Vortex Flow Meter

For gas and steam

Key Features

- Vortex flow meter – suitable for gas and steam
- IP65 rating
- Flow range:
  - 1.5 to 300 Nm/s
  - 5 to 931 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

Vortex flow meters are perfectly suited for measuring flow and consumption of inert gases and steam, no matter how heavily contaminated.

With built-in pressure and temperature sensors, all parameters of your gas or steam system are monitored in one unit, saving you install and maintenance costs.

The turndown ratio of 1:53 goes well beyond traditional Vortex flowmeters.

An all-welded construction means the flow meter is resistant to corrosion, high pressure and temperature. Full digital signal processing for higher precision and better stability

Applications

- Manufacturing and industrial use
- Temporary or permanent installation
- Outdoor environments
- Gas pressure up to 16 bar (232 psi)
- Steam pressure up to 63 bar (913 psi)
- Pipe Sizes: DN15 to DN300

Specifications

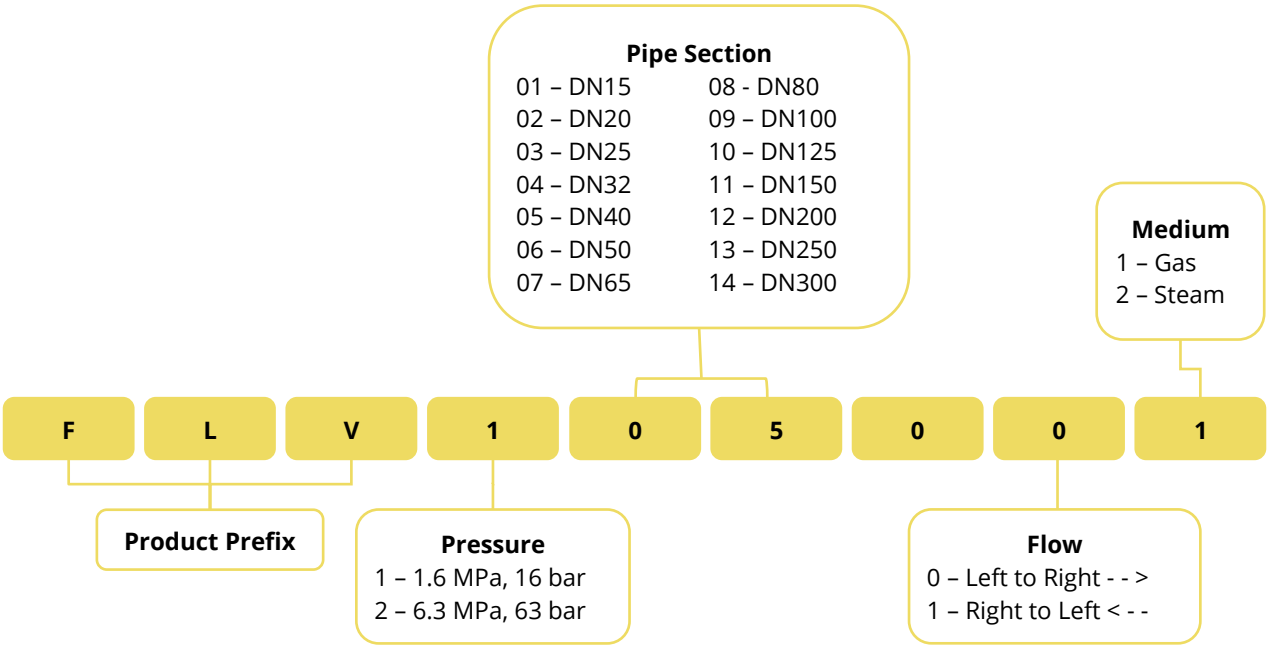
Measurement Range		
Flow Velocity	1.5 to 300 Nm/s 5 to 984 ft/sec	
Gas Temperature	Gas -40°C to +150°C -40°F to +302°F	Steam -40°C to +280°C -40°F to +536°F
Gas Pressure	Gas 0 to 16 bar 0 to 232 psi	Steam 0 to 63 bar 0 to 913 psi
Accuracy		
Flow Accuracy	±(1.5% RD + 0.3% FS)	
Contact us for higher accuracy of ±1% RD		
Repeatability	±0.2% RD	
Reference Conditions: 20 °C, 1 bar(a), ISO 1217 (editable)		
Pressure Accuracy	±0.5% FS	
Temperature Accuracy	±0.5 °C (±1.0 FS @ > 100 °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	-40 to +85°C -40°F to +185°F	
Relative Humidity	0 to 95% RH	
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	No	

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/10W @ 24V
Electrical Connection	1 × 5 pin M12, Female
Electromagnetic Compatibility	Meets IEC 61326-1
Other	
Process Connection	Flange
Pipe Size	DN15 to DN300
IP Rating	IP65
Sensor Technology	Karman vortex principle
Turndown Ratio	1:53
Bi-directional	No
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

Vortex Flow Meter						
Pipe Size		Flow Rate	Flow Range (Nm3/h)		Flow Range (cfm)	
Inches	DN	m/s	Min Flow	Max Flow	Min Flow	Max Flow
1/2"	15	5.5 – 80	1.0	50.9	0.6	30.0
3/4"	20	5.0 – 80	3.1	90.4	1.0	53.2
1”	25	4.0 – 80	8.8	530	5	312
1.25”	32	3.0 – 80	14.5	868	9	511
1.5”	40	2.0 – 80	22.6	1,357	13	798
2”	50	1.5 - 80	35.3	2,120	21	1,247
2.5”	65	1.5 - 80	59.7	3,583	35	2,108
3”	80	1.5 - 80	90.5	5,428	53	3,193
4”	100	1.5 - 80	141.4	8,482	83	4,990
5”	125	1.5 - 80	220.9	13,253	130	7,797
6”	150	1.5 - 80	318.1	19,085	187	11,228
8”	200	1.5 - 80	565.5	33,929	333	19,962
10”	250	1.5 - 80	883.6	53,014	520	31,190
12”	300	1.5 - 80	1,272.3	76,340	749	44,913

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

- 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.

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