

FAM-001-01 Air quality detection module

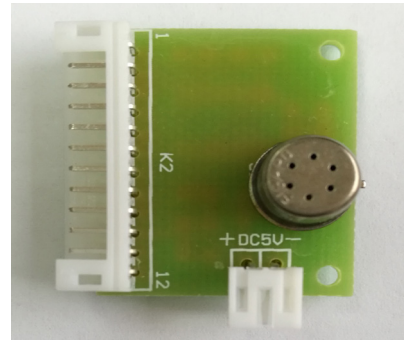
characteristic : _____

- :: Low power consumption
- * long life
- * High selectivity for low concentration gases
- High sensitivity to cigarette or cooking odors and volatile gases from organic solvents

This module is primarily designed for air quality monitoring, specifically targeting low-concentration pollutants in the air such as cigarette smoke, cooking odors, and TVOC (volatile organic compounds) with high sensitivity. By integrating advanced gas sensors and scientific software processing, it achieves human-like sensing capabilities to accurately detect air pollution levels.

apply : _____

- * It can be used as indoor air freshener, air quality monitor, air conditioner, ventilation fan and other detection modules.



performance parameter : _____

source	DC 5V±0.2V
consumed power	250mW
working temperature	-10°C~55°C
outline dimension	27.5×23mm
End device model	K2 PH-12AYT (spacing 2.00mm)

	name	explain
K2-1	reset	Joke reset button
K2-2	power supply indicators	
K2-3	Level 1 outputs	High level, output I <20mA
K2-4	Secondary pollutant outputs	High level, output I <20mA
K2-5	Level 3 pollution output	High level, output I <20mA
K2-6	Level 4 pollution output	High level, output I <20mA
K2-7	Level 5 pollution output	High level, output I <20mA
K2-8	Level 6 pollution output	High level, output I <20mA
K2-9	Saturated signal output	High level, output I <20mA
K2-10	vastum	K2 1-9 South side
K2-11	empty	unused
K2-12	empty	unused
K1	source	DC 5V±0.2V

Note: The power input of this module is not equipped with a one-way current limit. Reversing the power supply may cause damage to the module.

The following is for your reference only:

First-level pollution is equivalent to the average pollution caused by lighting a cigarette in a room of 2 10 meters. It is equivalent to about 2ppm hydrogen.

Important Notice: The application conditions for Feigaro sensors may vary depending on specific customer requirements. Feigaro strongly recommends consulting our technical team prior to use, particularly when the detected gas is not listed. Feigaro assumes no liability for any usage that has not undergone professional testing by Feigaro.

Normal operation mode:

The power-on indicator light illuminates (assuming a green LED is connected to K2-2). After approximately 5 minutes of delay, the system enters normal operation mode. It automatically detects and evaluates air quality through natural air changes (the detection update interval varies depending on application purposes; please consult your forward supplier for details). Air pollution levels are classified using the six-stage system described above.

Saturation operation mode:

In order to make the indoor air fresh, there are many ways, common ones like: ventilation and circulation of outdoor air, or filtration of the dirty air in the room through filtration devices.

However, although the latter can be filtered by a filter, it cannot filter out hydrogen in the polluted air, so the sensor still detects it. This may lead to saturation.

When the pollution level 6 is reached and lasts for 30 minutes without a downward trend, it is judged as the saturation state and enters the saturation operation mode. The saturation indicator light will be lit (assuming that K9 is connected with a red LED).

In the saturated operation mode, the saturation is determined every few minutes (more than 20 minutes). If it is a transition from polluted air to clean air, the saturated operation is withdrawn. On the other hand, if the saturated operation continues for another 30 minutes, the pollution level is forcibly changed to 0.

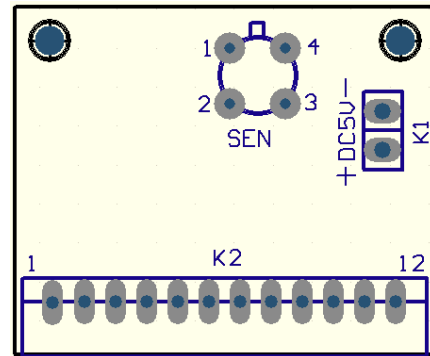
Abnormal display:

When the sensor is abnormal, the K9 outputs high and low levels (if connected to LED, it will flash). After the exception is removed, the power supply needs to be restarted.

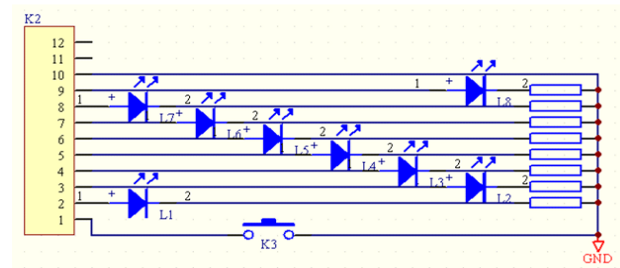
reset :

It has nothing to do with the operating state. If K2-1 is shorted (K3 is closed), the module is reset. After the reset, the air quality at this time is reevaluated.

K1 and K2 are shown in the figure:



Application examples of K2 output interface:



Note: The purpose of this module design is not intended for use in the case of personal injury. Personal safety and property losses caused by improper use shall not be responsible. For special purposes, please consult in advance. This product is a performance improvement to the specification changes without further notice.

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