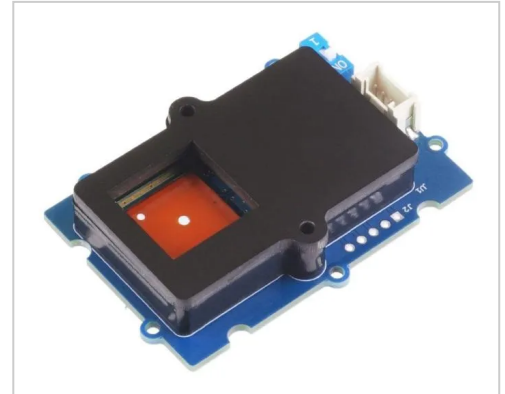


# seeed Grove Formaldehyde Sensor (SFA30)

The Grove formaldehyde sensor can detect formaldehyde in the range of 0~1000 ppb with low cross-sensitivity to alcohol and high stability of 6 years lifetime. The inbuilt RHT sensor ensures that it can detect formaldehyde even at low levels

**Product number** SE-101020972

**Weight** 0.027kg



## Product description

### Seeed Grove Formaldehyde Sensor (SFA30)

The Grove formaldehyde sensor is based on the Sensirion SFA30 and offers powerful detection of formaldehyde with particularly low cross-sensitivity to other volatile organic compounds (VOCs) such as ethanol. The integrated SHT sensor provides precise measured values for humidity and temperature. The module is designed for easy integration into air conditioning systems, air purifiers and intelligent ventilation systems, especially in new buildings.

The Grove Formaldehyde Sensor is part of the Grove sensor toolset with standardised connectors. The SFA30 technology used is based on electrochemical gas sensing with patented anti-desiccation technology for a lifetime of up to six years. The module is calibrated at the factory and can be integrated into electronic systems via an I2C or UART interface. Thanks to the temperature and humidity-compensated algorithms, the performance remains constant even under changing environmental conditions. The integrated Sensirion RHT sensor compensates for temperature and humidity and ensures stable operation. The low power consumption enables use in battery-operated applications.

The sensor measures formaldehyde concentrations in the air in a range from 0 to 1,000 ppb (parts per billion) and detects values below 20 ppb. The response time is less than two minutes. The detection accuracy is  $\pm 20$  ppb or  $\pm 20$  % of the measured value, whichever is greater. Thanks to its low cross-sensitivity and high long-term stability, the module is suitable for continuous operation in air quality systems.

The product is suitable for detecting formaldehyde indoors, for example in air exchange systems, air purifiers or for continuous air quality monitoring. The compact design and standardised Grove interface facilitate integration. The module analyses the formaldehyde concentration by breaking down the electrolyte into charged ions, whose signals are transmitted to the electrodes.

### Features at a glance

- Low cross-sensitivity to VOCs such as ethanol
- Measuring range for formaldehyde: 0 to 1,000 ppb
- Long-term stability thanks to patented anti-dry technology (up to 6 years)
- Compensation of temperature and humidity through RHT sensor
- Grove-compatible connection format for easy integration

### Compatibility

- Grove systems
- Microcontroller with I2C or UART interface

### Technical specifications

- Supply voltage: 3.3 V or 5 V
- Measuring range: 0 to 1,000 ppb
- Response time: less than 2 minutes
- Detection limit: below 20 ppb
- Interfaces: I2C / UART
- Accuracy:  $\pm 20$  ppb or  $\pm 20$  % of the measured value

**Other data**

- Basic module based on electrochemical cell with factory calibration
- Advanced algorithms to compensate for environmental influences

**Scope of delivery**

- 1x Grove formaldehyde sensor SFA30
- 1x 5-pin header

**Links**

- [Sensirion SFA30 data sheet \(PDF\)](#)
- [Grove Sensirion overview \(PDF\)](#)

## Product properties

<b>Gross Weight (kg)</b>	0.027
<b>Country of Origin</b>	China
<b>Brand</b>	seeed
<b>Product ID</b>	SE-101020972
<b>Manufacturer ID</b>	101020972
<b>Zolltarifnummer</b>	90271010

## More images

