AG-3-CHX-M6812(D)

Features

- ✓ Sensitive to Flammable gases (Hydrogen, methane and LP gas)
- ✓ Linear output
- ✓ Long life
- ✓ Digital output
- ✓ pre-calibrated before leaving the factory

Product Description

The AG-3-CHX-M6812(D) is an embedded type module equipped with the Figaro's Catalytic Sensor TGS6812, capable of detecting combustible gases such as Hydrogen (H_2), methane (CH_4) 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.

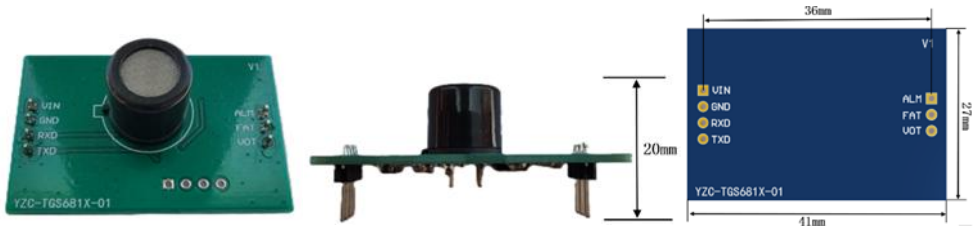
Technical Specification

Item	Specification
Model Number	AG-3-CHX-M6812(D)
Target Gases	H_2, CH_4, LP gas
Sensing Principle	Catalytic
Detection Range	0 ~ 14,000ppm H2 (also can detect methane, iso-butane, and propane)
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*20mm

Application

- Hydrogen & combustible gas leak detectors
- Safety measures for lithium-ion batteries
- 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.