



Recorder



Flow



Pressure



Temp



Analyzer



Level

Datasheet

Micro Gas Mass Flow Meter

SIN-FTM200

Sinomeasure

Committed to process automation solutions

Tel: 86-13336194863

E-mail: info@sinomeasure.com

www.sino-measure.com

Datasheet**Micro Gas Mass Flow Meter
SIN-FTM200**

The micro gas mass flow meter is an electronic instrument designed for precise measurement of gas velocity and cumulative flow across various applications. Engineered for industrial environments, the device incorporates multiple anti-interference measures and a highly compatible design. It supports multiple signal outputs and enables network management via communication interfaces. With its compact size, lightweight structure, and high measurement accuracy, the meter offers exceptional performance, ease of installation, and reliable operation. It is widely applicable in fields such as medical equipment, oil and gas, chemical, and energy industries for diverse gas monitoring requirements.

Features

- Simplified structure, compact design, and lightweight construction.
- Developed using microelectronic system chip technology combined with large-scale integrated circuit manufacturing, enabling significant downsizing of the sensor and greatly enhancing measurement accuracy.
- Integration of multiple sensors on a single chip, significantly expanding the measurement range ratio.
- Real-time zero-point monitoring and adjustment of the sensor, offering superior stability and responsiveness compared with conventional detection systems.
- Equipped with an LCD display for clear and intuitive readings, with a screen that can be rotated 180°.
- Multiple output options available to meet the requirements of different application scenarios.

**Micro Gas Mass Flow Meter**

Principle

The flow meter is equipped with two temperature sensors installed within the measurement section. One temperature sensor measures the actual fluid temperature, while the other—an electrically heated Pt100 resistance element—is maintained at a constant temperature differential relative to the process. The heated resistor adjusts its temperature by regulating the current supplied to the heating element. As the mass flow of the medium increases, the cooling effect intensifies, requiring greater current to maintain a constant temperature difference. By monitoring the current through the heating element, the mass flow rate of the medium can be precisely determined.

Parameters					
Input					
Specification	20	60	100	200	300
Measured Variables	Mass Flow				
Flow Range	0.2~20	0.6~60	1~100	2~200	3~300
Wide Turndown Ratio	1:100				
Output					
Transmitter Output	(4~20) mA output, load resistance ≤650 Ω				
Communication Output	RS485 Interface, MODBUS Communication Protocol				
Pulse Output	Pulse width: 2 ms, passive output, external voltage ≤ 30 VDC				
Alarm Output	Single channel				
Power Supply					
Power Supply Input	(9–24) VDC Note: When using (4–20) mA current output, 24 VDC supply is required.				
Power Consumption	≤2VA				
Electrical Interface	GX16-7 Aviation Connector				
Performance Parameters					
Accuracy	±1.5%FS				
Repeatability	0.5%				
Instantaneous Flow Resolution	< 100 L/min: resolution 0.01 ≥ 100 L/min: resolution 0.1				
Process Conditions					
Medium Type	Air, Oxygen (O ₂), Nitrogen (N ₂), Argon (Ar), Carbon Dioxide (CO ₂), Carbon Monoxide (CO)				
Process Pressure	≤1MPa				
Pressure Loss	≤600Pa	≤1000Pa	≤1000Pa	≤2000Pa	≤2000Pa
Environmental Conditions					
Operating Temperature	-10℃~55℃				
Operating Humidity	≤80%RH（No icing, no condensation）				
Storage Temperature	-25℃~80℃				
Protection Rating	IP52				
Construction					
Material	Housing: Aluminum alloy Base: 304 stainless steel				
Weight	750g				

Wiring

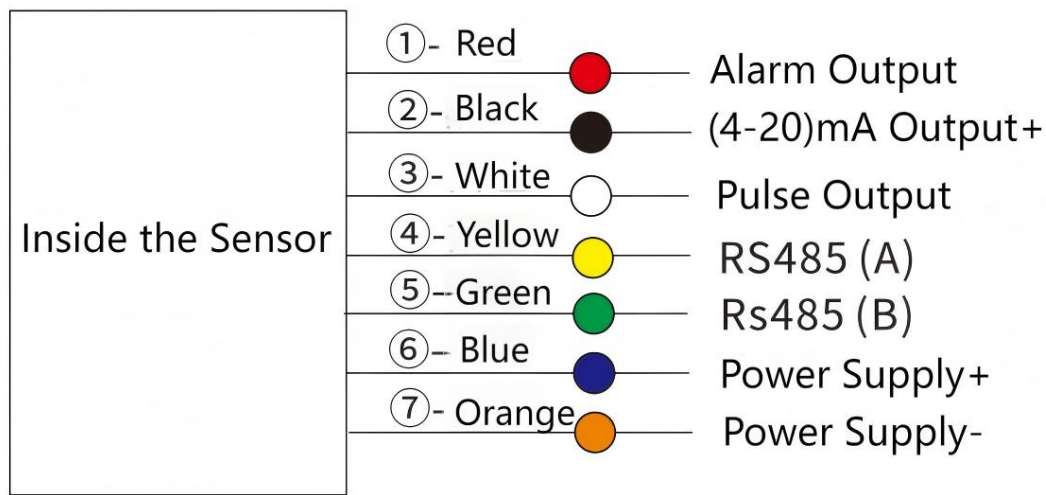
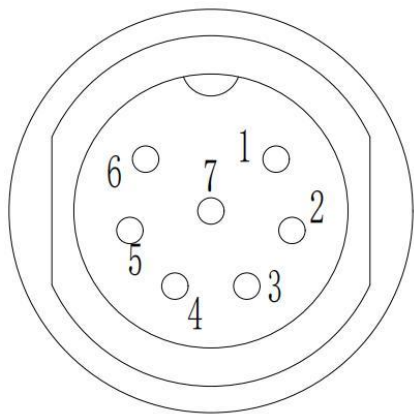


Figure 1 Cable Diagram

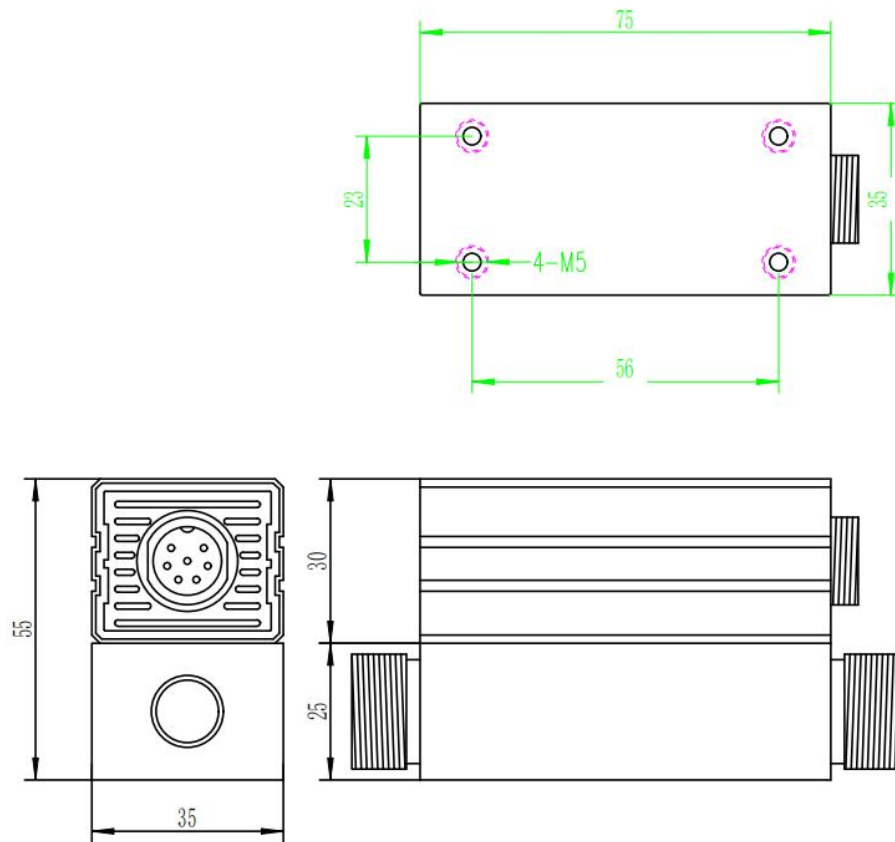
Dimension

Figure 2 Outline Dimensions of Micro Gas Mass Flow Meter (unit: mm)

Ordering Code

SIN-FTM200-1-M-1-BM-J1-6							Description
SIN-FTM200	-	-	-	-	-	-	
Measuring Range	1						0.2-20L/min
	2						0.6-60L/min
	3						1-100L/min
	4						2-200L/min
	5						3-300L/min
	X						Others
Accuracy		M					1.5 Class
Display Type			1				Available
Output and Power Supply				BM			4-20mA+Pulse + RS485 + Flow Over-limit Alarm, 24VDC
Process Connection					J1		JB/T 7056 Φ 6mm Quick Connector, Nickel-plated Brass
					J2		JB/T 7056 Φ 8mm Quick Connector, Nickel-plated Brass
					J3		JB/T 7056 Φ 10mm Quick Connector, Nickel-plated Brass
					J4		JB/T 7056 Φ 12mm Quick Connector, Nickel-plated Brass
					J5		M22*1.5, 304SS
					J6		G1/2, 304SS
					XX		Others
Housing Material and Protection Rating						6	Aluminum Alloy, IP52