FSM-19T-02 Pre-calibrated Module for Combustible Gas

Features:

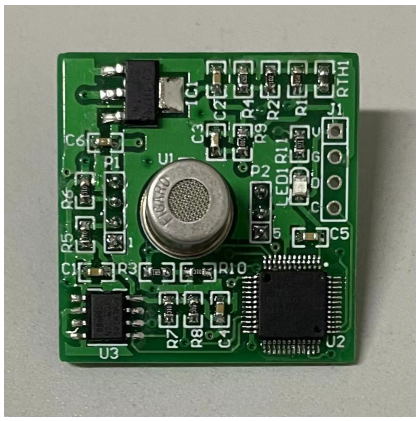
* USART digital outputs proportional to gas concentration
* Maintenance free
* Small volume
* RoHS Compliant

Applications:

* Leakage detection for combustible gases
* Combustible gases leaking detector
* Industrial detector

The pre-calibrated module for combustible gas FSM-19T-02 is a module in which Figaro's semiconductor sensor TGS2619 is installed and features good durability as well as high stability. It is able to provide USART output (the module is equipped with a memory in which the factory pre-calibrated data are stored) proportional to the concentration detected. Meanwhile, the module will detect whether there is a sensor disconnection or short fault. The module can be operated over a wide temperature range.

In addition, the module has neglectable cross sensitivities to organic gases, and a better tolerance against silicone compounds, for which it is more suitable to adverse environment.



Output characteristics:

The module exhibits a linear output which correlates with the concentration of the target gas in air. The output is USART digital output.

1. USART digital output

The module sends a set of data every 300ms.

01 H	03H	00 H 01 H	conc.（2 bytes）	CRC

Communication setting: 9600BPS 8/N/1

Level rules:

Rules for module serial I/O and IO I/O

Low level（binary“0”）: 0V
High level（bibary“1”）: 3.3V

Pin connections:

Pin	Name	Description
1	ALARM	Alarm output
2	RX	USART serial input
3	TX	USART serial output
4	+5V	Input voltage
5	NC	Not Connected
6	GND	Ground
7	F	Fault output

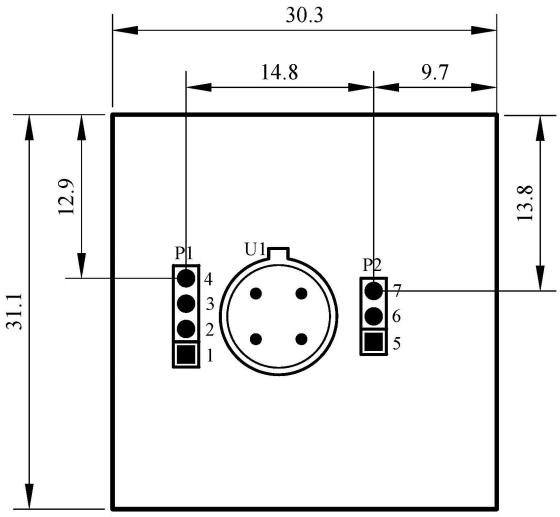
FSM-19T-02 pin connection:
(The connection mode is pin loader with spacing of 2.0)

iSweek www.isweek.com
Add: 16/F, Bldg. #3, Zhongke Mansion, No.1 Hi-Tech S. Rd, Hi-Tech Park South, Shenzhen, Guangdong, 518067 P.R.China
Tel: + 86-755-83289036 Fax: + 86-755-83289052 E-mail: sales@isweek.com

Specifications:

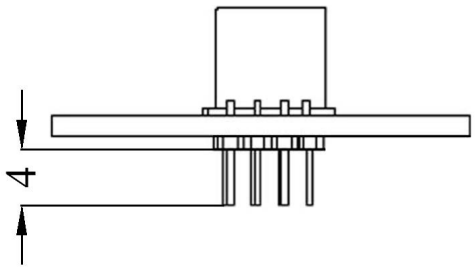
Product name	Pre-calibrated module for combustible gas	
Model No	FSM-19T-02	
Gas sensor	TGS2619 (Semi-conductor type)	
Gas detected	Methane gas	
Detecting range	0 ~ 20% LEL	
Alarming point	10% LEL	
Alarming point error	± 3% LEL	
Status indicator output	Alarm	Alarm：H，Normal：L
	Fault	Alarm：H，Normal：L
Response time(T_{90})	⩽30 s	
Operating condition	-40° C ~+70° C, 20~95%RH (non-condensing)	
Storage	-10°C ~+80°C, 20~95%RH	
Input voltage（V_{IN}）	5.0±0.2V DC	
Power consumption	⩽1.5W	
Net weight	Less than15g	
Dimensions	31.1×30.3 mm	
Standard test conditions	Environment	20±2°C, 65±5%RH
	Loop	5.0±0.2V
	Warming-up	⩾10 min

Dimensions:



(Spacing between pins: 2.0mm)

Top view
(incl. dimension and pin S/N)
Unit: mm



Left view
Unit: mm

Note：

1. Please contact us if the module is used to detect other combustible gases or alarm points (calibration points) of different measuring ranges;

2.Measurement errors can differ due to various gas detected or measuring range used;

3.The module is not explosive-proof, so please refer to GB3836.1-2010,GB3836.2-2010,GB3836.4-2010,GB3836.15-2000 and related standards if use it in dangerous places,

All sensor characteristics shown in this brochure represent typical characteristics. Actual chracteristics vary from sensor to sensor and from production lot to production lot. For more information, please refer to sensor spec and related info. For performance improvement, product is subject to change without notice.

iSweek www.isweek.com
Add: 16/F, Bldg. #3, Zhongke Mansion, No.1 Hi-Tech S. Rd, Hi-Tech Park South, Shenzhen, Guangdong, 518067 P.R.China
Tel: + 86-755-83289036 Fax: + 86-755-83289052 E-mail: sales@isweek.com