

AG-2-CH4-MA2611(D)

Features

- ✓ High selectivity to methane
- ✓ Long life and low cost
- ✓ Programmable Alarm output
- ✓ USART digital output
- ✓ pre-calibrated before leaving the factory



Product Description

The AG-2-CH4-MA2611(D) is an embedded type module equipped with the Figaro's semiconductor Sensor TGS2611-E00, the module has been pre-calibrated before leaving the factory and it includes a specialized filter that reduces interference from gases like alcohol, ensuring a selective response to methane (CH₄). It utilizes digital communication through a USART and a programmable Alarm output interface for gas concentration readings. This allows users to easily and quickly integrate the module into residential gas leakage alarm systems, such as household natural gas detectors.

Technical Specification

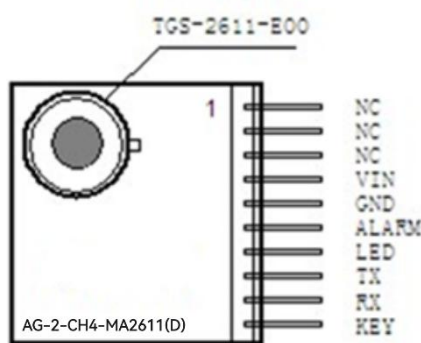
| Item | Specification |
|--------------------|---|
| Model Number | AG-2-CH4-MA2611(D) |
| Target Gases | CH ₄ |
| Sensing Principle | Semiconductor |
| Detection Range | 0 ~ 20% LEL |
| Measurement Error | < ±2.5% LEL (4000ppm~5000ppm) < ±5.0% LEL FS |
| Response time(T90) | ≤ 30 s |
| Output Signal | USART Programmable Alarm output |
| Resolution USART | 1 ppm |
| Operating Voltage | 5V±0.2V DC |
| Power consumption | ≤ 0.5 W |

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Technical Specification

| | |
|----------------------|--|
| Humidity Range | 20% ~ 95%RH |
| Pressure Range | 1 ± 0.1 atm |
| Temperature Range | -10 ~ 55°C (Operating) -25 ~ 60°C (Storage) |
| Warm up time | ≥ 5 min |
| Electrical interface | 2.54 mm pitch 1-row pin header |
| Size | L*W*H=27.2mm*22.8mm*17mm (TGS2611-E00) |

Pin Configuration



| Pin | Name | Functional Description |
|-----|-------|------------------------|
| 1 | NC | |
| 2 | NC | |
| 3 | NC | |
| 4 | +5V | Power supply, 5V DC |
| 5 | GND | Signal ground |
| 6 | Alarm | Alarm output |
| 7 | LED | States display |
| 8 | TX | transmitter |
| 9 | RX | receiver |
| 10 | KEY | Address Setting Button |

Note:

- 1) After being powered-on, the module needs approximate 5 minutes to warm up. Once the process is complete, the module enters into normal monitoring state. (Standard test conditions: 7 days; Methane in air at 20±2°C, 65±5%RH)
- 2) **USART Output:** Baud rate: 9600, data bits: 8bit, stop bits: 1bits, parity bit: no parity
For detailed information on sensor operation, please refer to the application manual.
- 3) An **Alarm output** signal is automatically triggered on the Alarm terminal when the gas concentration reaches a predetermined level. This feature eliminates the need for additional processing, which helps to minimize development and production costs. As a result, users can create residential natural gas alarms more easily and efficiently. Additionally, alarm manufacturers have the option to program different alarm thresholds through communication.

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Application Notes

1. The module is not protected against reverse polarity or ESD (Electrostatic Discharge). Users should ensure correct power connection and implement appropriate ESD protection measures when using the module.
2. Exceeding the module power supply voltage range may cause damage to the module or the module may fail to operate properly.
3. Please follow precautions specific to the sensor when using the module.
4. For detailed information on sensor operation, please refer to the application manual.

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