

FCM2610-G - R290 Refrigerant Gas Sensor Module

Features:

- * Small size and low cost
- * Long life
- * Factory calibrated
- * Temperature compensation circuit
- * Proprietary semiconductor-type gas sensor
- * Protection rating: IP55
- * Open collector or UART digital interface
- * Meets IEC60335-2-40 requirements

Applications:

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



FCM2610-G is an embedded type module using the proprietary semiconductor gas sensor which has high sensitivity to A3 refrigerant gas R-290. 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.

In addition, this module has high waterproof performance by protective measures for a printed circuit board, sensors, and connectors.

The module is provided with open collector or UART digital interface. By utilizing dual gas sensors, a longer life is achieved than our single sensor modules.

The refrigerant gas sensor has a built-in filter to reduce the influence of alcohol and other interference gases, resulting in high selectivity to R-290.

FCM2610-G is capable of satisfying the IEC60335-2-40 Edition 7. The applicable standards are both limited to refrigerant gas type: R-290.

Pin Connections

Pin No.	Name	Description
1	Vc	Circuit voltage
2	VOUT1/Rx	Monitoring/alarm/malfunction output/ UART Rx input
3	VOUT2/Tx	Total running time output / UART Tx output
4	GND	Common ground

For VOUT1/Rx and VOUT2/Tx, please contact Figaro.

Specifications (tentative)

Model No.	FCM2610-G1A	FCM2610-G1B
Target gases	R-290	
Circuit voltage Vc	5VDC $\pm$ 4%	
Output signals	Open collector	UART
The alarm set point declared by the manufacturer	6.2%LFL(1302ppm) of R-290	
Warm-up time	60 seconds after power ON	
Design life	15 years	
Operating conditions (NOTE 1)	-40°C ~ +70°C, 10 ~ 100%RH	
Protection rating	IP55	
Current consumption	approx. 75mA (Max. 120mA)	
Power consumption	approx. 0.3W	
Dimensions	69.6 × 51.6 × 20.0mm	
Weight	approx. 40g	

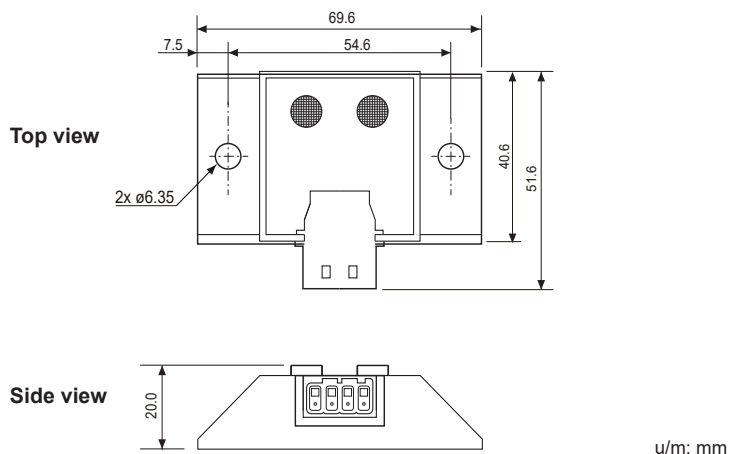
NOTE 1:

The upper limit of the absolute humidity is 50g/m³.

NOTE 2:

If the internal temperature near the gas sensor module becomes higher than the external ambient temperature by 10°C or more due to heat generated by electronic components in a device into which this gas sensor module is incorporated, the set alarm threshold may drift. Please consult with Figaro if there is difficulty in designing a device so as to keep the temperature rise inside the device within 10°C.

Structure and Dimensions



Connector model: MX44004NF1 (made by JAE)

Recommended receptacle for connector :

MX44004SF1 (made by JAE)

All sensor characteristics shown in this brochure represent typical characteristics. Actual characteristics vary from sensor to sensor. The only characteristics warranted are those in the Specification table above.

REV: 02/24

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