Pitot Tube Flow Meter

For wet and dirty gases

Key Features

- Option to measure bi-directional flow
- IP65 rating
- Flow range:
  - 5 to 300 Nm/sec
  - 17 to 984 ft/sec
- Accuracy: ±1.5% reading, ±0.3% full scale
- Integrated touch screen display
- Power Supply: 18 to 30 vDC
- Two outputs as standard:
  - Digital - Modbus RTU
  - Analog – 4...20 mA + Pulse
- Measure: standard flow, consumption, pressure and temperature

About

Pitot tube flow meters are ideally suited to wet, dirty and high velocity compressed air and gas systems that contain some level of contamination. This makes pitot tube flow meters ideal for measuring flow, temperature and pressure near the outlet of compressors and other difficult environments.

The extremely sensitive differential pressure measurement allows this sensor to be used over a wide flow range. The patented anti - condensation technology ensures the sensor can be used under 100% saturated conditions.

Applications

- Manufacturing and industrial use
- Temporary or permanent installation
- Gas pressure up to 50 bar (232 psi)
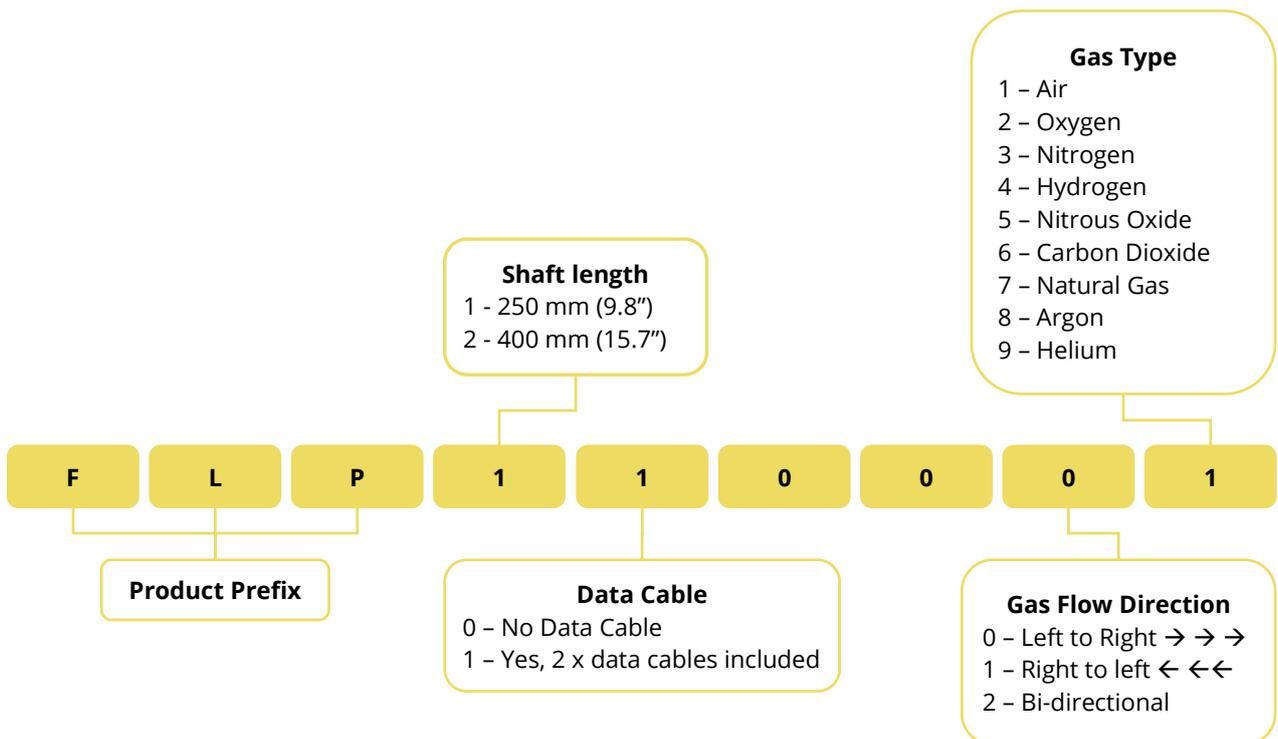- Pipe Sizes: DN25 to DN600

Specifications

Measurement Range	
Flow Velocity	5 to 300 Nm/sec 17 to 984 ft/sec
Gas Temperature	-40 to +150°C -40 to +302°F
Gas Pressure	0 to 17 bar (247 psi)

Accuracy	
Flow Accuracy	±(1.5% RD + 0.3% FS)
Contact us for higher accuracy of ±1% RD	
Reference Conditions: 20 °C, 1 bar(a), ISO 1217 (editable)	
Pressure Accuracy	±0.5% FS
Temperature Accuracy	±0.5°C
The accuracy and response time of the sensor can be affected by the on-site conditions, contaminates in the gas and incorrect installation.	

Working Environment	
Ambient Temperature	-20 to +60°C -4 to +140°F
Gas types	Dry /moist air and non-corrosive gases
Gas Quality	Clean and dry gas Wet and dirty gas

Display & Data Logger	
Display	2.8" IPS ultra-wide viewing angle LCD touch screen
Data Logging	10,000,000 record points
Sampling Rate	> 20 samples per second

Output	
Analogue Output	4-20 mA (isolated) / Pulse output (cumulative)
Digital Output	Modbus RTU (RS485)
Output Signals	Flow, Consumption Pressure, Temperature
Full digital signal processing	

Power Supply	
Power Requirement - Measurements	18 to 30V DC/6.5W @ 24V
Power Requirement – Start up phase	18 to 30V DC/24W @ 24V
Electrical Connection	2 × 5 pin M12, Female
Electromagnetic Compatibility	Meets IEC 61326-1

Other	
Process Connection	ISO G1/2" thread
Pipe Size • 250 mm shaft • 400 mm shaft	DN25 to DN250 DN25 to DN600
Shaft Lengths	250 mm or 400 mm 9.8" or 15.7"
IP Rating	IP65
Sensor Technology	Pitot Tube
Turndown Ratio	1:60
Bi-directional	Optional
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

Pipe Size			Flow Range (Nm3/h)		Flow Range (cfm)	
Inches	DN	ID (mm)	Min Flow	Max Flow	Min Flow	Max Flow
1	25	25	8.8	530	5	312
1.25	32	32	14.5	868	9	511
1.5	40	40	22.6	1,357	13	798
2	50	50	35.3	2,120	21	1,247
2.25	65	65	59.7	3,583	35	2,108
3	80	80	90.5	5,428	53	3,193
4	100	100	141.4	8,482	83	4,990
5	125	125	220.9	13,253	130	7,797
6	150	150	318.1	19,085	187	11,228
8	200	200	565.5	33,929	333	19,962
10	250	250	883.6	53,014	520	31,190
12	300	300	1,272.3	76,340	749	44,913

How to Order

Shaft length
1 - 250 mm (9.8")
2 - 400 mm (15.7")

Gas Type
1 – Air
2 – Oxygen
3 – Nitrogen
4 – Hydrogen
5 – Nitrous Oxide
6 – Carbon Dioxide
7 – Natural Gas
8 – Argon
9 – Helium

F	L	P	1	1	0	0	0	1

Product Prefix

Data Cable
0 – No Data Cable
1 – Yes, 2 x data cables included

Gas Flow Direction
0 – Left to Right → → →
1 – Right to left ← ←←
2 – Bi-directional

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

- We export to almost 100 countries.
- We have more than 2000 global customers.
- We can provide a total filtration solution.

- Filter-Online & Nordic Filtration offers a wide selection of filtration products for Domestic and Industrial Application.

- You can buy our products on our websites or by contacting us by phone or e-mail.
  Information about our products as well as brochures and manuals can be found on our websites:

  www.filter-online.com for Domestic Products

  nordicfiltration.com for Industrial Products

  We distribute many of our products from our stock in Denmark.
  Some products are shipped from remote stock.