

Formaldehyde Sensor Module

CB-HCHO



Description

CB-HCHO formaldehyde sensor is an electrode electrochemical type sensor. It measures the gas concentration through the diffusion principle. It has better selectivity to formaldehyde, but it can also respond to the alcohol, benzene and naphthalene and other gases. With signal amplification circuit, single power supply, serial signal output, fast and convenient use.

Main features

- ✧ High sensitivity, good stability
- ✧ Low power consumption, strong anti-interference ability
- ✧ Temperature compensation algorithm, good linearity

Application

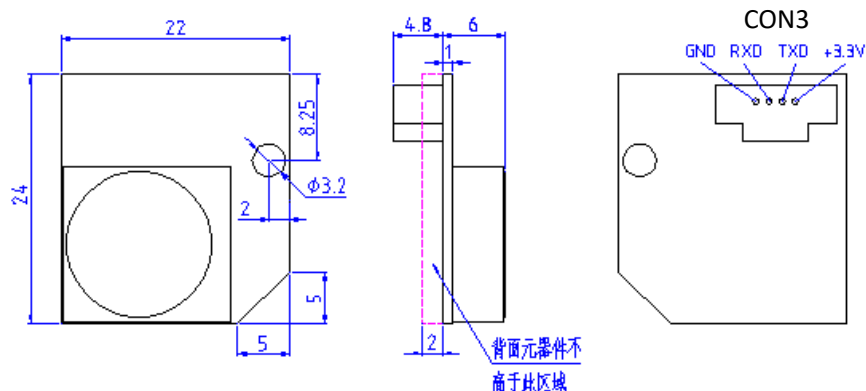
- ✧ Portable instrumentation
- ✧ Desktop air quality monitoring equipment
- ✧ Air Purifier
- ✧ HVAC
- ✧ Air conditioning
- ✧ Smart home equipment

Table 1. Specification

Power supply	DC 3.3 ~ 5.0 ±0.1V
Working current	< 10mA
Working temperature	-10 ~ +40°C
Working humidity	0 ~ 95%RH, non-condensing
Storage temperature	-20 ~ + 60°C
Dimension	24 × 22 × 6(mm), exclude pins
Measurement range	0 ~ 3ppm
Sensitivity	0.01ppm
Preheating time	≤ 30sec
Accuracy	0 ~ 0.2ppm: ±0.05ppm; >0.2ppm: ±30%
Life span	≤ 2 years
Output protocol	UART: TTL 3.3V, support calibration by command

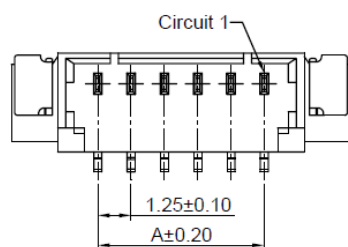
Dimensions and Pin Definition

Dimensions: 24mm x 22mm x 6mm (Un-concluding connector) ,

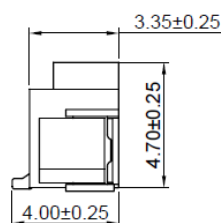
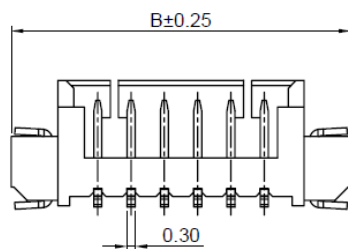


Pin definition

No.	Pin Name	Description
Pin1	+3.3 ~ 5.0V	Power supply input (+3.3 ~ 5.0V)
Pin2	TXD	UART TX(sending) TTL level @3.3V
Pin3	RXD	UART RX(receiving) TTL level @3.3V
Pin4	GND	Power supply input (GND)

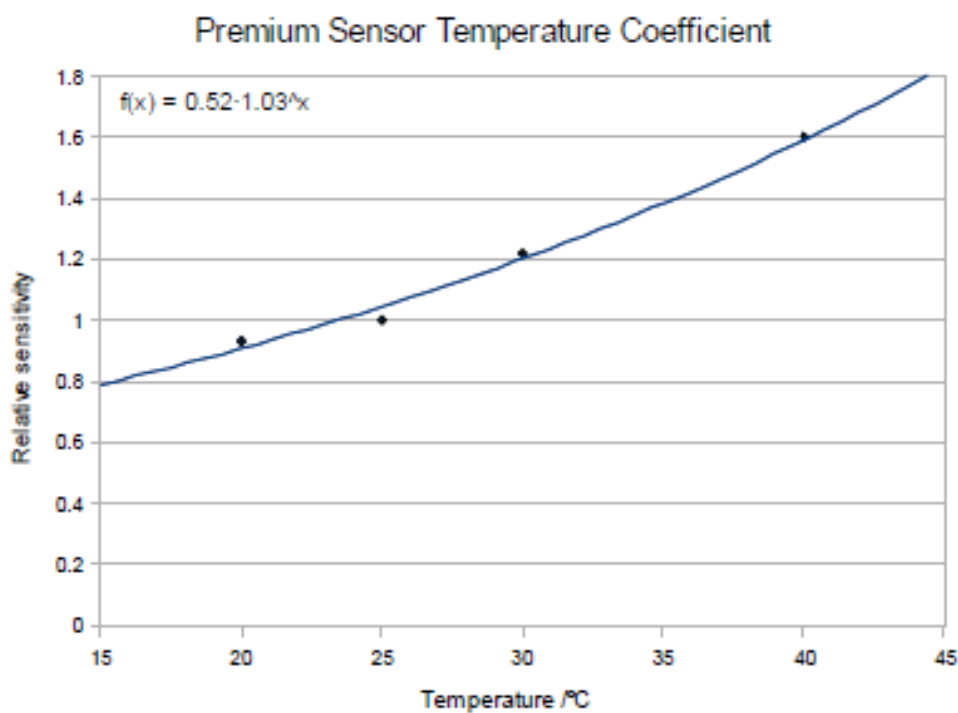


PART NO.	Dimensions	
	A	B
A1251WV-S-4P	3.75	10.25



Note: The connector model is A1251WV-S-4P, the above schematic diagram is 6Pin, the actual of the model is 4Pin.

Temperature correction coefficient curve



Gas selectivity

Substance	Relative sensitivity
Reference: formaldehyde	100
Ammonia	0.0
Water vapor	0.0
Carbon dioxide	0.0
Acetone	0.0
Methyl ethyl ketone	0.0
Benzene	0.0
Toluene	0.0
Methane	0.0
Ethyl acetate	0.0
hydrogen	0.1
chlorine	-3
Carbon monoxide	1
Phenol	8
Sulfur dioxide	12
Ethanol, methanol	50

Notice

Do not use this module in systems that related to personal safety;

- 1) Do not put the module for a long time in high concentrations of organic gases, or it is likely to cause damage to the sensor;
- 2) Do not install the module in a strong air convection environment;
- 3) Diffusion sampling, the air circulation of the measurement point should be ensured.
- 4) To ensure the measuring accuracy of formaldehyde, should be avoid using in the environment of perfume, cooking wine and another alcohol-heavy environment.

After-sales services and consultancy

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