

FCM7210 - Pre-calibrated R290Gas Module

Features:

- * Non-dispersive infrared (NDIR)
- * Low power consumption
- * Open collector and Digital output
- * High accuracy achieved through proprietary optical design.
- * Equipped with a self-test system, the FCM7210 can detect and alert failures.

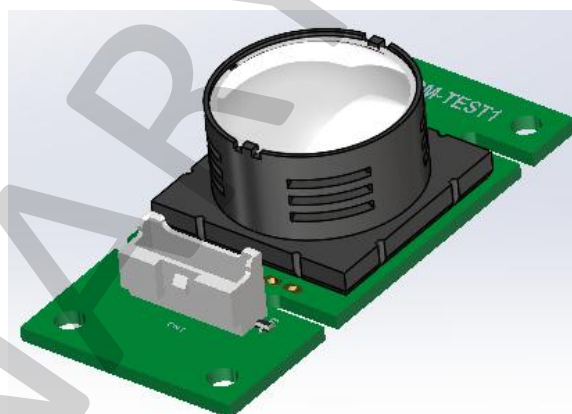
The **FCM7210** R290 module integrates a compact NDIR sensor for R290 gas detection, offering low power consumption and stable performance.

This module enables users to easily build a reliable gas leakage detection system by eliminating electronic circuit design for temperature compensation and the calibration process.

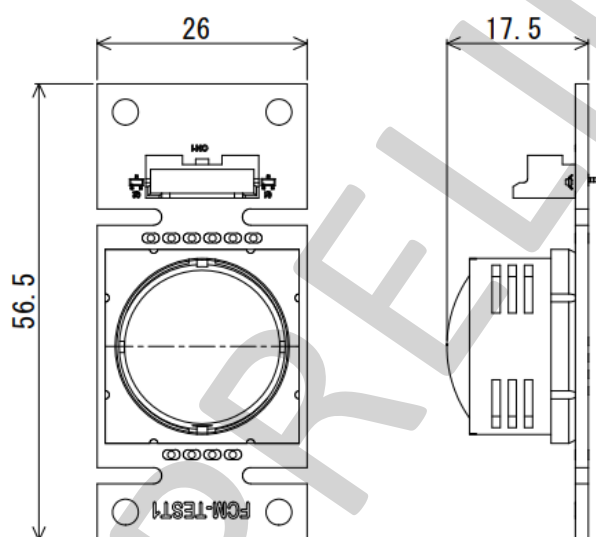
The module is provided with open collector PWM and Analog output.

Applications:

- *Refrigerant gas leak detection in air conditioning/refrigeration systems



Dimensions:



Pin Connections:

Pin No.	Name	
1	GND	Common ground
2	NC	-
3	NC	-
4	Vout1 Analog output	Monitoring/alarm/ malfunction output
5	Vout2 PWM	Monitoring/alarm/ malfunction output
6	Vc	Circuit voltage

The functions of each pin are provisional and may be subject to change depending on market requirements. For example, HIGH/LOW alarm output at the alarm concentration level may be added.

Specifications:

Model No.	FCM7210
Detection range	0~21000ppm
Operating principle	Non-dispersive infrared (NDIR)
Power supply	3.3~5.5V DC
Current consumption (@5VDC)	Peak : <80mA Ave:<10mA
Threshold	Initial : 3150ppm(15%LFL) 10~20%LFL Adjustable
Accuracy	Threshold $\pm 3\%$ LFL (25°C, 50%RH) Threshold $\pm 6\%$ LFL (Long term)
Response time	Within 30 seconds at 25%LEL(5250ppm) of R290
Measurement interval	2~5sec, variable depending on the concentration : <1000ppm: 5s >1500ppm :3s >2500ppm :2s
Operating conditions	-40 ~ 85°C / 0 ~ 95%RH (no condensation)
Storage conditions	-30 ~ 60°C (tentative) / 0 ~ 95%RH (no condensation)
Communication port	• Open collector Analog output: Alarm、Malfunction PWM : Alarm、Malfunction • I2C/UART: Conc、Temp、Malfunction mode
Warm up time	15 sec
Weight	approx. 7.5 g

	Open collector Analog output	Open collector PWM
Initial/Monitoring	Lo	
Alarm	Hi	
Malfunction	Hi	

NOTE : FCM7210 is an ESD-sensitive product. No ESD protection components are used in this product. It is also recommended that ESD protection components should be used as required for the intended application when this product is embedded into finished products

IMPORTANT:

Figaro Engineering Inc. reserves the right to make changes without notice to this product to improve reliability, functioning or design.

This information is based on a product under development and is subject to change.