

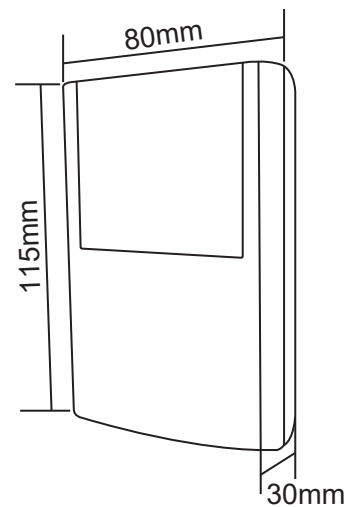
- Detectable for CO<sub>2</sub>, CO, HCHO, O<sub>2</sub>, NH<sub>3</sub>, TVOC, PM<sub>2.5</sub>, PM<sub>10</sub>, temperature and humidity.
- Wall mounted type, recommended installation height is 1-2 meters from the ground.
- Using NDIR infrared technology that complies with regulations to detect CO<sub>2</sub> concentration.
- Detection of formaldehyde, carbon monoxide, oxygen and ammonia with sensing elements of electrochemical formula.
- Laser scattering technology for sensing PM<sub>2.5</sub> and PM<sub>10</sub> concentrations.
- High precision and good stability.
- After detecting relevant values, it can be combined with XE-B1.3 to adjust the exhaust equipment.



**SPECIFICATION**

- ◆Parameters: Temperature, Humidity, CO<sub>2</sub>, CO, HCHO, TVOC, PM<sub>2.5</sub>, PM<sub>10</sub>, O<sub>2</sub>, NH<sub>3</sub>,
- ◆Signal output: RS485 or RS485 / LoRa (Peer to Peer) switchable, LoRa frequency band: 920~925 MHz(1)
- ◆Operating environment: -10 ~ 50 °C(14~122°F) / 0 ~ 95%RH, non-condensing
- ◆Storage temperature: -10 ~ 50 °C(14~122°F)
- ◆Power supply: DC 12 ~36V, AC 24V (50/60Hz)
- ◆Power consumption: RS485: 3W (Max.); LoRa / RS485: 4.5W (Max.)
- ◆IP rating IP30 (No protection from liquids)
- ◆Case material Fireproof ABS
- ◆Dimension(mm): 115(H)\*80(W)\*30(D)
- ◆Weight 125g

**DIMENSION**



**ORDER INFORMATION**

ADC-M [Code1] [Code2] [Code3] [Code4] [Code5] [Code6] -M

Code1	Gas type	Code2	Gas type	Code3	Gas type	Code4	Installation
N	None	N	None	N	None	W	Wall-mount
3	CO <sub>2</sub>	2	PM <sub>2.5</sub>	0	O <sub>2</sub>	Code5	Signal output
5	H+T	5	PM <sub>10</sub>	1	CO	Y	RS-485
A	H+T+CO <sub>2</sub>	9	TVOC	4	NH <sub>3</sub>	L	LoRa/ RS-485
		A	PM <sub>2.5</sub> +PM <sub>10</sub>	8	HCHO	Code6	Display
		B	PM <sub>2.5</sub> +TVOC	A	CO+O <sub>2</sub>	N	None
		C	PM <sub>10</sub> +TVOC	B	CO+NH <sub>3</sub>		
		D	PM <sub>2.5</sub> +PM <sub>10</sub> +TVOC	C	CO+HCHO		

**AQI LEVEL**

According to American EPA definition, AQI air quality index can be divided into six grades:

AQI	Health impact level	Color
0-50	Good	Green
51-100	Moderate	Yellow
101-150	Unhealthy for sensitive groups	Orange
151-200	Unhealthy	Red
201-300	Very unhealthy	Purple
301-500	Hazardous	Maroon

## PM2.5

- ◆Measurement principle: Laser distributing Laser distributing
- ◆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%)
- ◆Resolution: 1 µg/m<sup>3</sup>
- ◆Response time: ≤ 10 sec.
- ◆Maintenance: free for normal indoor applications

## PM10

- ◆Measurement principle: Laser distributing Laser distributing
- ◆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%)
- ◆Resolution: 1 µg/m<sup>3</sup>
- ◆Response time: ≤ 10 sec.
- ◆Maintenance: free for normal indoor applications

## CO<sub>2</sub>

- ◆Measurement principle: NDIR with automatic calibration
- ◆Measurement range: 0 ~ 9999 ppm
- ◆Accuracy: 0~2000ppm±3% and±40ppm Note 1 and 2
- ◆Resolution: 1ppm
- ◆Response time: 2 minutes by 90%
- ◆Maintenance: free for normal indoor applications

## CO

- ◆Measurement principle: Electro-chemical
- ◆Measurement range: 0 ~100ppm
- ◆Accuracy: (at 25°C)±5%
- ◆Resolution: 1 ppm
- ◆Repeatability: Reading±2 %
- ◆Response time: τ<sub>90</sub> ≤ 30 sec.
- ◆Drift: ≤ 5%/ year

## HCHO

- ◆Measurement principle: Electro-chemical
- ◆Measurement range: 0~3.00ppm
- ◆Accuracy: ±5%
- ◆Resolution: 0.01ppm
- ◆Repeatability: <±0.05 ppm
- ◆Response time: <120 sec.(HCHO:1ppm)
- ◆Drift: <2%/ month

## Humidity

- ◆Measurement principle: CMOS sensing element
- ◆Measurement range: 0~95%RH
- ◆Accuracy: ±3%RH (typical)
- ◆Resolution: 0.01%RH
- ◆Repeatability: ±0.1%RH
- ◆Response time: <8 sec. (τ<sub>63%</sub>, 25°C)
- ◆Long-term drift: <0.5 %RH/ year

## Temperature

- ◆Measurement principle: CMOS sensing element
- ◆Measurement range: -10~50°C (14~122°F)
- ◆Accuracy: ±0.3°C (typical)
- ◆Resolution: 0.01°C
- ◆Repeatability: ±0.1°C
- ◆Repeatability: 5~30 sec. (τ<sub>63%</sub>, 25°C)
- ◆Long-term drift: <0.04°C/ year

## O<sub>2</sub>

- ◆Measurement principle: Electro-chemical
- ◆Measurement range: 0~30%
- ◆Accuracy: ±5%
- ◆Resolution: 0.01%
- ◆Response time: ≤ 15sec.
- ◆Long-term drift: <2%/ month

## NH<sub>3</sub>

- ◆Measurement principle: Electro-chemical
- ◆Measurement range: 0~50ppm
- ◆Accuracy: ±5%
- ◆Resolution: 0.1ppm
- ◆Repeatability: ±10%
- ◆Response time: ≤ 90sec.
- ◆Long-term drift: <2%/ month

## TVOC

- ◆Measurement principle: CMOS sensing element
- ◆Measurement range: 0~500 TVOC AQI  
(Air Quality Index) (2)
- ◆Accuracy: <±15 AQI
- ◆Repeatability: <±5 AQI
- ◆Response time: <10 sec. (τ<sub>63%</sub>)

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.

(1) 109/7/1 Revision 5.8.1.1(3) conforms to NCC technical specification for low-power RF equipment (<https://www.rootlaw.com.tw>).

(2) AQI (Air Quality Index) air quality index: the index value of 100 refers to the past 24 hours.

General air quality status;

If the index value is between 100 and 500, it means that the air quality is deteriorating gradually;

If the index value is between 0 and 100, it means that the air quality is improving gradually.