SEN-0072 | Duct VOC Sensor

Product Description

Air Quality (VOC)

The air quality sensor is a mix gases sensor with high sensitivity for VOC (kinds of volatile pollutant gases) such as ammonia, toluene, formaldehyde and cigarette smoke, alcohol, H_2S, and carbon monoxide. So it is very suitable to detect the general indoor air quality in real time and long term. It responds quickly to any change of the concentration of such gases.

- Built in semi-conductor mix gases sensor
- 5~7 years life time
- High sensitive to volatile gases like ammonia, toluene, formaldehyde, cigarette smoke, alcohol, H_2S, etc.
- Small volume, lower consumption

Temperature and humidity

Combined digital temperature and humidity sensor with high accuracy and stability. It also has compensation to CO_2 and air quality which makes the measurements more accurate by minimizing environmental effects.

Product Dimensions (mm)
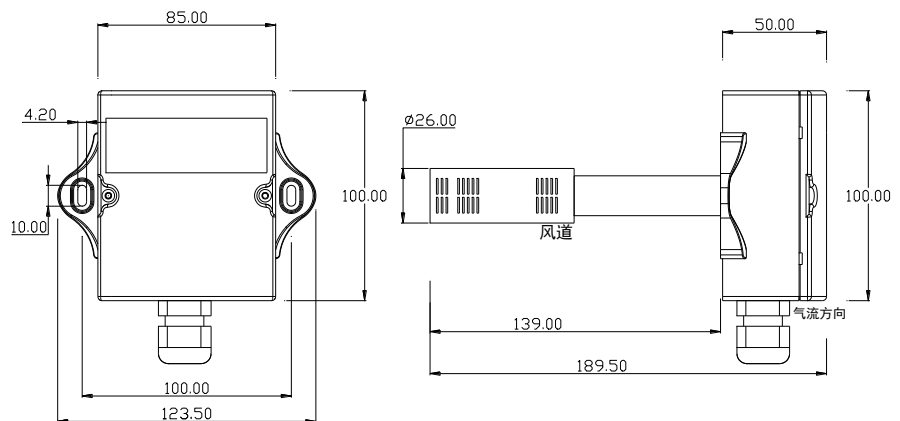
Product Application

- Residential houses, exhibition halls, restaurants, shopping malls, sports gymnasiums, conference rooms, etc.
- Museums, theaters, offices, classrooms, train stations, airports, etc.

Product Features

- Designed for real time detecting carbon dioxide, air quality, temperature or relative humidity in air ducts.
- NDIR infrared CO_2 sensor inside with special Self Calibration and up to 15 years' lifetime. It makes CO_2 measurement more accurate and reliable.
- Mix gases sensor with high sensitivity for VOCs from new furnitures, wall coverings, office equipment, cleanser etc. and other pollutants from smoking and cocking etc.
- 2 analog outputs (0~10VDC or 4~20mA) for CO_2, air quality (VOC).
- Modbus RS485 interface with outputs for CO_2, temperature, humidity and air quality (VOC).
- With LCD display
- LCD display real-time measurements of CO_2, air quality (VOC).
- Simple and smart design and installation of sensor probe with a water-proof and porous film
- Probe fits more air duct systems
- 24VAC/VDC power supply.
- EU standard and CE-approval.

Detection Focus

Carbon Dioxide (CO_2)

Indoor CO_2 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 CO_2 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) CO_2 sensor with more than 10-year lifetime
- ABC self-calibration technology guarantees reliable CO2 measurement
- CO_2 range: 0~2000ppm
- Rapid response, high stability and consistency

Technical Specifications

Monitoring parameters	CO_2	Air Quality (VOC)	
Sensing element	Non-Dispersive Infrared Detector (NDIR)	Semiconductor mix gases sensor	
Measuring range	0~2000ppm(default)	0~30ppm	
Display Resolution	1ppm	5ppm	
Accuracy@25℃(77℉)	±50ppm + 3% of reading	-------	
Life time	15 years (normal)	5～7 years	
Calibration cycle	ABC Logic Self Calibration	-------	
Response Time	<2 minutes for 90% change	<1 minute (for 10ppm hydrogen, 30ppm ethanol) <5 minute (for a cigarette) in 20m^2 room	
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.		
Analog Outputs	Two analog outputs 0~10VDC (default) or 4~20mA (selectable by jumpers)		
Modbus RS485 interface	RS-485 with Modbus protocol, 19200bps rate, 15KV antistatic protection, independent base address		
Conditions of Using and Installation			
Operating conditions	0~50℃(32~122℉); 0~95%RH, non condensing		
Storage conditions	0~50℃(32~122℉)/ 5~95%RH		
Weight	320g		
Installation	Fixed on the air duct with 100mm installation hole size		
IP class of the housing	PC/ABS IP50 for models without LCD; IP40 for models with LCD		
Standard	CE-Approval		