

SENSECUBE

KCD-BN

CO₂ / Temperature / Humidity Sensor Module

Our CO₂ gas sensors get a small deviation unlike NDIR Single type. So they keep long term stability.

Excellent stability and accuracy

- through testing and calibration with sophisticated process and techniques

Easy application to

- Measuring Carbon dioxide, Temperature, and Humidity together (VOC is optional)
- Duct system
- Indoor ventilation system
- Securing devices of combustors
- Air conditioning system
- Environment management system

Read following instruction from first line to the end for right use of sensor modules.

→ When put power and a signal line into a connector, you should check voltage and polarity.

→ If you supply wrong power unlike said on Specifications, a controller will be repaired or replaced with charge.

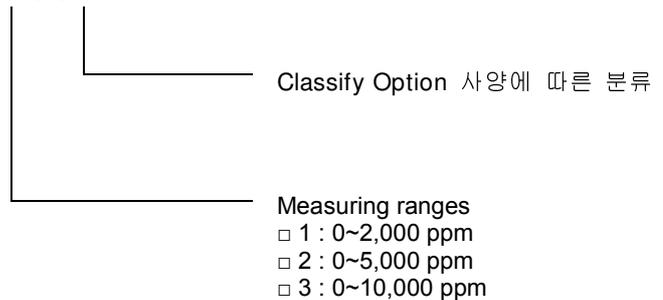
→ NDIR type uses optical property to measuring CO₂ gas. We make up for a controller not to be affected by a shock and a wave(vibration).

But please consult with our engineers, if you use it under harsh environments (like construction sites).



◆ Model Numbering System

KCD-BN x G 0 xx



Contact us If you want to add technical functions or change specifications as you apply our CO₂ sensor to your product. Our engineers will support you.

SENSECUBE

KCD-BN

CO₂ / Temperature / Humidity Sensor Module

◆ Technical Data

■ Measurement	Measuring range	CO ₂	0~2,000ppm, 0~5,000ppm, 0~10,000ppm	
		Temperature	-10~60℃	
		Humidity	0~99% RH	
		VOC	Level 1~ level 10	
	Accuracy (@25℃)	CO ₂	±(50ppm+3% F.S)	
		Temperature	±2℃	
		Humidity	±3%	
		VOC	±1 level	
	Response time (65%)	CO ₂	< 30 sec	
		Temperature	< 10 sec	
Humidity		< 10 sec		
VOC		< 30 sec		
Measurement time interval		1.5 sec		
■ General	Warm up time	CO ₂	< 3 min	
		Temperature	< 30 sec	
		Humidity	< 30 sec	
		VOC	< 15 min	
	Storage temperature		-40~70℃	
	Temperature dependence	CO ₂ , Temperature, Humidity	0.2%/℃	
VOC		1%		
■ Operating Conditions	Operating temperature	CO ₂	5~45℃	
		Temperature, Humidity, VOC	-10~60℃	
	Operating humidity	0~95%RH (Non-condensing)		
	Gas flow rate	0.2~1 m/sec		
■ Electrical	Power supply	12V DC (±15%)		
	Power consumption	70mA average (10~250mA)		
■ Signal Logic	Digital Outputs	PWM		
	Analog Outputs	0(1) ~4 VDC		
	Communication	RS485		
■ Communications (UART)	BAUD RATE	38,400 bps		
	Low	0~0.3V		
	High	2.7~5V		

※ Detecting VOC is optional

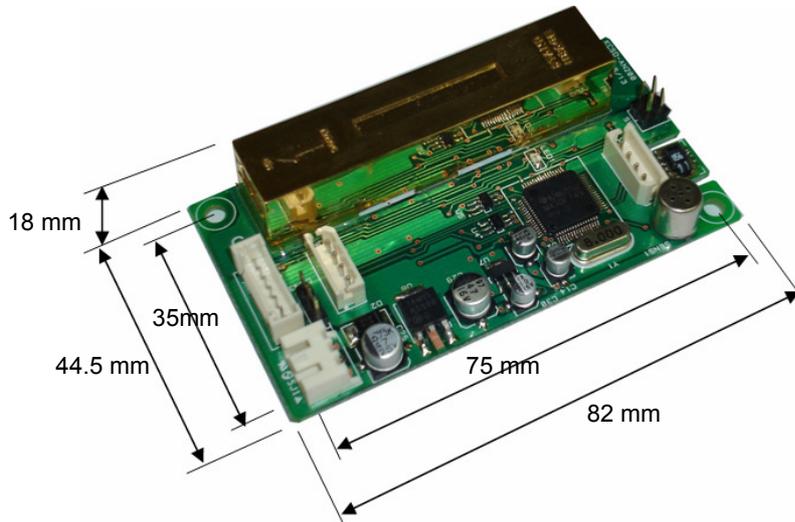
SENSECUBE

KCD-BN

CO₂ / Temperature / Humidity Sensor Module

◆ Dimensions

Length 82mm × Width 44.5mm × Height 18 mm
Φ3.5 holes



Warranty and Instructions

■ Warranty

This product passes our strict quality control and Korea Digital will repair or replace without charge this item within 1 year after sale except for damage or break by customer's mistake.

■ Instructions

1. Caution: shock and moisture
 - 1) The characters of NDIR optical system may be changed by impacts.
Never drop this sensor module and give it heavy impacts.
 - 2) Don't use it where water drops and condensation can occur, too
2. Keep operating conditions written above. If you do not, it may break down or have large errors.
3. Don't use a sensor without a case to block dust and other pollutants in case of using for a long time.
4. You should insulate unused output signal line of the cable. It may be damaged by short.
5. If output terminal is damaged by short, repair isn't free of charge whether within one-year warranty period.