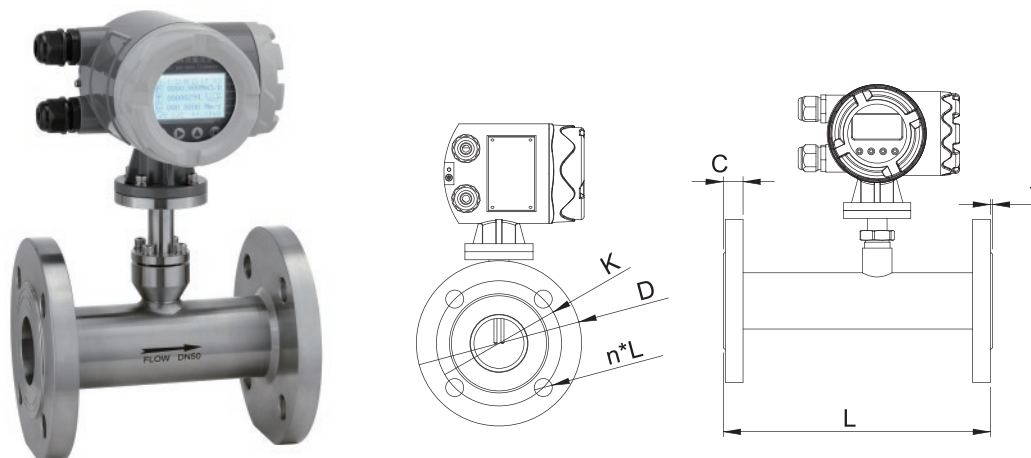


The Series KF100 Thermal Gas Mass Flowmeter

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

Service	Gases compatible with the selected material
Wetted Material	304 or 316 Stainless Steel
Housing Material	Die-cast aluminum
Accuracy	$\pm 1.5\%$ FS
Repeatability	$\pm 0.5\%$
Flow Velocity Range	0.05m/s - 100m/s
Pressure Rating	Flange: optional 1.6, 2.5, or 4MPa, Insertion: 1.6MPa
Temperature Rating	-10°C to 200°C
Power Supply	220V AC or 24V DC
Output	4-20mA + pulse + RS485
Display	16 digits*4 lines
Switch Output	2 Relays, 3A/250V AC, 3A/30V DC
Enclosure Rating	IP65
Electrical Connections	M20*1 5

The Series KF100

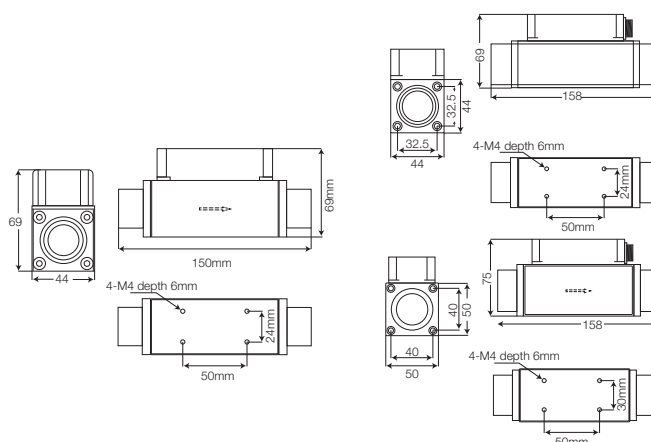
Thermal Gas Mass Flowmeter

From DN15 to DN3000, used for various industrial applications

MODEL CHART								
Example	KF100	-FA	-15	-N	-1	-1	-1	-D
Series	KF100							Thermal Gas Mass Flowmeter
Structure		FA						Flange Type
		CA						Insertion Type
Pipe Size			15					DN15, Flange Type, flow range: 0.2Nm³/h - 20Nm³/h, D=95mm, L=200mm
			20					DN20, Flange Type, flow range: 0.5Nm³/h - 50Nm³/h, D=105mm, L=200mm
			25					DN25, Flange Type, flow range: 1Nm³/h - 100Nm³/h, D=115mm, L=200mm
			32					DN32, Flange Type, flow range: 1.5Nm³/h - 150Nm³/h, D=140mm, L=200mm
			40					DN40, Flange Type, flow range: 2Nm³/h - 200Nm³/h, D=150mm, L=200mm
			50					DN50, Flange Type or Insertion Type, flow range: 4Nm³/h - 400Nm³/h, D=165mm, L=200mm
			65					DN65, Flange Type or Insertion Type, flow range: 6.5Nm³/h - 650Nm³/h, D=185mm, L=220mm
			80					DN80, Flange Type or Insertion Type, flow range: 10Nm³/h - 1000Nm³/h, D=200mm, L=220mm
			100					DN100, Flange Type or Insertion Type, flow range: 15Nm³/h - 1500Nm³/h, D=220mm, L=220mm
			125					DN125, Insertion Type, flow range: 25Nm³/h - 2500Nm³/h
			150					DN150, Insertion Type, flow range: 35Nm³/h - 3500Nm³/h
			200					DN200, Insertion Type, flow range: 65Nm³/h - 6500Nm³/h
			250					DN250, Insertion Type, flow range: 100Nm³/h - 10000Nm³/h
			300					DN300, Insertion Type, flow range: 150Nm³/h - 15000Nm³/h
			350					DN350, Insertion Type, flow range: 200Nm³/h - 20000Nm³/h
			450					DN450, Insertion Type, flow range: 320Nm³/h - 32000Nm³/h
			500					DN500, Insertion Type, flow range: 400Nm³/h - 40000Nm³/h
			550					DN550, Insertion Type, flow range: 480Nm³/h - 48000Nm³/h
			600					DN600, Insertion Type, flow range: 560Nm³/h - 56000Nm³/h
			650					DN650, Insertion Type, flow range: 680Nm³/h - 68000Nm³/h
			700					DN700, Insertion Type, flow range: 780Nm³/h - 78000Nm³/h
			800					DN800, Insertion Type, flow range: 1000Nm³/h - 100000Nm³/h
			900					DN900, Insertion Type, flow range: 1300Nm³/h - 130000Nm³/h
			1000					DN1000, Insertion Type, flow range: 1600Nm³/h - 160000Nm³/h
			1100					DN1100, Insertion Type, flow range: 1950Nm³/h - 195000Nm³/h
			1200					DN1200, Insertion Type, flow range: 2280Nm³/h - 228000Nm³/h
			1300					DN1300, Insertion Type, flow range: 2680Nm³/h - 268000Nm³/h
			1400					DN1400, Insertion Type, flow range: 3100Nm³/h - 310000Nm³/h
			1500					DN1500, Insertion Type, flow range: 3560Nm³/h - 356000Nm³/h
			1600					DN1600, Insertion Type, flow range: 4050Nm³/h - 405000Nm³/h
			1700					DN1700, Insertion Type, flow range: 4560Nm³/h - 456000Nm³/h
			1800					DN1800, Insertion Type, flow range: 5150Nm³/h - 515000Nm³/h
			1900					DN1900, Insertion Type, flow range: 5750Nm³/h - 575000Nm³/h
			2000					DN2000, Insertion Type, flow range: 6350Nm³/h - 635000Nm³/h
			2500					DN2500, Insertion Type, flow range: 9500Nm³/h - 950000Nm³/h
			3000					DN3000, Insertion Type, flow range: 14000Nm³/h - 1400000Nm³/h
Medium type				N				Gas: -10°C to 100°C
				H				High temperature gas: -10°C to 200°C
Output					1			4-20mA + Pulse
					2			4-20mA + Pulse + RS485
					3			4-20mA + Pulse + Alarm output
Pressure Rating						1		1.6MPa (Flange Type, Insertion Type)
						2		2.5MPa (Flange Type)
						3		4.0MPa (Flange Type)
Material							1	304 Stainless Steel
							2	316 Stainless Steel
Power Supply							D	24V DC
							A	220V AC
Note	Optional thread connection or clamp connection							

The Series KF130 Thermal Gas Mass Flowmeter

The display orientation can be set to 0°, 90°, 180°, or 270°, with multiple configurations.



The Series KF130 Thermal Gas Mass Flowmeter is equipped with a MEMS sensor. Leveraging its miniaturization and high-sensitivity characteristics, it achieves millisecond-level rapid response to capture transient changes in gas flow accurately. It exhibits outstanding zero-point stability, ensuring high-precision measurement even under complex operating conditions, with minimal repeatability error for reliable data. The device features an extensive turndown ratio, offering multiple flow range options to suit diverse application scenarios. Its display design offers flexible viewing angles (0°, 90°, 180°, 270°) for optimal readability across various installation environments. Supporting multiple signal output methods, it meets diverse system integration requirements. Additionally, it comes with a standard thread for quick connection to pipelines and equipment, ensuring convenient and efficient installation.

FEATURES

- Utilizes MEMS sensors with fast response time
- Stable zero point, high accuracy, and excellent repeatability
- Wide turndown ratio with selectable flow ranges
- Selectable display orientation (0°, 90°, 180°, 270°)
- Multiple signal output options available
- Optional standard threads

APPLICATIONS

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

SPECIFICATIONS

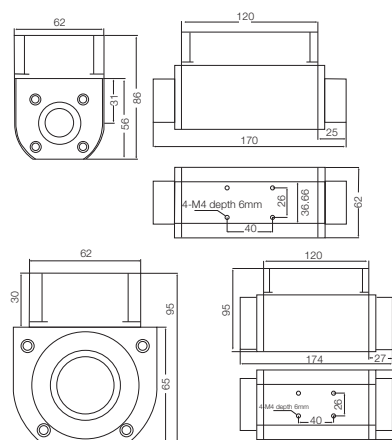
Accuracy	±(2.0+0.2FS)%
Power Supply	15-24V DC/100mA
Response Time	50 ms - 1000 ms
Output	4-20mA or RS485
Zero Drift	±20mV
Display	Instantaneous flow, cumulative flow
Temperature Rating	-10°C to 55°C
Humidity Limit	Humidity: <95%RH, non-condensing
Storage Temperature	-10°C to 65°C
Communication	RS485 (Modbus RTU)
Pressure Rating	≤1.6MPa
Calibration Medium	Air 20°C, 101.325kPa

MODEL CHART

Example	KF130	-10	-L0200	-GW1	-A	-AIR	-P0	
Series	KF130							Thermal Gas Mass Flowmeter
Pipe Size		10						DN10, Flow Range: 2.8 L/min -280 L/min
		15						DN15, Flow Range: 6 L/min -600 L/min
		20						DN20, Flow Range: 10 L/min -1000 L/min
		25						DN25, Flow Range: 15 L/min -1500 L/min
Max Flow			Lxxxx					L0200 means 200L/min, L1500 means 1500L/min
Process Connection				GW1				3/8" BSP male (DN10)
				GW2				1/2" BSP male (DN15)
				GW3				3/4" BSP male (DN20)
				GN1				3/8" BSP female (DN10)
				GN2				1/2" BSP female (DN15)
				GN3				3/4" BSP female (DN20)
				NW1				3/8" NPT male (DN10) custom-made
				NW2				1/2" NPT male (DN15) custom-made
Output					A			4-20mA
					R			RS485
Medium Type						AIR		Air (default)
						N2		Nitrogen
						O2		Oxygen
						CO2		Carbon dioxide
						MG		Other mixed gases
Pressure Rating						P0		≤1.6MPa (default)
						P1		Customized other pressure ratings
Note	All flow measurement ranges are data based on air.							

The Series KF140 Thermal Gas Mass Flowmeter

Stable zero point, high accuracy, and excellent repeatability



The Series KF140 Thermal Gas Mass Flowmeter is equipped with a MEMS sensor, leveraging their miniaturization and high sensitivity characteristics, to achieve millisecond-level rapid response to capture transient changes in gas flow accurately. It features excellent zero-point stability, maintaining high-precision measurements even under complex operating conditions with minimal repeatability error for reliable data. The device offers a wide turndown ratio and multiple selectable flow ranges to adapt to diverse application requirements. Supporting various signal output methods to meet different system integration needs, it also comes equipped with a standard thread for quick connection with pipelines and equipment, ensuring convenient and efficient installation.

FEATURES

- Utilizes MEMS sensors with fast response time
- Stable zero point, high accuracy, and excellent repeatability
- Wide turndown ratio with selectable flow ranges
- Selectable display orientation (0°, 90°, 180°, 270°)
- Multiple signal output options available
- Optional standard threads

APPLICATIONS

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

SPECIFICATIONS

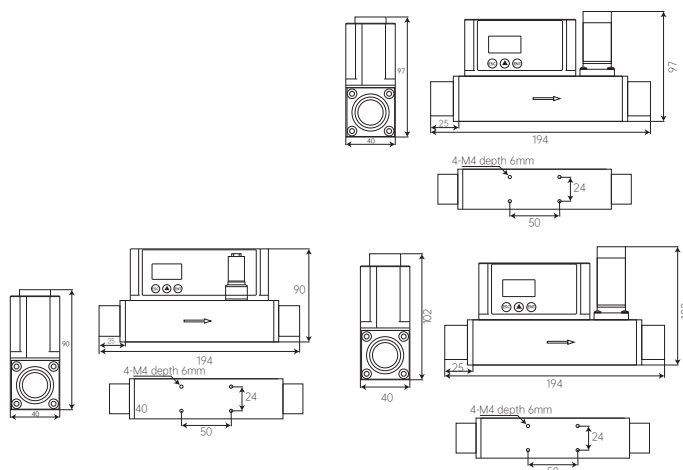
Accuracy	±(1.5+0.2FS)%
Power Supply	24V DC/1A
Response Time	1s - 5s
Output	4-20mA or RS485
Zero Drift	±20mV
Display	Instantaneous flow, cumulative flow
Temperature Rating	-10°C to 55°C
Humidity Limit	Humidity: <95%RH, non-condensing
Storage Temperature	-10°C to 65°C
Communication	RS485 (Modbus RTU)
Pressure Rating	≤1.6MPa
Calibration Medium	Air 20°C, 101.325kPa

MODEL CHART

Example	KF140	-15	-M050	-GN3	-N0	-AIR	-P0	
Series	KF140							Thermal Gas Mass Flowmeter
Pipe Size		15						DN15, Flow Range: 0.2Nm³/h - 18Nm³/h
		20						DN20, Flow Range: 0.6Nm³/h - 60Nm³/h
		25						DN25, Flow Range: 1Nm³/h - 100 Nm³/h
		32						DN32, Flow Range: 1.6Nm³/h - 160 Nm³/h
		40						DN40, Flow Range: 2.4Nm³/h - 240Nm³/h
Max Flow			Mxxx					M080 means 80Nm³/h, M200 means 200Nm³/h
Process Connection				GN1				1/2" female (DN15)
				GN3				3/4" female (DN20)
				GN4				1" female (DN25)
				GN5				1-1/4" female (DN32)
				GN6				1-1/2" female (DN40)
Output					N0			4-20mA + RS485 (Default)
					N1			4-20mA + 1-5V
					N2			4-20mA + Pulse + RS485
Medium Type						AIR		Air (default)
						N2		Nitrogen
						O2		Oxygen
						CO2		Carbon dioxide
						MG		Other mixed gases
Pressure Rating							P0	≤1.6MPa (default)
							P1	Customized other pressure ratings
Note	All flow measurement ranges are data based on air.							

The Series KF151 Thermal Gas Mass Flow Controller

Control range from 1-100 SCCM to 3-300 SLPM



The Series KF151 Thermal Gas Mass Flow Controller is based on the principle of thermal conductivity. Through built-in heating elements and temperature sensors, it detects the rate at which heat is carried away by flowing gas. Using constant temperature difference or thermal diffusion technology, it converts flow signals into electrical signals for precise control. It can directly measure mass flow without requiring temperature and pressure compensation. Its applications are extensive: in semiconductor manufacturing, it precisely controls process gas flow to ensure chip fabrication accuracy; in the chemical industry, it manages reactor feed to enhance production stability; additionally, it is suitable for medical equipment gas rationing, environmental monitoring gas analysis, and laboratory gas flow regulation. This device serves as a critical measurement and control instrument in industrial automation and scientific research fields.

FEATURES

- Utilizes MEMS sensors with fast response time
- Stable zero point, high accuracy, and excellent repeatability
- Wide turndown ratio with selectable flow ranges
- Selectable display orientation (0°, 90°, 180°, 270°)
- Multiple signal output options available
- Optional standard threads

APPLICATIONS

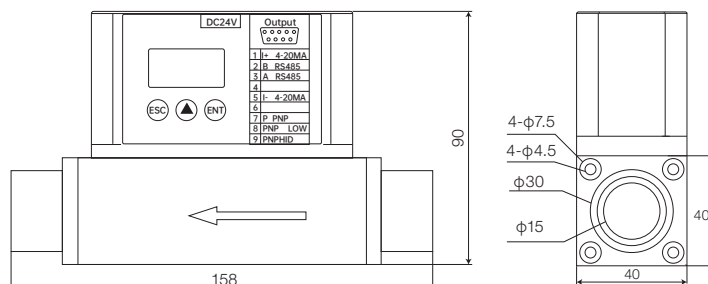
- Semiconductor industry
- Chemical industry
- Pharmaceutical industry
- Food and beverage industry
- Electronics industry
- Environmental protection industry
- Energy industry
- Scientific research field

SPECIFICATIONS	
Accuracy	±(1.5+0.2FS)%
Power Supply	24V DC/200mA
Response Time	1s - 5s
Output	4-20mA or RS485
Zero Drift	±20mV
Display	Instantaneous flow, cumulative flow
Temperature Rating	-10°C to 55°C
Humidity Limit	Humidity: <95%RH, non-condensing
Storage Temperature	-10°C to 65°C
Communication	RS485 (Modbus RTU)
Pressure Rating	≤1.0MPa
Calibration Medium	Air 20°C, 101.325kPa

MODEL CHART							
Example	KF151	-F0	-S0	-GN0	-P0	-NO	-AIR
Series	KF151						Thermal Gas Mass Flow Controller
Body Material		F0					Anodized aluminum
		F1					304 stainless steel
		F2					316 stainless steel
Flow Range			S0				1 SCCM~ 100 SCCM
			S1				5 SCCM~ 500 SCCM
			S2				10 SCCM~ 1000 SCCM
			S3				0.1 SLPM~ 10 SLPM
			S4				0.3 SLPM~ 30 SLPM
			S5				0.5 SLPM~ 50 SLPM
			S6				1 SLPM~ 100 SLPM
			S7				2 SLPM~ 200 SLPM
Process Connection			S8				3 SLPM~ 300 SLPM
				GN0			BSP 1/4" female thread
				PT2			PT 1/2" female thread
				NT			Special-made thread
Input					P0		4-20mA(default)
					P1		1-5V
					P2		RS485
Output						N0	4-20mA + RS485 (Default)
						N1	4-20mA + 1-5V
						N2	4-20mA + Pulse + RS485
Medium Type						AIR	Air (default)
						N2	Nitrogen
						O2	Oxygen
						CO2	Carbon dioxide
						MG	Other mixed gases
Note	All flow measurement ranges are data based on air.						

The Series KF152 Thermal Gas Mass Flowmeter

Range from 1 NmL/min - 100 NmL/min to 10 NmL/min - 1000 NL/min



The Series KF152 Thermal Gas Mass Flowmeter is equipped with a MEMS sensor, leveraging their miniaturization and high sensitivity characteristics, to achieve millisecond-level rapid response to capture transient changes in gas flow accurately. It features excellent zero-point stability, maintaining high-precision measurements even under complex operating conditions with minimal repeatability error for reliable data. The device offers a wide turndown ratio and multiple selectable flow ranges to adapt to diverse application requirements. Supporting various signal output methods to meet different system integration needs, it also comes equipped with a standard thread for quick connection with pipelines and equipment, ensuring convenient and efficient installation.

FEATURES

- Utilizes MEMS sensors with fast response time
- Stable zero point, high accuracy, and excellent repeatability
- Wide turndown ratio with selectable flow ranges
- Selectable display orientation (0°, 90°, 180°, 270°)
- Multiple signal output options available
- Optional standard threads

APPLICATIONS

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

SPECIFICATIONS

Accuracy	When $\leq 100\text{NL/min}$: $\pm(1.0+0.4\text{FS})\%$; When $> 100\text{NL/min}$: $\pm(1.5+0.2\text{FS})\%$
Power Supply	15-24V DC/100mA
Preheating Time	3minutes to 4 minutes
Response Time	50ms
Output	4-20mA or RS485
Zero Drift	$\pm 20\text{mV}$
Display	Instantaneous flow, cumulative flow
Temperature Rating	-10°C to 55°C
Humidity Limit	Humidity: $<95\%\text{RH}$, non-condensing
Storage Temperature	-10°C to 65°C
Communication	RS485 (Modbus RTU)
Pressure Rating	$\leq 1.0\text{MPa}$
Calibration Medium	Air 20°C , 101.325kPa

MODEL CHART

Example	KF152	-F0	-S0	-GN0	-NO	-AIR	
Series	KF152						Thermal Gas Mass Flow Controller
Body Material		F0					Anodized aluminum
		F1					304 stainless steel
		F2					316 stainless steel
Flow Range			S0				1 NmL/min ~ 100 NmL/min
			S1				1 NmL/min ~ 1000 NmL/min
			S2				1 NL/min ~ 100 NL/min
			S3				5 NL/min ~ 500 NL/min
			S4				10 NL/min ~ 1000 NL/min
			SN				Customizable range (measurement starts from 0.3 NmL/min)
Process Connection				GN0			BSP 1/4" female thread
				PT2			PT 1/2" female thread
				NT			Special-made thread
Output					NO		RS485 + 4-20mA (Default)
					N1		RS485 + PNP
					N2		RS485 + 1 - 5V
					N3		RS485 + 1 - 10V
Medium Type					AIR		Air (default)
					N2		Nitrogen
					O2		Oxygen
					CO2		Carbon dioxide
					MG		Other mixed gases
Note	All flow measurement ranges are data based on air.						