

FCM2630 - Pre-calibrated Module for Refrigerant Gas R-32

Features:

- * Factory calibrated
- * Temperature compensation circuit
- * Resistant to interference gases
- * Compact embedded type module

FCM2630 is an embedded type module using the semiconductor gas sensor TGS2630 which is optimized to detect the low-flammable 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. In addition, a connector allows easy replacement of the gas sensor module for periodic maintenance.

The TGS2630 gas sensor has a built-in filter to reduce the influence of alcohol and other interference gases, resulting in high selectivity to R-32. For more detailed information on the gas sensor, including sensitivity characteristics, see *TGS2630 Product Information*.

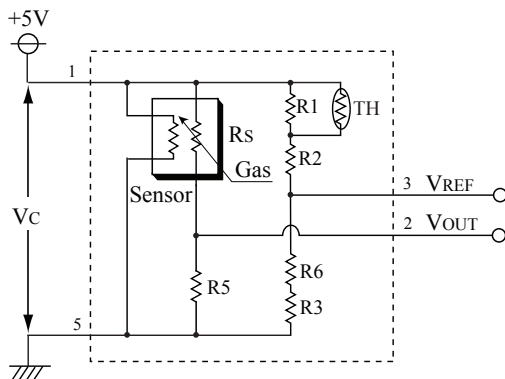
FCM2630 is capable of satisfying the JRA4068:2016 standard (Performance 3) established by the Japan Refrigeration and Air Conditioning Industry Association.

Applications:

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



Circuit Diagram



Vc: Circuit voltage
 Vout: Output voltage
 VREF: Reference voltage

Pin Connections

Pin No.	Name	Description
1	Vc	Circuit voltage
2	Vout	Output voltage
3	VREF	Reference voltage
4	-	-
5	GND	Common ground

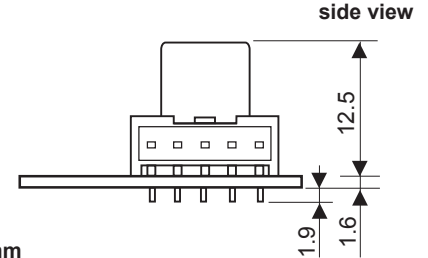
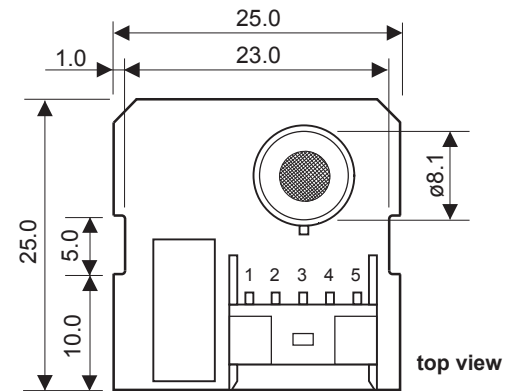
Connector model: S05B-PASK-2 (made by JST)
 Recommended receptacle for connector: PAP-05V-S (made by JST)

Specifications

Model No.		FCM2630
Gas sensor		TGS2630
Target gases		Refrigerant gas R-32
Circuit voltage	V _c	5.0±0.2V DC
Output voltage	V _{OUT}	2.5±1.0V in 5000ppm R-32 (under standard test conditions) Malfunction condition: V _{OUT} < 0.05V or V _{OUT} > 4.95V (V _c = 5.00V)
Reference voltage	V _{REF}	2.5±1.0V (under the standard test conditions) Malfunction condition: V _{REF} < 0.50V or V _{REF} > 4.00V (V _c = 5.00V)
Initial alarm accuracy	2800-9000ppm R-32 (under standard test conditions) Alarm state: V _{OUT} ≥ V _{REF} Normal state: V _{OUT} < V _{REF}	
Warm-up time	≤60 seconds (time before V _{OUT} < V _{REF} after power is turned on in a clean atmosphere)	
Operating conditions	-10°~+50°C, 20-95%RH (avoid condensation)	
Power consumption	approx. 0.3W	
Weight	approx. 4g	
Dimensions	25 x 25 x 17mm	
Standard test conditions	Test gas conditions	20°±2°C, 65±5%RH
	Circuit conditions	V _c = 5.00±0.05V DC
	Conditioning period prior to test	≥1 day

NOTE: 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 due to change of the reference voltage (V_{REF}). 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



u/m: mm

For information on warranty, please refer to Standard Terms and Conditions of Sale of Figaro USA Inc. Figaro Engineering Inc. reserves the right to make changes without notice to this product to improve reliability, functioning, or design.

REV: 08/17

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