

FCM2630-K1A - R454B 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
- * RS485 digital interface
- * Meets IEC TS 63542 Edition 1.0 requirements
- * Recognized component in accordance with Annex LL of UL60335-2-40:2022 Ed.4, and Annex LL of CSA C22.2#60335-2-40:2022 Ed.4

Applications:

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



FCM2630-K1A is an embedded type module using the proprietary semiconductor gas sensor which has high sensitivity to refrigerant gas R-454B. 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 RS485 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-454B.

FCM2630-K1A is certified to Annex LL of UL60335-2-40:2022 Ed.4, and Annex LL of CSA C22.2#60335-2-40:2022 Ed.4. The applicable standards are both limited to refrigerant gas type: R-454B.

Pin Connections

Pin No.	Name	Description
1	VDD	Power supply/DC+5V
2	OUTPUT A	Digital output/RS485-A
3	OUTPUT B	Digital output/RS485-B
4	GND	Ground

For OUTPUT A and B, please contact Figaro.

Specifications

Model No.	FCM2630-K1A
Target gases	R-454B
Circuit voltage Vc	5VDC $\pm$ 4%
Output signals	RS485 digital interface
The alarm set point declared by the manufacturer	4.2%LFL(4830ppm) of R-454B
Warm-up time	60 seconds after power ON
Design life	15 years
Operating conditions (NOTE 1)	-40°C ~ +95°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. 45g

NOTE 1:

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

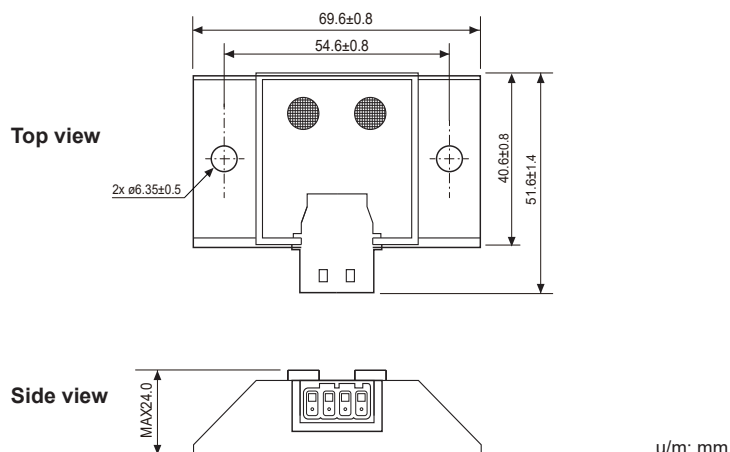
NOTE 2:

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.

NOTE 3:

The DETECTION THRESHOLD LIMIT VALUE shall not be adjustable in the field. Recalibration other than self-recalibration shall not be allowed.

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.

Before purchasing this product, please read the Warranty Statements shown in our webpage by scanning this QR code.



https://www.figaro.co.jp/en/pdf/Limited_Warranty_en.pdf

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