



Micro Flow Sensor

(Model: F1032)

Manual

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Zhengzhou Winsen Electronics Technology Co., Ltd

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F1032 Flow Sensor

Profile

F1032 flow sensor adopts thermodynamic principle to detect the gas flow, and it has high accuracy and good repeatability. The built-in temperature sensor makes the product has the function of professional temperature compensation calibration. At the same time, the output is linear analog voltage which is convenient to use.

Features

- Latest MEMS Sensor chip technology
- High accuracy, quick response, good repeatability
- Detection micro flow accurately
- It is calibrated completely and temperature compensated.

Main Applications

- Medical oxygen supply
- Combustion control
- Portable detector

Technical Parameters

Model	F1032			
Measuring Range ^①	20、35、50、100、150、200 SLM ^②			
	Min	Typical	Max	Unit
Full Scale Output	4.90	5.00	5.10	V
Zero Output	0.96	1.00	1.04	V
Output Impedance	-	200	-	Ω
Working Voltage	7.0	10.0	14.0	V
Working Current	15	25	30	mA
Accuracy	-	±1.5	±2.5	%F.S
Repeatability	-	±0.3	±0.5	%F.S
Annual Drift ^③	-	±0.1	±0.5	%F.S
Pressure range ^④	-	-	600	kPa
Response Time	5	10	15	ms
Working Tem. ^⑤	-25		65	°C
Storage Tem.	-40		90	°C

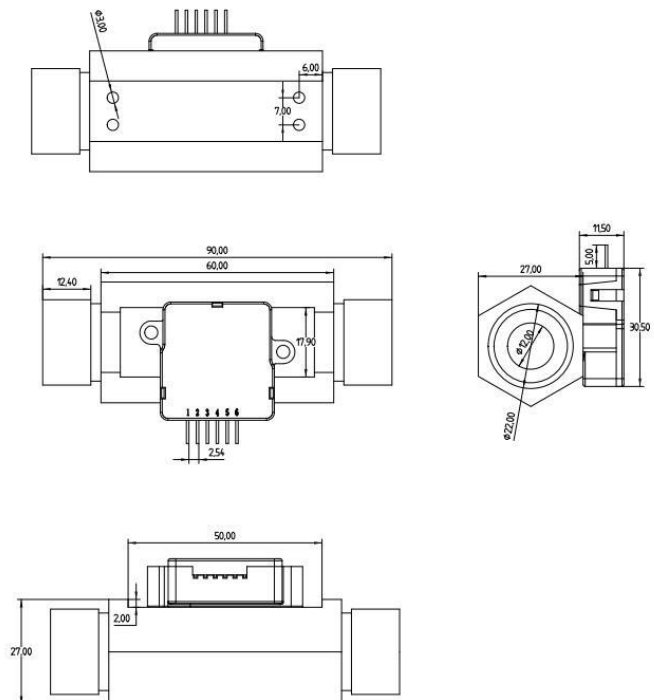


Fig1.Sensor Structure

Pin	Function
1	NC
2	NC
3	GND
4	VCC
5	OUT
6	NC

Fig2. Pin Definition

Note:

- ① The measuring range within 20-200SLM is available and regular measuring ranges such as 20、30、50、100、150、200SLM. Customized fee will be charged for other ranges.
- ② SLM means standard liter per minute. Standard-state: gas temperature is 0°C and pressure is 101.325 kPa.
- ③ The testing environment is room temperature and clear air.
- ④ The pressure range of 0.8 MPa can be customized.
- ⑤ The temperature compensation is for the tem. range of 0-50°C and the compensation performance can't be ensured beyond the temperature range.

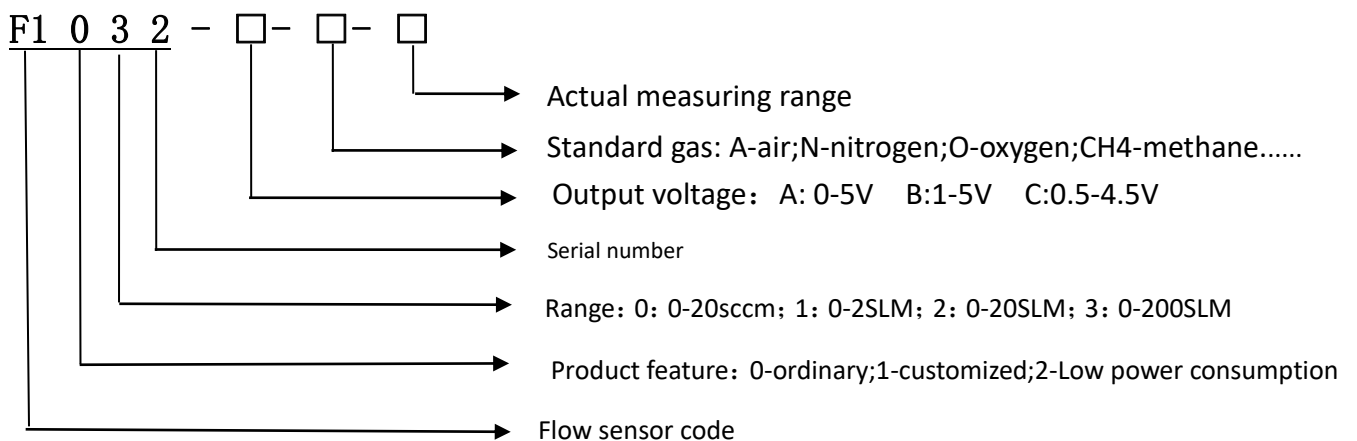
Calculation for Airflow

Actual flow=full scale * (sensor actual output voltage-zero output voltage) / (full scale output voltage-zero output voltage)

For example: the sensor full scale is 100 SLM, the sensor output voltage is 1V~5V, and the actual output is 2.5V.

Then the actual flow=100 SLM * (2.5V - 1V)/(5V- 1V) = 37.5SLM

Naming Rule



Cautions

1. Prohibit to use it in strong corrosive gas, toxic gas, explosive gas environment.
2. If measured gas medium contains dirt, the sensor's lifespan will be shorten. We suggest users equip the sensor flow inlet with 5 micrometer precise filter.
3. The sensitivity of the product will reduce or be damaged if it contacts to water.
4. The wrong connecting of power supply will damage the internal circuit.

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