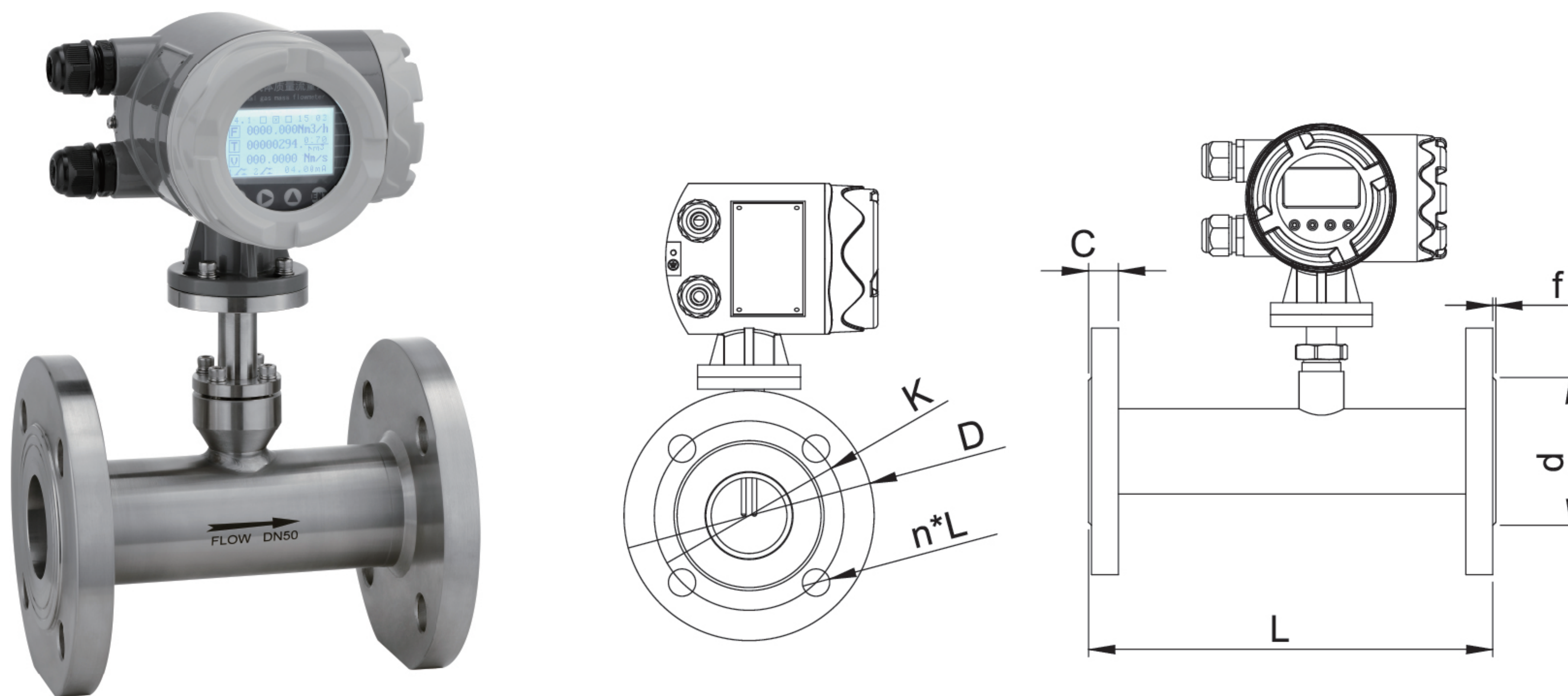


# The Series KF100 Thermal Gas Mass Flowmeter

From DN15 to DN3000, used for various industrial applications



The Series KF100 Thermal Gas Mass Flowmeter operates on the principle of thermal diffusion, determining the mass flow rate by measuring the heat transfer relationship between the fluid and a heat source. Its core components include two temperature sensors and a heating element: the reference sensor measures the fluid temperature, while the measurement sensor is heated to a constant temperature difference above the fluid temperature. When gas flows, the heat carried away is proportional to the mass flow rate; changes in heating power or temperature difference are converted into electrical signals, which are then used to calculate the mass flow rate. Thermal flow meters can directly measure mass flow without requiring temperature and pressure compensation, offering fast response and a wide measurement range. They are suitable for low-velocity and small-flow gas measurements and are widely used in various application fields such as industrial process control, environmental monitoring, and medical equipment.

## FEATURES

- Directly measures gas mass flow without requiring temperature and pressure compensation
- Wide measurement range with a turndown ratio of up to 100:1
- Stable operation at low flow velocities (e.g., 0.05 m/s)
- Fast response time for real-time tracking of flow changes
- High accuracy of  $\pm 1.5\%$
- Simple structure, minimal pressure loss, easy installation and maintenance
- Excellent repeatability and stability with strong anti-interference capability
- Capable of measuring various gases, including certain corrosive gases

## APPLICATIONS

- Semiconductor industry
- Chemical industry
- Pharmaceutical industry
- Food and beverage industry
- Electronics industry
- Environmental protection industry
- Energy industry
- Scientific research field

## SPECIFICATIONS

<b>Service</b>	Gases compatible with the selected material
<b>Wetted Material</b>	304 or 316 Stainless Steel
<b>Housing Material</b>	Die-cast aluminum
<b>Accuracy</b>	$\pm 1.5\%RS$
<b>Repeatability</b>	$\pm 0.2\%$
<b>Flow Velocity Range</b>	0.05m/s - 100m/s
<b>Pressure Rating</b>	Flange: optional 1.6, 2.5, or 4MPa, Insertion: 1.6MPa
<b>Temperature Rating</b>	-10°C to 200 °C
<b>Power Supply</b>	220V AC or 24V DC
<b>Output</b>	4-20mA + pulse + RS485
<b>Display</b>	16 digits*4 lines
<b>Switch Output</b>	2 Relays, 3A/250V AC, 3A/30V DC
<b>Enclosure Rating</b>	IP65
<b>Electrical Connections</b>	M20*1 5

# The Series KF100 Thermal Gas Mass Flowmeter

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MODEL CHART							
Example	KF100	-FA	-15	-N	-1	-1	-D
<b>Series</b>	KF100						Thermal Gas Mass Flowmeter
<b>Structure</b>		FA					Flange Type
		CA					Insertion Type
<b>Pipe Size</b>			15				DN15, Flange Type, flow range: 0.2Nm <sup>3</sup> /h - 20Nm <sup>3</sup> /h, D=95mm, L=200mm
			20				DN20, Flange Type, flow range: 0.5Nm <sup>3</sup> /h - 50Nm <sup>3</sup> /h, D=105mm, L=200mm
			25				DN25, Flange Type, flow range: 1Nm <sup>3</sup> /h - 100Nm <sup>3</sup> /h, D=115mm, L=200mm
			32				DN32, Flange Type, flow range: 1.5Nm <sup>3</sup> /h - 150Nm <sup>3</sup> /h, D=140mm, L=200mm
			40				DN40, Flange Type, flow range: 2Nm <sup>3</sup> /h - 200Nm <sup>3</sup> /h, D=150mm, L=200mm
			50				DN50, Flange Type, flow range: 4Nm <sup>3</sup> /h - 400Nm <sup>3</sup> /h, D=165mm, L=200mm
			65				DN65, Flange Type, flow range: 6.5Nm <sup>3</sup> /h - 650Nm <sup>3</sup> /h, D=185mm, L=220mm
			80				DN80, Flange Type, flow range: 10Nm <sup>3</sup> /h - 1000Nm <sup>3</sup> /h, D=200mm, L=220mm
			100				DN100, Flange Type, flow range: 15Nm <sup>3</sup> /h - 1500Nm <sup>3</sup> /h, D=220mm, L=220mm
			125				DN125, Insertion Type, flow range: 25Nm <sup>3</sup> /h - 2500Nm <sup>3</sup> /h
			150				DN150, Insertion Type, flow range: 35Nm <sup>3</sup> /h - 3500Nm <sup>3</sup> /h
			200				DN200, Insertion Type, flow range: 65Nm <sup>3</sup> /h - 6500Nm <sup>3</sup> /h
			250				DN250, Insertion Type, flow range: 100Nm <sup>3</sup> /h - 10000Nm <sup>3</sup> /h
			300				DN300, Insertion Type, flow range: 150Nm <sup>3</sup> /h - 15000Nm <sup>3</sup> /h
			350				DN350, Insertion Type, flow range: 200Nm <sup>3</sup> /h - 20000Nm <sup>3</sup> /h
			450				DN450, Insertion Type, flow range: 320Nm <sup>3</sup> /h - 32000Nm <sup>3</sup> /h
			500				DN500, Insertion Type, flow range: 400Nm <sup>3</sup> /h - 40000Nm <sup>3</sup> /h
			550				DN550, Insertion Type, flow range: 480Nm <sup>3</sup> /h - 48000Nm <sup>3</sup> /h
			600				DN600, Insertion Type, flow range: 560Nm <sup>3</sup> /h - 56000Nm <sup>3</sup> /h
			650				DN650, Insertion Type, flow range: 680Nm <sup>3</sup> /h - 68000Nm <sup>3</sup> /h
			700				DN700, Insertion Type, flow range: 780Nm <sup>3</sup> /h - 78000Nm <sup>3</sup> /h
			800				DN800, Insertion Type, flow range: 1000Nm <sup>3</sup> /h - 100000Nm <sup>3</sup> /h
			900				DN900, Insertion Type, flow range: 1300Nm <sup>3</sup> /h - 130000Nm <sup>3</sup> /h
			1000				DN1000, Insertion Type, flow range: 1600Nm <sup>3</sup> /h - 160000Nm <sup>3</sup> /h
			1100				DN1100, Insertion Type, flow range: 1950Nm <sup>3</sup> /h - 195000Nm <sup>3</sup> /h
			1200				DN1200, Insertion Type, flow range: 2280Nm <sup>3</sup> /h - 228000Nm <sup>3</sup> /h
			1300				DN1300, Insertion Type, flow range: 2680Nm <sup>3</sup> /h - 268000Nm <sup>3</sup> /h
		1400				DN1400, Insertion Type, flow range: 3100Nm <sup>3</sup> /h - 310000Nm <sup>3</sup> /h	
		1500				DN1500, Insertion Type, flow range: 3560Nm <sup>3</sup> /h - 356000Nm <sup>3</sup> /h	
		1600				DN1600, Insertion Type, flow range: 4050Nm <sup>3</sup> /h - 405000Nm <sup>3</sup> /h	
		1700				DN1700, Insertion Type, flow range: 4560Nm <sup>3</sup> /h - 456000Nm <sup>3</sup> /h	
		1800				DN1800, Insertion Type, flow range: 5150Nm <sup>3</sup> /h - 515000Nm <sup>3</sup> /h	
		1900				DN1900, Insertion Type, flow range: 5750Nm <sup>3</sup> /h - 575000Nm <sup>3</sup> /h	
		2000				DN2000, Insertion Type, flow range: 6350Nm <sup>3</sup> /h - 635000Nm <sup>3</sup> /h	
		2500				DN2500, Insertion Type, flow range: 9500Nm <sup>3</sup> /h - 950000Nm <sup>3</sup> /h	
		3000				DN3000, Insertion Type, flow range: 14000Nm <sup>3</sup> /h - 1400000Nm <sup>3</sup> /h	
<b>Medium type</b>				N			Gas: -10°C to 100°C
				H			High temperature gas: -10°C to 200°C
<b>Output</b>					1		4-20mA + Pulse
					2		4-20mA + Pulse + RS485
					3		4-20mA + Pulse + Alarm output
<b>Pressure Rating</b>						1	1.6MPa (Flange Type, Insertion Type)
						2	2.5MPa (Flange Type)
						3	4.0MPa (Flange Type)
<b>Material</b>						1	304 Stainless Steel
						2	316 Stainless Steel
<b>Power Supply</b>						D	24V DC
						A	220V AC
<b>Note</b>	DN50, DN65, DN80, DN100 optional Insertion Type						