

CGM6812-B00 Combustible Gas Pre-Calibration Module

characteristic : _____

- * A simulated linear output proportional to the gas concentration
- * maintenance-free
- * small volume
- * Comply with RoHS requirements

The CGM6812-B00 gas sensor pre-calibration module, featuring the Figaro catalytic combustion sensor TGS6812, delivers exceptional durability and stability. This module provides analog voltage output proportional to hydrogen concentration while incorporating a moisture-resistant coating for waterproof and insulated environments. It also detects sensor wire breakage faults. With an operational temperature range of -10°C to +60°C, it ensures reliable performance across extreme conditions. Since the TGS6812 gas sensor can detect methane, LP gas and hydrogen, this module is suitable for fixed fuel cell combustible gas —— hydrogen leakage detection.

apply : _____

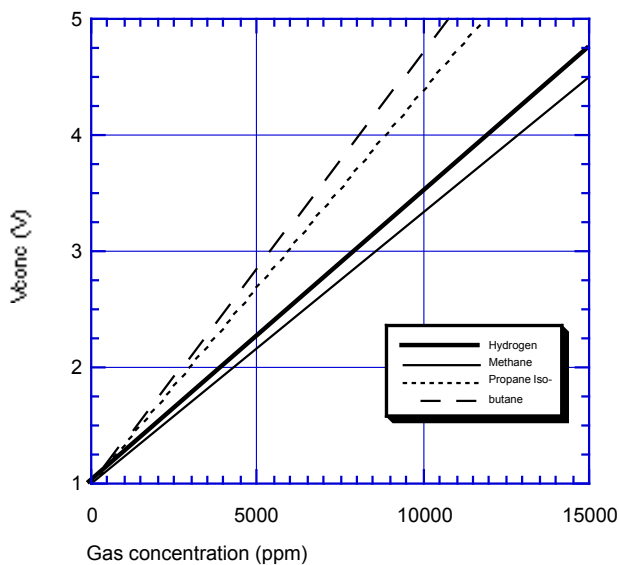
- * Detect gas leaks in fuel cell systems
- * Hydrogen and combustible gas leak detector



Sensitivity characteristics: _____

The representative sensitivity characteristic curve is shown in the figure below under standard test conditions (see back for details).

The vertical axis shows the output voltage.



Pin connection: _____

pin	name	description
1	GND	Common ground line
2	NC	Connection prohibited
3	NC	Connection prohibited
4	VCONC	Concentration output voltage
5	VIN	input voltage

CGM6812-B00 pin connection (connection mode BH05B-XMSK) is recommended to use XMP-05V socket connector

Important Notice: The application conditions for Figaro sensors may vary depending on specific customer requirements. Figaro strongly recommends consulting our technical team before use, particularly when the detected gas is not listed. Figaro assumes no liability for any usage that has not undergone professional testing by Figaro.

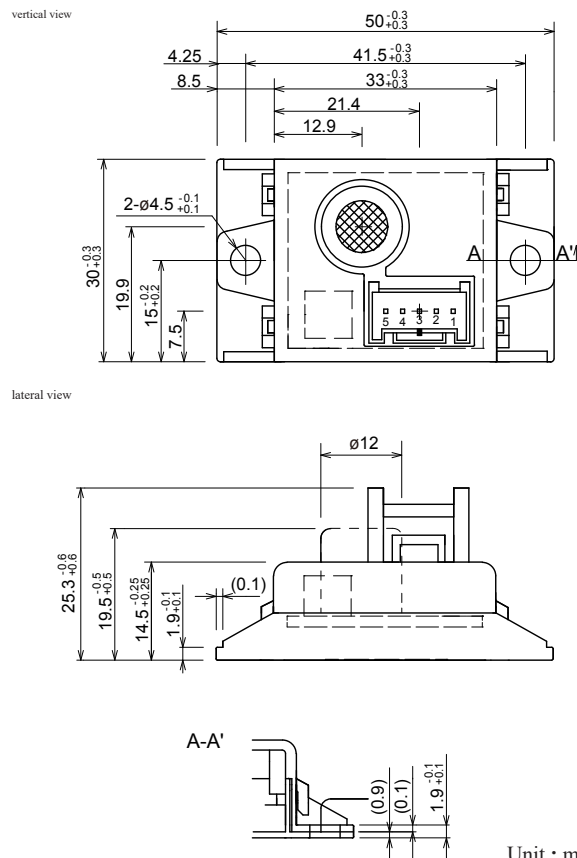
specifications :

product name	Combustible gas sensor module	
model	CGM6812 -B00	
gas transducer	TGS6812 (catalytic combustion type)	
Scope of detection	0 ~ 14,000ppm hydrogen (Methane, isobutane and propane can also be detected)	
Voltage output (Vconc)	1~4.5V DC (up to V IN)	
	Convert to hydrogen concentration	$V_{[out]} = [\text{Hydrogen concentration (ppm)} / 4000] + 1.0$
	hitch	$V_{conc} = 0 \sim 0.1V (*)$
Factory set output	V conc air	$1.0 \pm 0.2V$
	In V conc 8000ppm hydrogen	$3.0 \pm 0.2V$
4000ppm hydrogen response time (T90)	≤ 30 seconds	
Alarm time (V CONC <2.0V)	≤ 30 seconds (time required for V conc in air <2.0V)	
going	-10. C ~+60. C, 20~95%RH (anti-condensation)	
maintaining requirement	-10°C ~+60°C, 20~95%RH	
Input voltage (V IN)	$5.0 \pm 0.2V$ DC	
power dissipation	$\leq 1.5W$	
net weight	Under 15g	
outline dimension	50 x 30 x 25.3mm	
Installation requirements	Because this module requires orientation, the two ear holes should be installed horizontally	
standard test conditions	ambient condition	$20 \pm 2^\circ C, 65 \pm 5\%RH$
	Loop conditions	$5.0 \pm 0.2V$ DC
	Pre-test debugging	≥ 10 minutes

(*) Fault detection recommended threshold =0.2V.

The gas sensor TGS6812 opening used in this module is equipped with two layers of 100 purpose stainless steel (SUS316) protective nets. After the ignition test by an independent third-party testing institution, the results show that the gas sensor does not explode in the explosive gas mixture of ethylene and air with concentration of $6.5 \pm 0.5\%$.

Size structure diagram:



Unit : mm

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