

### FCM6812 - Pre-calibrated module for combustible gas

#### Features:

- \* Linear analog output proportional to gas concentration
- \* Maintenance free
- \* Compact size

#### Applications:

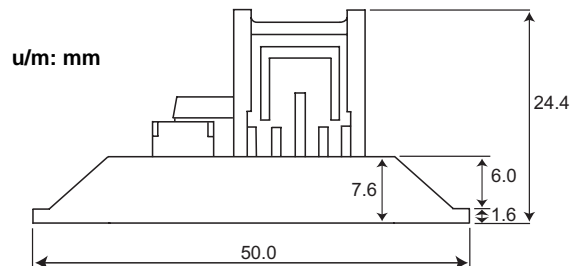
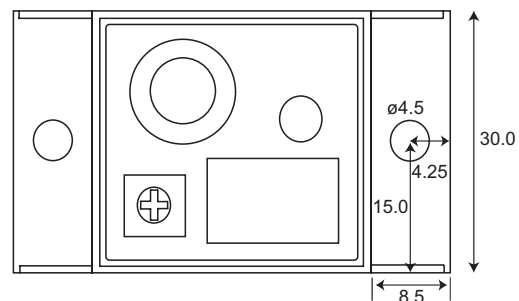
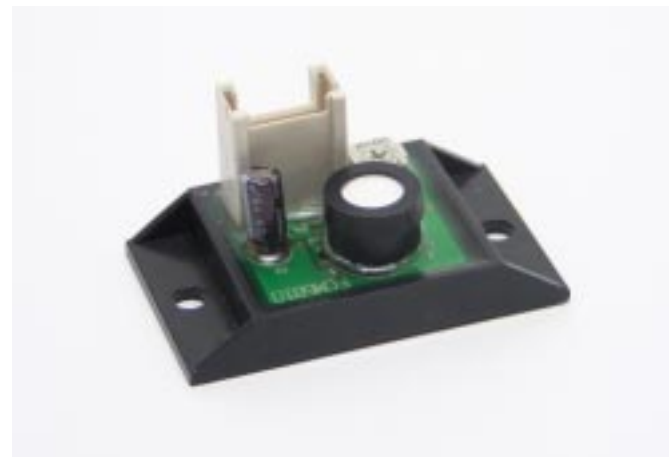
- \* Gas leak detection in fuel cell systems
- \* Gas concentration monitors

The **FCM6812** combustible gas sensor module is a new unit which utilizes **TGS6812**, Figaro's catalytic pellistor type gas sensor which features durability, stability, and quick gas response. Calibrated under strictly controlled environmental conditions at Figaro's factory, this module provides analog output voltage proportional to hydrogen gas concentration. FCM6812 is resin coated for waterproofing and electrical insulation purposes, and also is also capable of detecting sensor wire breakage. The unit has a wide range of operating temperature from -10° to +60°C.

Because the TGS6812 sensor can detect methane and LP gas as well as hydrogen, this module is suitable for gas leak detection in stationary fuel cells which use hydrogen generated from combustible gases.

#### Caution:

The TGS6812 gas sensor offers a practical explosion-proof structure due to double 100 stainless mesh covering its opening. However, this construction is not able to satisfy the requirements of an intrinsically safe structure. In the case where an intrinsically safe device is required, simple measures such as the addition of a sintered metal explosion-proof housing should be added in order to meet these requirements.



FCM6812 dimensions

## Specifications (tentative)

Product name	Combustible gas sensor module	
Model No.	FCM6812-P00	
Gas sensor	TGS6812 (catalytic type)	
Detection range	800 to 10,000ppm of H <sub>2</sub> (also can detect methane, iso-butane, and propane)	
Output signal	0.5~3.0V DC proportional to H <sub>2</sub> concentration	
	normal operation	$V_{out} = [H_2 \text{ conc(ppm)}/4000] + 0.5$
	trouble condition	$V_{out} = 0V$
Response time	≤30 seconds	
Conditioning period before testing	≤30 seconds	
Operating conditions	-10°~+60°C, 5~95%RH (avoid condensation)	
Storage temperature & humidity range	-10°~+60°C, 5~95%RH	
Input voltage	5.0±0.2V DC	
Power consumption	approx 1.0W	
Weight	approx. 15g	
Dimensions	50 x 30 x 24.4mm	

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