

## AG-3-CHX-M6814(D)

### Features

- ✓ Sensitive to methane and LP gas
- ✓ Linear output
- ✓ Long life
- ✓ UART digital output
- ✓ pre-calibrated before leaving the factory



### Product Description

The AG-3-CHX-M6814(D) is an embedded type module equipped with the Figaro's Catalytic Sensor TGS6814, capable of detecting combustible gases such as methane (CH<sub>4</sub>) and LP gas. The module provides a quick response and offers linear output in a variety of environments. It is pre-calibrated before leaving the factory, ensuring good durability, stability, and anti-poisoning. It utilizes digital communication through a UART bus output for gas concentration readings, which allows users to easily and quickly integrate the module into various systems. This makes it suitable for both residential and industrial gas detection applications.

### Technical Specification

| Item              | Specification            |
|-------------------|--------------------------|
| Model Number      | AG-3-CHX-M6814(D)        |
| Target Gases      | CH <sub>4</sub> , LP gas |
| Sensing Principle | Catalytic                |
| Detection Range   | 0-100% LEL               |
| Resolution        | 1% LEL                   |
| Measurement Error | < ±5.0% FS               |
| Output Signal     | UART                     |
| Operating Voltage | 5V ~12V DC               |
| Operating Current | ≤ 200mA@5V               |
| Humidity Range    | 0% ~ 95%RH               |
| Pressure Range    | 1 ± 0.1 atm              |
| Temperature Range | -10 ~ 55°C               |
| Size              | L*W*H=49*34*26mm         |

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## Application

- Residential LNG and LPG alarms
- Detectors for LNG and LPG

## Product Appearance and Dimensions



## Pin Configuration

The module reserves a 3P + 4P pin header with a pitch of 2.54 mm as the electrical interface. Pin descriptions are as follows:

| Pin Number | Name | Functional Description   |
|------------|------|--|
| 1          | VIN  | Power supply, 5 - 12V DC   |
| 2          | GND  | Signal ground  |
| 3          | RXD  | Serial port input, Connected to the host TXD                               |
| 4          | TXD  | Serial port output, Connected to the host RXD                              |
| 5          | VOT  | Module onboard 3.0V reference power output (maximum output capacity 100mA) |
| 6          | FAT  | Fault signal output pin (reserved)   |
| 7          | ALM  | Alarm signal output pin (reserved)   |

### Note:

- 1) After being powered-on, the module needs approximate 3 minutes to warm up. Once the process is complete, the module enters into normal monitoring state.
- 2) After being powered-on, the module's serial port outputs a frame of data containing status and concentration values every 1 second.

## 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.

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