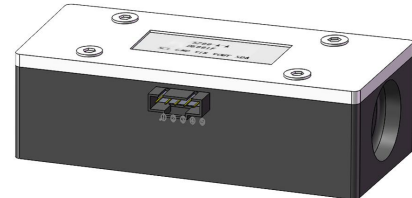


## XGZF5000 AIR FLOW SENSOR

### FEATURES

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- High sensitivity, wide flow range measurement
- Internal temperature compensation calibration
- High accuracy, high resolution
- Reliable quality, stable performance, low cost
- The latest generation of MEMS chip technology
- Linear output (Analog or Digital)
- Fast response time
- Resistant to condensated water



### APPLICATIONS

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- Portbale Ventilator, Household Oxygen Generator
- CPAP Device
- Anesthesia for childbirth
- Critical care equipment
- HVAC
- Air purifier
- Environmental climate monitoring
- Fuel cell control and
- More applications for air flow control and measurement

### INTRODUCTION

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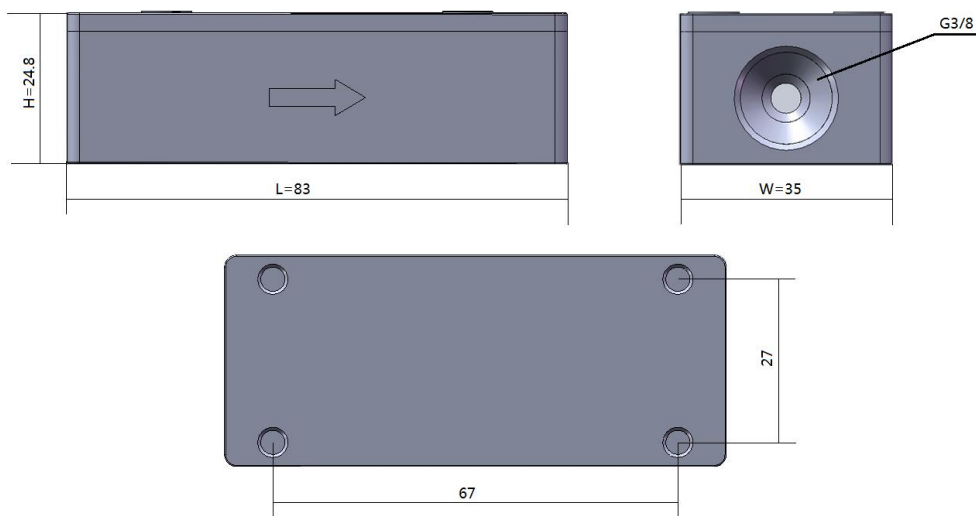
The XGZF5000 series adopts micro-electromechanical system (MEMS) flow sensor chip technology and thermodynamic principles to measure the flow of gaseous media in the flow channel. Reasonable flow channel design to make the pressures stable; it provides high-precision, fast response processing circuit, as well as MEMS integrated circuit + special calibration circuit that can process the internal temperature compensation and calibration. It can accurately obtain accurate, real-time and effective flow signals to ensure the high stability and reliability of the product.

## ELECTRONIC PERFORMANCE

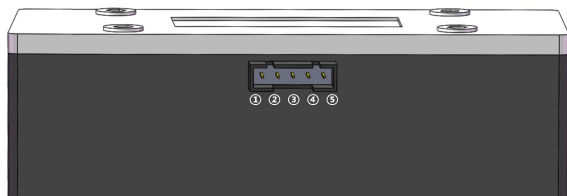
Unless otherwise specified, measurements were taken with a supply voltage of ( 8 ~ 24 ) VDC (Default: 12 VDC) Vdc at a temperature of 25±1°C and humidity ranging from 40 % ~60 % RH

Specifications	Min.	Typ.	Max	Unit
Analog output	1	-	5	V
Digital output	6554	-	57015	
Accuracy	-	±1.5	-	%FS
Offset drift	-	0.02	-	%FS
Resolution	-	0.1	-	%FS
Range	20/50/100/150/200/300-			SLM
FS output	4.95	5	5.05	V
Offset output	0.95	1	1.05	V
Working voltage	8	12	24	V
Media temp.	-10	-	65	°C
Working temp.	-25	-	85	°C
Mechanical Interface	G3/8			
Electronic Interface	2.54mm PIN			
Materials	Aluminum alloy(stainless steel is custom material)			°C

## DIMENSION (Unit:mm)



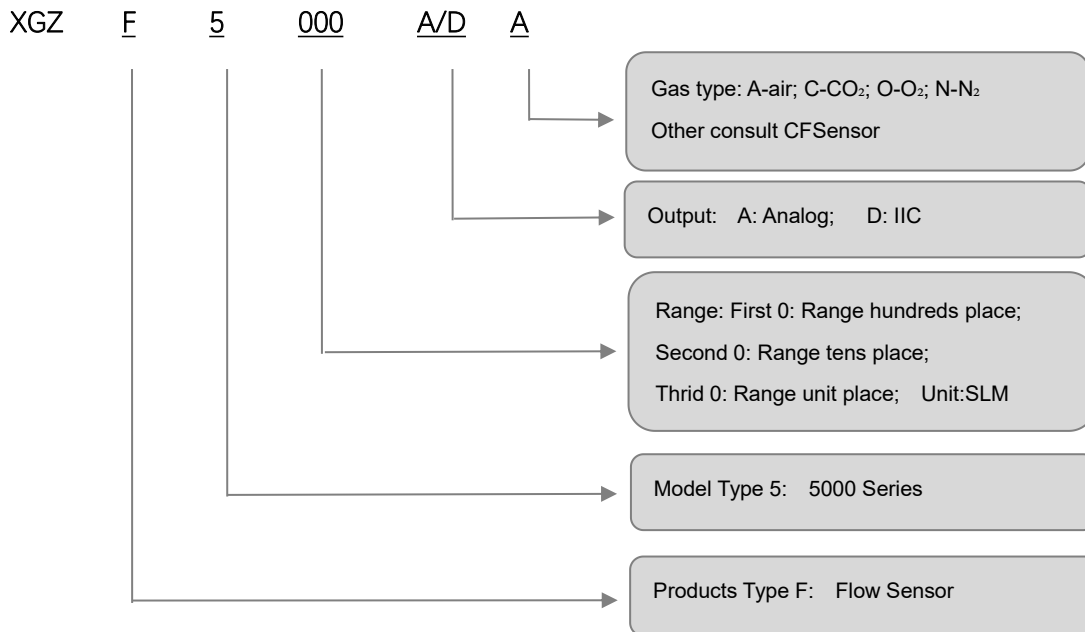
## PIN CONNECTION&DEFINITION



2.54mm 5 Pin Dubond Latch Connector

Analog output PIN&Colour Definition				
1	2	3	4	5
NC	GND	VIN	Vout	NC
NC	Black	Red	Yellow	NC

## ORDER GUIDE



Test Condition: VIN=12±0.01VDC, Ta=25°C; RH: 40%<RH<60% Max. Working Temp. Range: -25°C to +85°C		
P/N	Range	Unit
XGZF5020A	0-20	SLM
XGZF5050A	0-50	SLM
XGZF5100A	0-100	SLM
XGZF5150A	0-150	SLM
XGZF5200A	0-200	SLM
XGZF5300A	0-300	SLM
Remark	I2C and Other range are availale	

1. Customizable range between 0 ~ 300 SLM
2. SCCM: Standard millilitre per minute. Standard conditions: 20°C, 101.325 KPa
3. Customized two-way airflow, analog output, F(min)—F(max) corresponds 1-5 V output, and 0 flow corresponds to 3V
4. If you need to order digital output products, replace the selection "A" with "D"

1. Unidirectional(One-way) airflow method: (calculation formula)

XGZF5200-A-A

Flow rate= $[(V_{out} - 1 V)/4 V] \times \text{full scale flow rate}$

For example: XGZF5203-A-A, when reading the output voltage 2.5V,

The instantaneous flow rate is  $[(2.5V - 1V)/4V \times 2000\text{SCCM}] = 750 \text{ SCCM}$

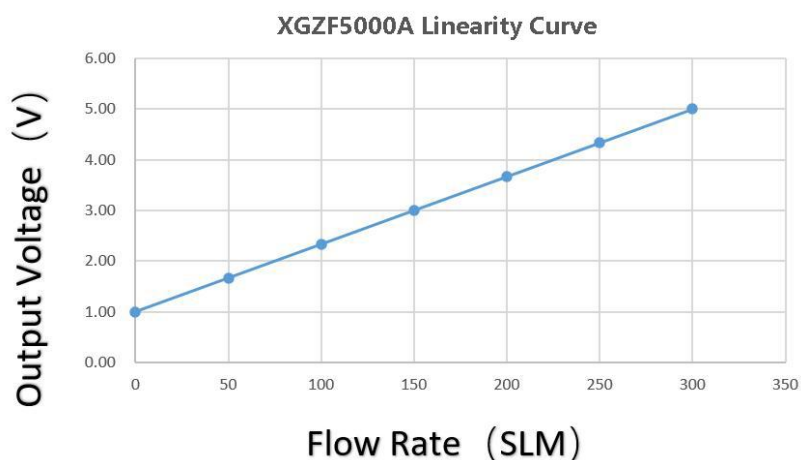
2. Bidirectional(Two-way) airflow mode:

(calculation formula)

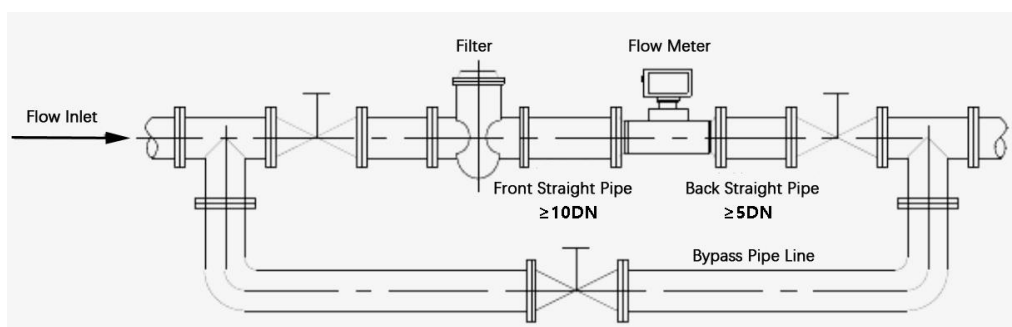
Forward flow= $[(V_{out} - 3V)/2 V] \times \text{full scale flow}$

Reverse flow= $[(3 V - V_{out})/2 V] \times \text{full scale flow}$

## OUTPUT CRUVE



## INSTALLATION NOTES



For XGZF5000 series installation, the pipe length is recommended to be the first ten and the last five, that is, the length of the inlet pipe is ten times of the product diameter, and the length of the outlet pipe is five times the diameter; the product is installed concentrically, which is reliable and firm; the airflow direction is consistent with the direction of the product; the product pin The connection needs to correspond to the product pin definition, and ensure that it works correctly after powering on. As shown above:.

## OPERATION NOTES

1. The product can be used normally only when it is suitable for the environment defined in this specification
2. Pay attention to the gas flow direction sign during installation, and the connection and leak detection should be carried out in accordance with the corresponding regulations.
3. During the use of the product, it is prohibited to install pipelines, clean pipelines or other improper operations that introduce a large amount of impurities at the same time; it may cause damage to the product.
4. If the gas medium contains water vapor and impurities, it may cause the sensor's sensitivity characteristics to decrease or damage.
5. Pay attention to the positive and negative poles of the power supply. If the positive and negative poles are connected reversely, the internal circuit of the sensor will be burned out and the normal use of the product will be affected.

### 【 SAFETY NOTES 】

Using these sensors products may malfunction due to external interference and surges, therefore, please confirm the performance and quality in actual use. Just in case, please make a safety design on the device (fuse, circuit breaker, such as the installation of protection circuits, multiple devices, etc.), so it would not harm life, body, property, etc even a malfunction occurs.

To prevent injuries and accidents, please be sure to observe the following items:

- The driving current and voltage should be used below the rated value.
- Please follow the terminal connection diagram for wiring. Especially for the reverse connection of the power supply, it will cause an accident due to circuit damage such as heat, smoke, fire, etc.
- In order to ensure safety, especially for important uses, please be sure to consider double safety circuit configuration.
- Do not apply pressure above the maximum applied pressure. In addition, please be careful not to mix foreign matter into the pressure medium. Otherwise, the sensor will be discarded, or the media will blow out and cause an accident.
- Be careful when fixing the product and connecting the pressure inlet. Otherwise, accidents may occur due to sensor scattering and the blowing out of the media.
- Because the sensor PIN is sharp, please be careful not to hurt your body when using it.

### 【 WARRANTY 】

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