

### Product Descriptions

VC2600 is an integrated sensor designed specifically for indoor environment. It comprises multiple sensing elements that measure various parameters in different combinations in an indoor space. This includes CO<sub>2</sub>, CO, TVOC, PM<sub>2.5</sub>, PM<sub>10</sub>, O<sub>2</sub>, NH<sub>3</sub>, HCHO, temperature and humidity.

The sensor adopts standard RS485 Modbus RTU communication protocol which can be connected to most BMS and PLC systems. The integrated sensor comes with wall and duct mounted enclosures.

VC2600 is easy to install and simple to use, hence it is a very good choice to monitor and measure indoor air quality.



### Specifications

#### General

Parameters	CO <sub>2</sub> , CO, HCHO, O <sub>2</sub> , NH <sub>3</sub> , TVOC, PM <sub>2.5</sub> , PM <sub>10</sub> , Relative Humidity, Temperature
Signal output	RS485 Modbus RTU
Operating Environment	0 ~ 50 °C / 0 ~ 95%RH, non-condensing
Storage temperature	-10 ~ 50 °C
Power supply	DC 12 ~ 36V, AC 24V (50/60Hz)
Current consumption	120 mA
Certifications	CE and FCC

#### CO<sub>2</sub> Measurement

Measurement principle	Non-dispersive infrared (NDIR) with automatic calibration
Measurement range	0 ~ 2000ppm (extended range 2001 ~ 9999ppm)
Accuracy	0 ~ 2000ppm ±3% and ±40 ppm <sup>note1 and 2</sup>
Response time	2 minutes by 90%
Maintenance	Maintenance-free for normal indoor applications

#### PM<sub>2.5</sub> Measurement

Measurement principle	Laser technology
Measurement range	0 ~ 600 µg/m <sup>3</sup>
Accuracy	0 ~ 100µg/m <sup>3</sup> (±10µg/m <sup>3</sup> ) , 100 ~ 600µg/m <sup>3</sup> (±10%)
Response time	≤ 10 sec.

### Specifications

#### PM<sub>10</sub> Measurement

Measurement principle	Laser technology
Measurement range	0 ~ 600 µg/m <sup>3</sup>
Accuracy	0~ 100µg/m <sup>3</sup> (±10µg/m <sup>3</sup> ) , 100~ 600µg/m <sup>3</sup> (±10%)
Response time	≦ 10 sec.

#### CO Measurement

Measurement principle	Electro-chemical
Measurement range	0 ~100ppm
Accuracy @25°C	± 5%
Repeatability	Reading ± 2 %
Response time	τ 90 ≦ 30 sec.
Zero point drift	≦5% / yr.

#### HCHO Measurement

Measurement principle	Electro-chemical
Measurement range	0 ~ 3ppm
Accuracy	± 5%
Repeatability	<±0.05 ppm
Response time	<120 sec.(HCHO:1ppm)
Long-term drift	<2%/month

#### O<sub>2</sub> Measurement

Measurement principle	Electro-chemical
Measurement range	0 ~ 30%
Accuracy	± 5%
Response time	≦ 15 sec
Long-term drift	<2%/month

#### TVOC level Measurement

Sensing element	CMOS sensing element
Measurement range	0 ~ 500 AQI
Accuracy	<±15 AQI
Repeatability	<±5 AQI
Response time	< 10 sec. (τ 63 %)

#### Temperature Measurement

Sensing element	CMOS sensing element
Measurement range	0 ~ 50 °C
Accuracy	± 0.3 °C (typical)
Repeatability	± 0.1 °C
Response time	5 ~ 30 sec. (τ 63% , 25°C)
Long-term drift	< 0.04 °C / year

#### Humidity Measurement

Sensing element	CMOS sensing element
Measurement range	0 ~ 95 %RH
Accuracy	± 3 %RH (typical)
Repeatability	± 0.1 %RH
Response time τ63	< 8 sec. (τ 63% , 25°C)
Long-term drift	< 0.5 %RH / year

### Specifications

#### NH<sub>3</sub> Measurement

Measurement principle	Electro-chemical
Measurement range	0 ~ 50 ppm
Accuracy	± 5%
Repeatability	± 10%
Response time	≦90sec
Long-term drift	<2%/month

**Note 1:** In normal IAQ applications. Accuracy is defined after minimum 3 weeks of continuous operation with ABC. However, some industrial applications do require maintenance.

**Note 2:** Accuracy is specified at room temperature +25°C and at normal pressure 101.3 kPa. Specification is referenced to certified calibration mixtures. Uncertainty of calibration gas mixtures (+1% currently) is to be added to the specified accuracy for absolute measurements.

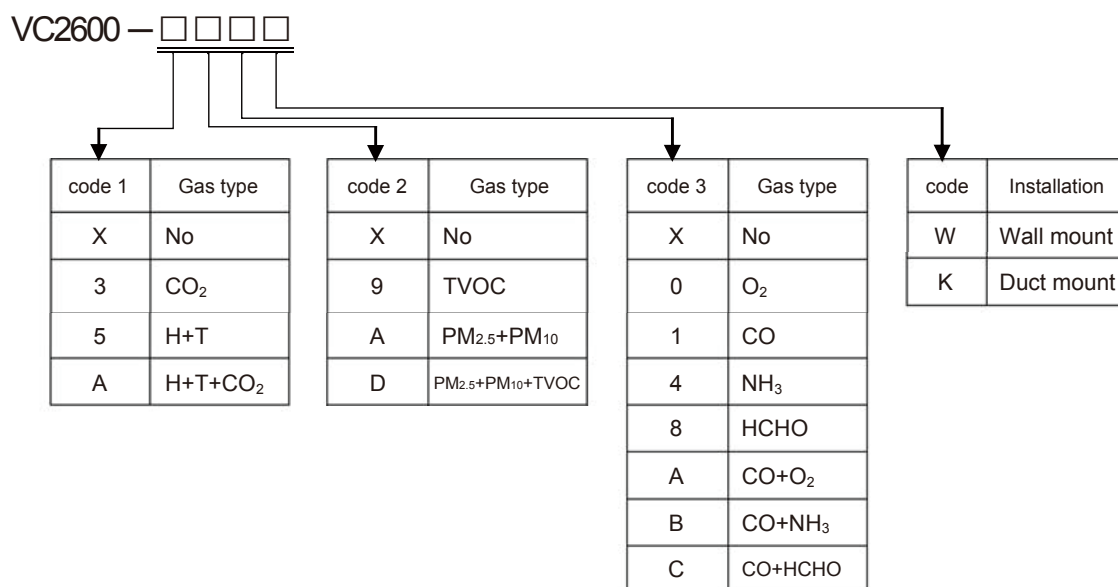
**Note 3:** The sensor should be installed at least 20cm above floor level so as prevent dust from entering the housing and caused PM sensor module to malfunction.

**Note 4:** This sensor is for usage under normal indoor environment.

For harsh environment with dust as stated below, the accuracy of the readings may be affected:

- In yearly dust level > 300 ug/m<sup>3</sup> for more than 50% of duration
- In yearly dust level > 500ug/m<sup>3</sup> for more than 20% of duration

### Models



### housing options



Duct IP65 housing  
size : 142 × 84 × 46 mm (L×W×H)  
Duct probe length : 140 mm



Wall IP44 housing  
size : 142 × 84 × 46 mm (L×W×H)