



Malodorous Gases Sensor Module

(Model: ZE809-0U)

User's Manual

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Zhengzhou Winsen Electronic Technology Co., Ltd

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ZE809-OU Malodorous Gases Sensor Module

Description

ZE809-OU Malodorous Gases Sensor Module uses high-precision electrochemical sensors, specialized instrument amplifiers, high-precision processors, and intelligent algorithms to convert the detected ammonia gas concentration into recognizable digital signals, which are transmitted through serial ports. Convenient for users to use and debug, shortening their design and development cycle.

The module is equipped with sensors with good linearity, high precision, high sensitivity, strong anti-interference ability, excellent repeatability and stability, and combined with temperature and humidity compensation algorithms, greatly improving the reliability of the module.



Natural diffusion type

Integrated pump type

Characteristic

- Small size
- Dual signal output (UART signal, analog voltage signal)
- High stability, high anti-interference
- Temperature and humidity compensation
- Sampling method can be selected: natural diffusion or integrated pumping

Application

Mainly used in gas monitoring, Internet of Things, UAV, atmospheric environment monitoring instrument, micro air quality monitoring station, toxic gas detection and other fields.

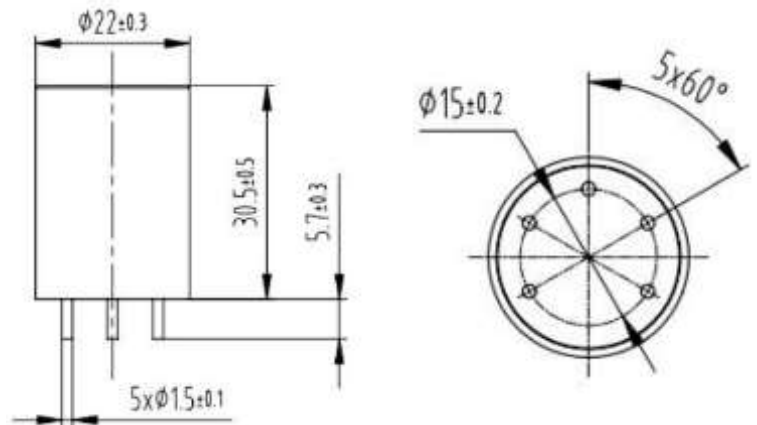
Technical Data

Sheet 1

Model No.	ZE809-OU
Detection Gas	Stench, odor
Detection Range	0~100 OU
Working voltage	DC 5±0.1V
Working Current	≤80mA
Output Signal	UART(TTL Level 3.3 V), Analog signal (0-5V)
Accuracy	≤±5%
Repeatability	≤±3%

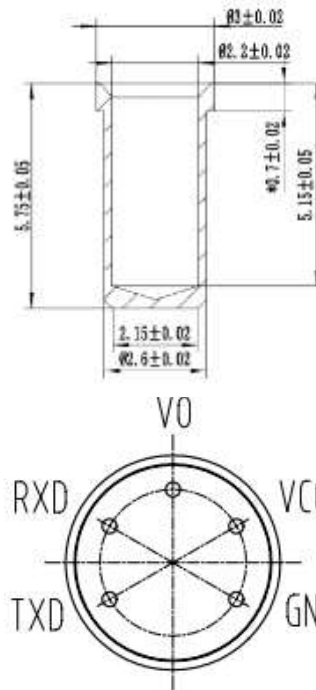
Picture 1: Module side and bottom views

Note: Error: ±0.25mm



Response Time	T90≤30s
Preheat Time	30s
Resolution	0.1 OU
Working Environment	Temperature: -20~50°C, Humidity: 15%~93%RH No condensation
Storage Environment	Temperature: -20~60°C, Humidity: 15%~75%RH
Dimension	Φ22mm * 30.5mm

Picture 2: Tube base dimension for module matching



Pin definition

Picture 2

GND	Power Ground
VCC	Voltage supply
VO	Analog signal
RXD	Serial port input
TXD	Serial port output

Note

1. After long-term storage, the module needs to be energized for a longer time to achieve stability before use, and the module needs to be aged for at least 24 hours for the first time.
2. Direct welding of the pins of the module is prohibited. The tube seat of the pins can be welded, and the size of the tube seat is shown in Figure 2.
3. The module can not withstand excessive impact or vibration.
4. Do not apply this module to the system involving personal safety.
5. Do not install the module in strong air convection environment.
6. To determine whether the module communication is normal, it is recommended to use the USB to TTL tool (communication level 3.3V), observe and judge according to the communication protocol through the serial debugging assistant software.

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