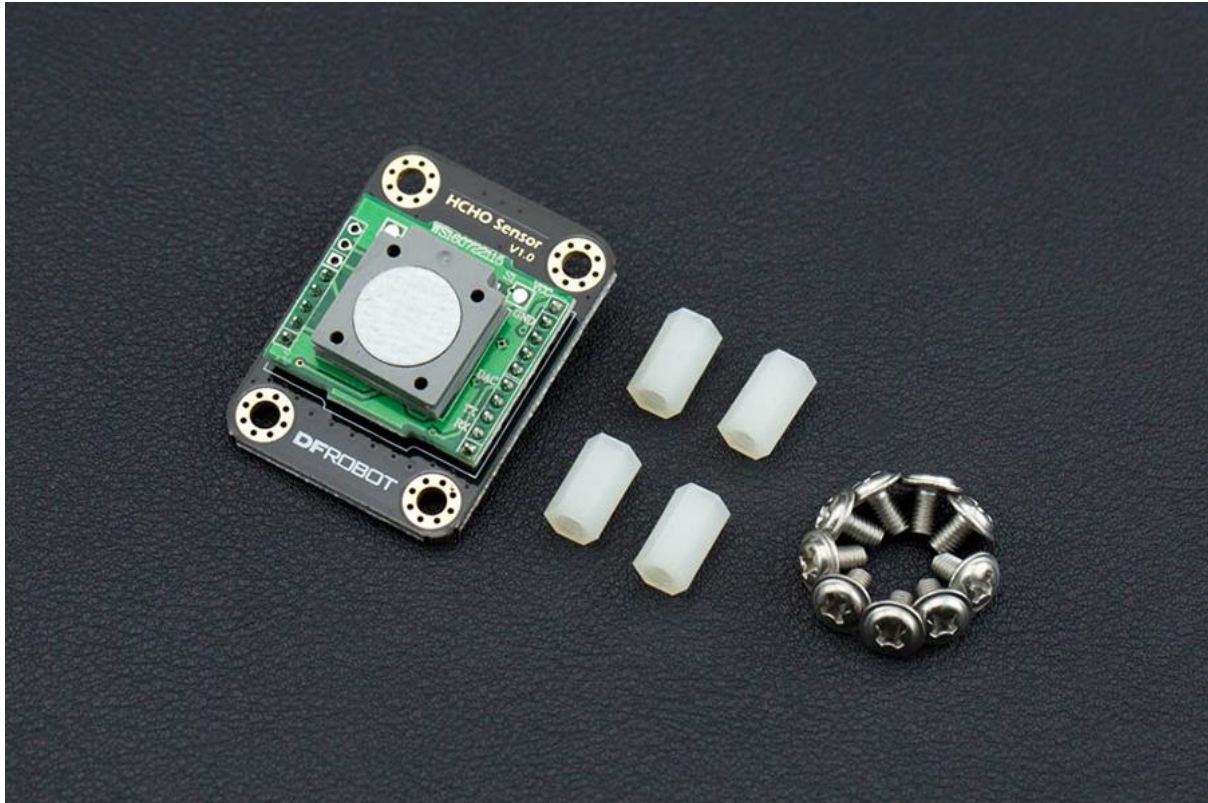# Gravity: Formaldehyde (HCHO) Sensor

SKU:SEN0231

INTRODUCTION

The Formaldehyde (HCHO) sensor is an Arduino & Raspberry Pi compatible module, which is the ideal solution for indoor air quality monitor.

This is a HCHO(CH2O) sensor module. It can be used to measure HCHO in air. Through it, you can know the air quality. This sensor module is widely used in many air testing applications, such as indoor air quality, real time quality monitoring stations. Our HCHO sensor module can detect and measure HCHO accurately. Many advantages are available, such as strong anti-jamming capability, high stability, ATC, high sensitivity(up to 0.01ppm) and long life(2 years in air). Integrated with Gravity Interface which is easy to used, wide input voltage, and optional output signal, Our module can be almost compatible with all MCU. According our sample codes , an HCHO detector can be made very quickly.

This is a formaldehyde (HCHO) sensor module with small size, and Arduino compatibility. Through it, you can measure the concentration of formaldehyde in air and know the Real-Time air quality. It can be widely used in many air testing applications, such as indoor air quality, real time quality monitoring stations. Applied in a DIY formaldehyde detector is also suitable.

The common solution to measure HCHO in air is the reagent or colourimetric card. But this solution will occupy much time, and used only once. And the result is not very accurate and you just know probably. VOC gas sensor is second generation solution. it can detect HCHO roughly, because this

sensor only expresses the whole concentration of VOC gas, not just HCHO only.

DFRobot Gravity Formaldehyde sensor module can detect and measure HCHO gas concentration accurately. Many advantages are available, such as strong anti-jamming capability, high stability, ATC, high sensitivity(up to 0.01ppm) and long life(2 years in air). It also support 3.3~6V wide range power supply, it means it could be used with Arduino and Raspberry Pi directly. The Formaldehyde monitor integrates with Gravity Interface, easy to use, plug and play. According the sample codes, it is easy to make your own formaldehyde detector. Combined with IOT, it is possible to make an automaic air quality station which can measure HCHO in different sites.

Cautions:
1. When using the sensor module, do not touch the white sensing film.
2. Please keep away from high concentration Hydrogen sulfide, hydrogen, methanol, ethanol, carbon monoxide. These gases will affect the precision and 3. reduce the service life.
4. Please keep the modules warming up for at least 5 minutes when first using.
5. The sensor shall avoid organic solvent, coatings, medicine, oil and high concentration gases
6. Please do not plug the sensor which on the module, and do not modify components on the PCB.
7. Excessive impact or vibration should be avoided.
8. Please do not use the modules in systems which related to human being's safety.
9. Please do not use the modules in strong air convection environment.
10. Please do not expose the modules in high concentration organic gas for a long time.

FEATURES

- High stability and sensitivity

- Automatic temperature compensation

- Wide input voltage(3.3~6V)

- Support DAC and UART output

- Long life(2 years in air)

- High resolution (0.01ppm)

SPECIFICATION

- Input Voltage: 3.3~6V

- Target Gas: HCHO

- Interference Gas: Alcohol, CO & etc

- Detection Range: 0~5ppm

- Resolution: 0.01ppm

- Warm Up Time: ≤3 minutes

- Response Time: ≤60 seconds

- Resume Time: ≤60 seconds

- Interface Type: Gravity-3Pin

- Output Signal: Optional DAC(0.4～2V,for 0-5ppm) or UART(9600)

- Operating Temp: 0~50℃

- Operating Hum: 15%RH-90%RH(No Condensation)

- Storage Temp: 0~50℃

- Working Life: 2 years(in air)

- Dimension: 38*28*15mm/1.50*1.10*0.59inches

- Weight: 22 g