

FCM2630-L - R-32 Refrigerant Gas Sensor Module

Features:

- * Small size and long life
- * Factory calibrated
- * Temperature compensation circuit
- * Proprietary semiconductor-type gas sensor
- * Meets IEC TS 63542, UL60335-2-40, and JRA 4068 requirements

FCM2630-L is an embedded type module using the proprietary semiconductor gas sensor which has high sensitivity to A2L refrigerant gas R-32. 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.

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-32.

FCM2630-L is capable of satisfying the IEC TS 63542, and UL60335-2-40, and JRA4068 (*TBD).

Applications:

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



Pin Connections:

Pin No.	Name	Description
1	GND	Common ground
2	—	No connection
3	—	No connection
4	Vout1	Total running time output
5	Vout2	Monitoring/alarm/malfunction output
6	VDD	Power supply

Connector model: B06B-PASK-1 (LF) (SN)
Recommended connector: PAP-06V-S

Specifications (tentative):

Model No.	FCM2630-L
Target gases	R-32
Circuit voltage Vc	DC 5V $\pm$ 4%
Output signals	Open collector *See below about Vout 1, 2 output
The alarm set point declared by the manufacturer	R-32: 4.2%LFL (6,048ppm)
Warm-up time	60 seconds after power ON
Design Life	15 years
Operating conditions (NOTE 1)	-35 °C to +60 °C, 0 to 95% RH
Current consumption	Approx. 75 mA (Max. 125 mA)
Power consumption	Approx. 0.375 W
Dimensions	Approx. 26 × 26 × 16 mm
Weight	Approx. 6 g

*NOTE 1: The upper limit of the absolute humidity is 50 g/m³.

Vout1: Time notification (81sec. cycle)

State	Vout 1 (Time)
Initial/Monitoring	64.8sec HiZ / 16.2sec Low
t1: 83,220 hours (Approx. 9.5 years)	32.4sec HiZ / 48.6sec Low
t2: 87,600 hours (Approx. 10 years)	16.2sec HiZ / 64.8sec Low
Power OFF	81sec HiZ / 0sec HiZ

Vout2: State output (375msec. cycle)

State	Vout 2 (State)
Initial/ Monitoring	75msec HiZ / 300msec Low
Alarm	225msec HiZ / 150msec Low
Malfunction	0msec HiZ / 375msec Low
Power OFF	375msec HiZ / 0msec Low

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.