

Mini Flow Meter

For point of use applications

Key Features

- Inline flow meter
- Pipe Sizes:
 - NPT: DN3 to DN10
 - G thread: D10 to DN40
- For clean, dry compressed air and gases
- Accuracy: $\pm 1.5\%$ reading, $\pm 0.3\%$ full scale
- Digital display
- Power Supply: 24 vDC
- Two outputs as standard:
 - Digital - Modbus RTU
 - Analog - 4...20 mA + Pulse
- Measure: instantaneous flow and cumulative flow



About

The mini flow meter is ideal for low gas flow, small pipe applications. The flow meter is based on the principle of thermal diffusion, directly measuring the mass flow without the need for pressure and temperature compensation.

The in-built digital display shows instantaneous flow and cumulative flow. Ultra-wide 1:100 range ratio, measuring limit as low as 0.04 at reference conditions (DN3). Integrated digital adaptive signal processing technology can effectively suppress random errors. The fully isolated electrical structure completely filters out interference.

The integrated temperature measurement sensor is based on the micro-electromechanical system (MEMS) made of CMOS semiconductor technology to achieve high-precision measurements

Applications

- Manufacturing and industrial use
- Clean, dry compressed air and inert gases
- Temporary or permanent installation
- Gas pressure up to 16 bar (232 psi)

Specifications

Measurement Range

Flow Velocity	Refer to chart on next page
Gas Temperature	-20 to +60°C -4 to +140°F
Gas Pressure	0 to 16 bar (232 psi)

Accuracy

Flow Accuracy	±(1.5% RD + 0.3% FS)
Repeatability	< 0.25% FS
Sensitivity	< 0.1% FS
Zero Drift	< 0.1% FS
Response Time	< 20ms

Reference Conditions: 20 °C, 1 bar(a) -ISO 1217

The accuracy and response time of the sensor can be affected by the on-site conditions, contaminants in the gas and incorrect installation.

Working Environment

Ambient Temperature	-30 to +70°C -22 to +158°F
Gas types	Compressed air, nitrogen, oxygen, carbon dioxide and other non-condensable gases
Gas Quality	Clean and dry gas

Output

Analogue Output	4-20 mA
Digital Output	Modbus RTU (RS485)
Output Signals	Instantaneous flow and Cumulative flow

Full digital signal processing

Power Supply

Power Requirement	24v DC
Power Consumption	<48mV

Other

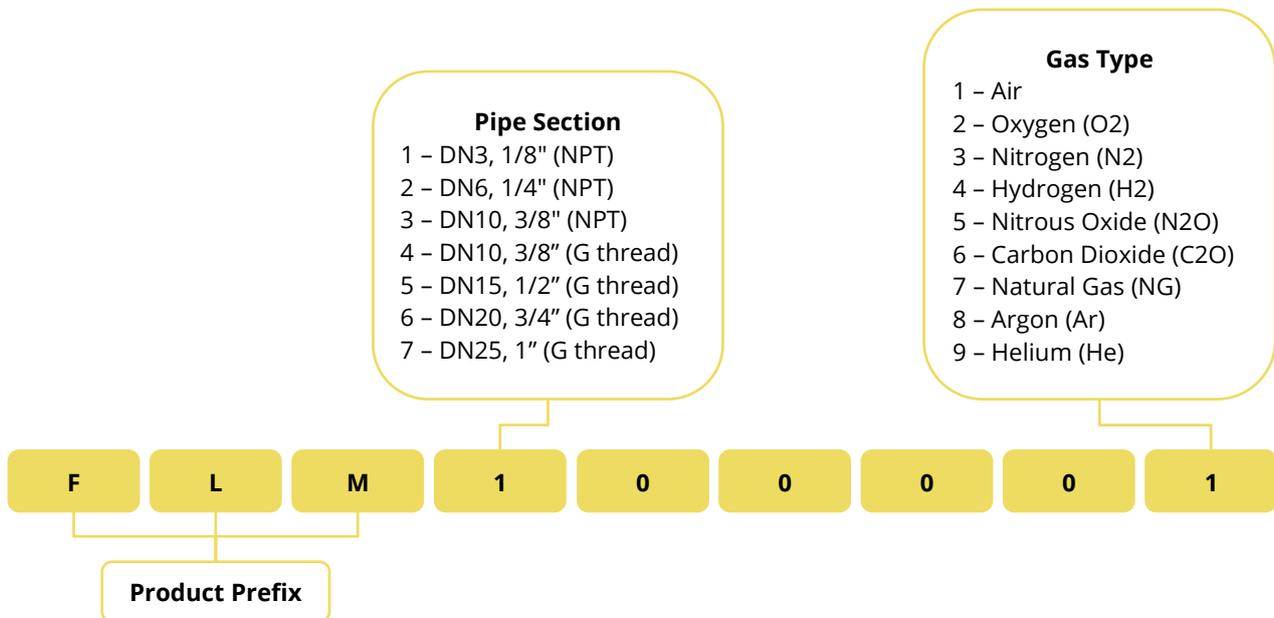
Process Connection	Female NPT (DN3 to DN10) Female G thread (DN10 to DN40)
Pipe Size	DN3 to DN40 1/8" to 1.5"
IP Rating	IP54
Sensor Technology	Thermal diffusion
Materials	Flow channel and connectors: SUS304 Seal: FKM, EPDM
Turndown Ratio	Ultra-wide, 1:100
Installation	Permanent or Temporary
Calibration	Every 2 years
Annual calibration is required if the sensor is exposed to relative humidity above 85%.	
Warranty	12 months
HS Code	9026.80.80

Flow Range

DN	Connection	Length (mm)	Width (mm)	Height (mm)	Flow Range (SLM)
3	Female NPT 1/8"	88	38	56	0.02 ... 2
6	Female NPT 1/4"	88	38	56	0.5 ... 50
10	Female NPT 3/8"	88	38	56	1 ... 100
10	Female G 3/8"	88	38	56	1 ... 100
15	Female G 1/2"	88	38	72	3 ... 300
20	Female G 3/4"	88	38	72	8 ... 800
25	Female G 1"	133	49	78	15 ... 1500
32	Female G 1.25"	133	54	85	20 ... 2000
40	Female G 1.5"	133	58	90	30 ... 3000

SLM = standard liters per minute, at reference conditions (20 °C, 1 bar(a) -ISO 1217)

How to Order



Flow Meter Range



Pitot Tube Flow Meter

Ideal for wet, dirty and high velocity gases.

Flow Range

5 to 300 Nm/sec (17 to 984 ft/sec)
Min Flow Velocity: 5 Nm/s (17 ft/sec)

Installation

Insertion

Pressure Range

0 to 16 bar (232psi)

Bi-directional

Optional

Gas Quality

Clean, dry, wet or dirty gas.

Outputs

Modbus & 4-20mA

Pipe Size

DN25 to DN600

IP Rating

IP65 (indoor use)



Thermal Mass

For clean, dry gas

Flow Range

0.1 to 250 Nm/sec (0.3 to 820 ft/sec)
Min Flow Velocity: 0.1 Nm/s (0.3 ft/sec)

Installation

Insertion

Inline - Flange or R-Thread connection

Pressure Range

Insertion: 0 to 50 bar (725psi)
Inline: 0 to 40 bar (580psi)

Bi-directional

No

Gas Quality

Clean dry gas
Must be installed after a dryer

Outputs

Modbus & 4-20mA

Pipe Size

Insertion - DN20 to DN600

Inline - DN15 to DN80

IP Rating

IP65 (indoor use) or IP67 (outdoor use)



Vortex Flow Meter

For use in gas and steam systems

Flow Range

1.5 to 80 m/s (5 to 24 ft/sec)
Min Flow Velocity: 1.5 Nm/s (4.9 ft/sec)

Installation

Inline - Flange or R-Thread connection

Pressure Range

0 to 63 bar (913psi)

Bi-directional

No

Gas Quality

Clean, dry, wet or dirty gas / steam
Can be installed on the outlet of compressors

Outputs

Modbus & 4-20mA

Pipe Size

DN15 to DN300

IP Rating

IP67



Mini Flow Meter

For point of use applications

Installation

Inline

Pressure Range

0 to 16 bar (232psi)

Bi-directional

No

Gas Quality

Clean dry gas

Outputs

Modbus & 4-20mA

Pipe Size

DN3 to DN40

IP Rating

IP54



Strength

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