CMM5042 - Pre-calibrated Module for CO Gas

Features:
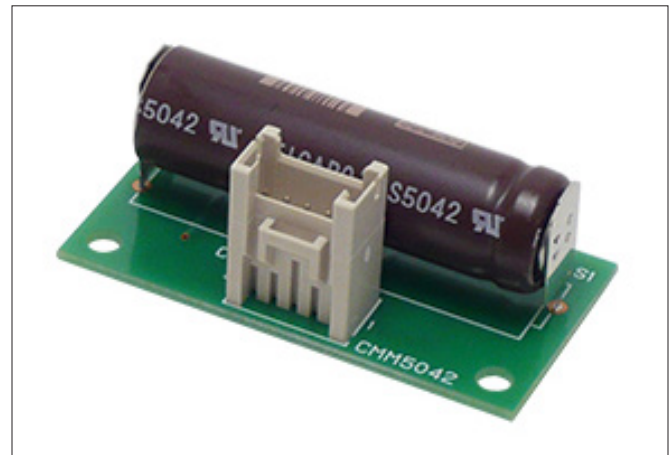
* **Ease of use**
* **Linear analog output proportional to gas concentration**
* **Maintenance free**
* **Battery operable**

Applications:

* **Residential and commercial CO detectors**
* **Ventilation control**
* **CO monitor for gas boilers, kerosene heaters, etc.**

The **CMM5042** carbon monoxide sensor module is a new unit which utilizes **TGS5042**, Figaro's electrochemical CO sensor, a widely used model for residential and commercial CO detectors with excellent durability and long term stability. This module provides analog output voltage proportional to CO concentration. CMM5042 is capable of detecting sensor trouble.

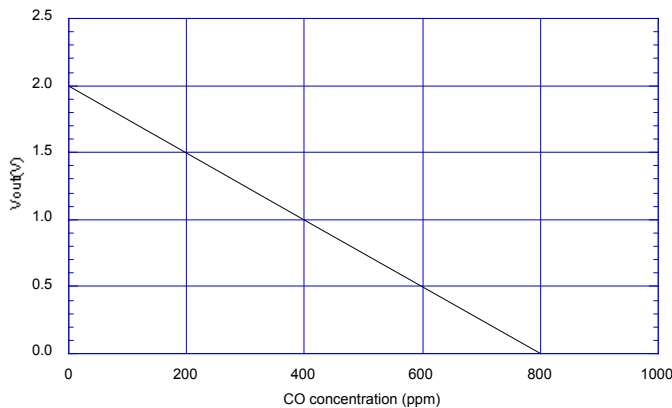Customers can easily design CO detectors with the ready-to-use module.

Sensitivity Characteristics

The figure below represents typical sensitivity characteristics. The Y-axis indicates output voltage.

Pin Connections

Pin No.	Name	Description
1	GND	Common ground
2	Test	Self-diagnosis control input
3	Vconc	Concentration output voltge
4	-	(not connected)
5	Vin	Input voltage

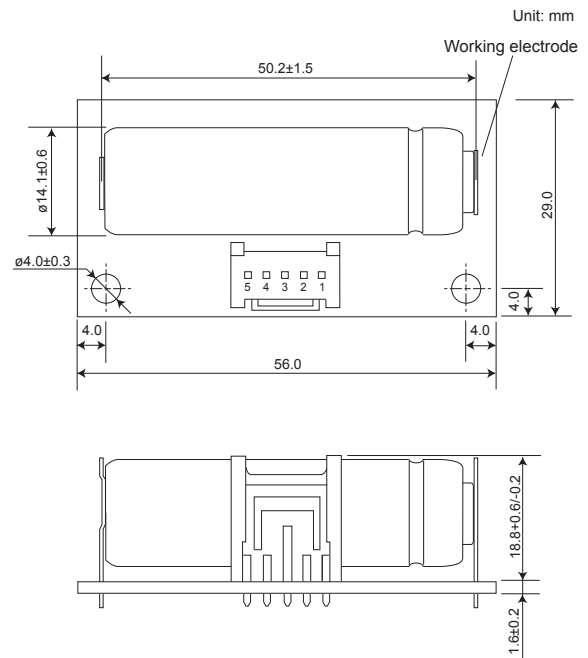(Connector model BH05B-XMSK)
Recommended receptacle for connector: XMP-05V
(*made by JST*)

Specifications

Item	Specification	
Model number	CMM5042	
Gas sensor	TGS5042 (electrochemical)	
Detection range	0 ~ 800ppm CO	
Current consumption	At no-load: ≤200µA	
Input voltage	Vin	2.5~5.3V DC
Output signal	Vout	0~2V DC
	Normal operation	Vout = 2-[CO conc(ppm)/400]
	Vout in air	2.0±0.1V
	Vout in 400ppm CO	1.0±0.2V
Warm up time	≤30 sec.	
Operating temperature*[1,2]	0˚C ~ +50˚C (continuous) -5˚C ~ +55˚C (intermittent)	
Operating humidity	5 ~ 95%RH	
Response time (T90)	within 60 seconds	
Storage conditions*[1,2]	-5˚C ~ +55˚C/5 ~ 95%RH	
Dimensions	56 x 29 x 22mm	
Weight	approx. 19g	

CMM5042 Dimensions

*[1] If the water in the reservoir should freeze very rapidly (typically occurs only under artificially created conditions), irreversible change of sensor characteristics would occur. To avoid this risk, the sensor is recommended to be positioned with its cap (working electrode) facing up.

*[2] Please contact Figaro for more information if the required temperature range would exceed the specified limits.

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