user selectable by jumpers) 0~ 5VDC (selected while placing order, user cannot change later)		
Additional Data, Dimensions and Approvals			
Operation conditions	0~50°C; 0~95%RH, non-condensing		
Storage conditions	0~50°C / 5~80%RH		
Weight	320g		
Installation	Fixed on the air duct with 100mm installation hole size		
Housing IP class	IP50 no LCD IP40 with LCD		
Standard	CE-Approval		



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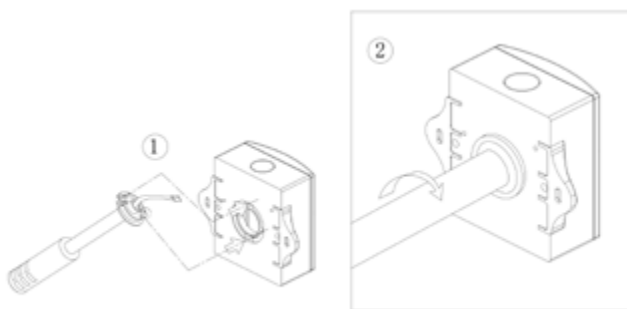
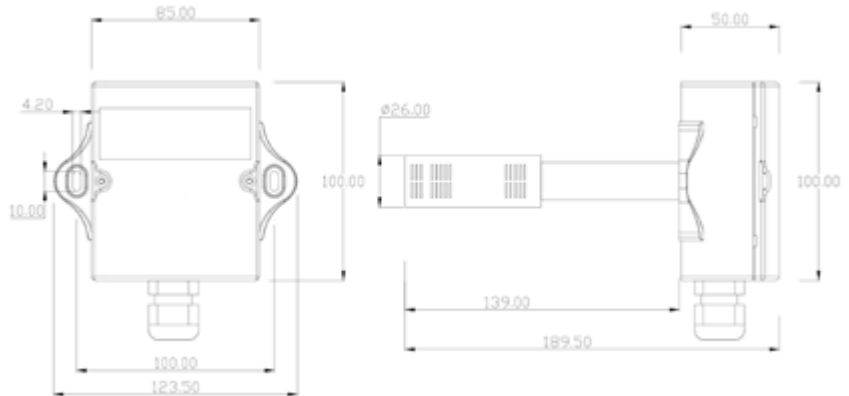
Dimensions and Mounting

Duct mountable

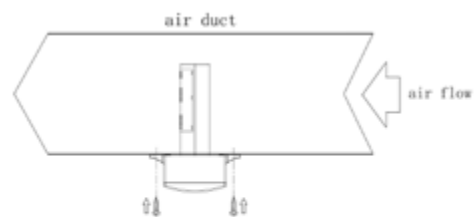
Probe Length: 139.00mm
can be extended to 139+70mm

Probe Diameter: Ø26.00mm

Installation Holes: 100mm

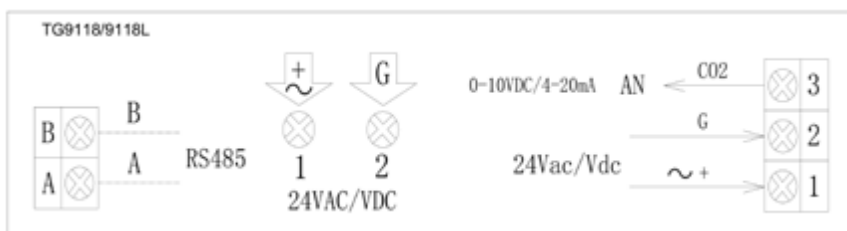


Install or move the probe



Air flow direction

Wiring Diagram



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Model Selection

HDM-TG9X₁X₂ 8 L - Y 02/05 E - Tab

- X₁: analog output
3- 3 x analog outputs for CO₂ + Temperature + Humidity
2- 2 x analog outputs for CO₂
0- no analog output
- X₂: Modbus interface
1- with Modbus interface
0- no Modbus interface
- 8: CO₂ sensor code
- L: LCD display
No L means LCD not required
- Y: default output type
A- 4~20mA (selectable via jumpers)
V- 0~10VDC (default)
V5- 0~5VDC (can't be changed to another output by jumpers)
- 02/05: CO2 measurement range
02- 0~2,000ppm (default)
05- 0~5,000ppm
- E: extended duct probe up to 209mm
No E indicates the standard probe length of 139mm
- Tab: temperature scaling
T05: 0~50°C default
T06: 0~60°C
Without the item option indicates no output for temperature measurement.