

Turbine Flowmeter



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Turbine Flowmeter

1. Product Description

A turbine flow meter is used for volumetric total flow and/or flow rate measurement and has a relatively simple working principle. As fluid flows through the turbine meter, it impinges upon turbine blades that are free to rotate about an axis along the center line of the turbine housing. The angular (rotational) velocity of the turbine rotor is directly proportional to the fluid velocity flowing through the turbine. The resulting output is taken by an electrical pickoff(s) mounted on the flow meter body.

2. Product Features

1. Highly sensitive to low flow rates
2. Very accurate over its entire flow range

3. Technical Datasheet

3.1 Material of Construction

Enclosure : S.S-304/S.S-316
Rotor : S.S-304
Shaft : Hard Stainless Steel-316 with carbon bush
Accuracy (standard installation position): +/- 0.5 OR 1% FSD
Repeatability: 0.1%
Maximum working Pressure : 6 MPa
Fluid & Ambient Temperature : -20° C to 120° C
Connection : Threaded (M/F) OR Flanged

3.2 Pulse Output Sensor:

Power voltage : 12 V DC
Output signal : NPN open connector
Output :
High electric level : Higher than 8 V DC (input voltage 12 VDC)
Low electric level : Lower than 0.8 V DC (input voltage 12 VDC)

3.3 Battery Operated Meter:

Power voltage : 3.3 V10AH lithium batteries can be used more than 5 years in a row.
Display mode : Double row Liquid Crystal Display (LCD), as follows:
L XXX. X four instantaneous flow (M³/Hr) or
L/h XX. XXXXXX eight cumulative flow (M³)

- Cumulative flow automatically expands the display precision
- The cumulative flow values can be reset
- Power-fail protection instrument coefficient
- The Total flow values are not lost for ten years when power supply drop

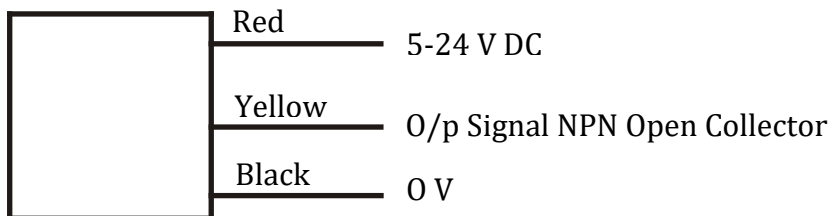
3.4 Display With 4 To 20 Ma Output:

Power voltage : 24 V DC
Output signal : 4 TO 20 mA

4. Capacity Table

Line Size	Range
04 mm (1/4")	40 - 400 LPH
09 mm (1/2")	200-2000 LPH
12 mm (1/2")	600 - 6000 LPH
25 mm (1")	1000 - 10000 LPH
40 mm (1 1/2")	2000 - 20000 LPH
50 mm (2")	4000 - 40000 LPH
80 mm (3")	10000 - 100000 LPH
100 mm (4")	20000 - 200000 LPH
150 mm (6")	30000 - 300000 LPH
200 mm (8")	80000 - 800000 LPH

4.1 Electrical Connection:



4.2 Calibration Process:

1. Calibrated each flow sensor with three pressure point: 0.5, 4 and 25 Bar
2. All pressure calculates pulse / litter at: 25%, 50%, 75% and 100% flow rate
3. Calibrated with pure water at 25° C

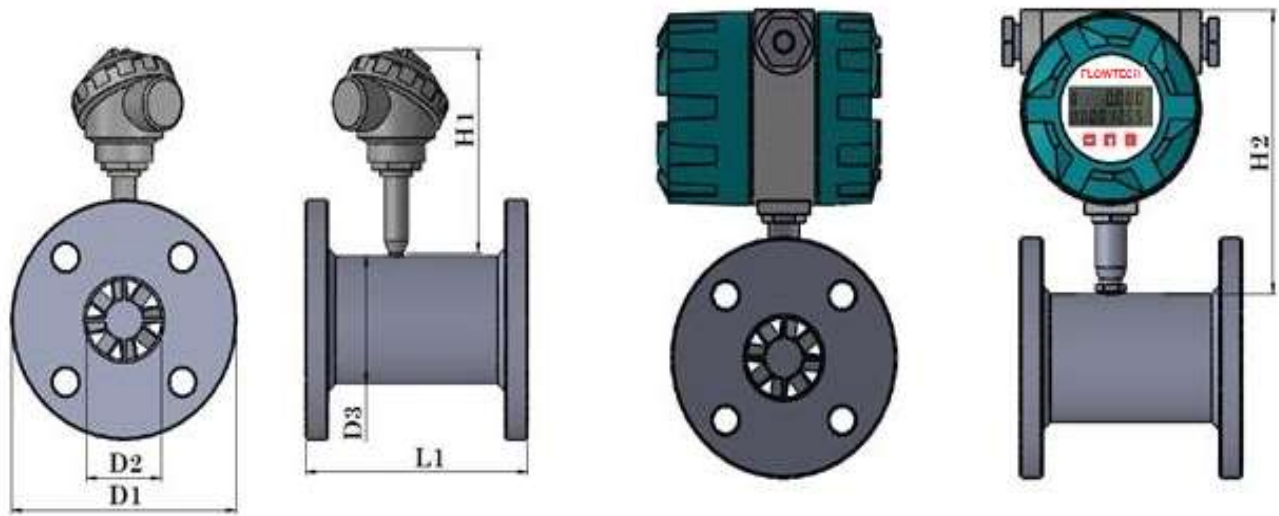
4.3 Application:

Turbine flow meters are used to measure clean, dry gases and liquids such as hydrocarbons, chemicals, gases and vapours, fuels and other types of liquids with lower viscosity, and for **applications** requiring highly accurate and precise measurements.

They are applicable in S.S. body and rotor flow measurements of Pharmaceutical, Drug, Food, Oil, Water and all other applications.

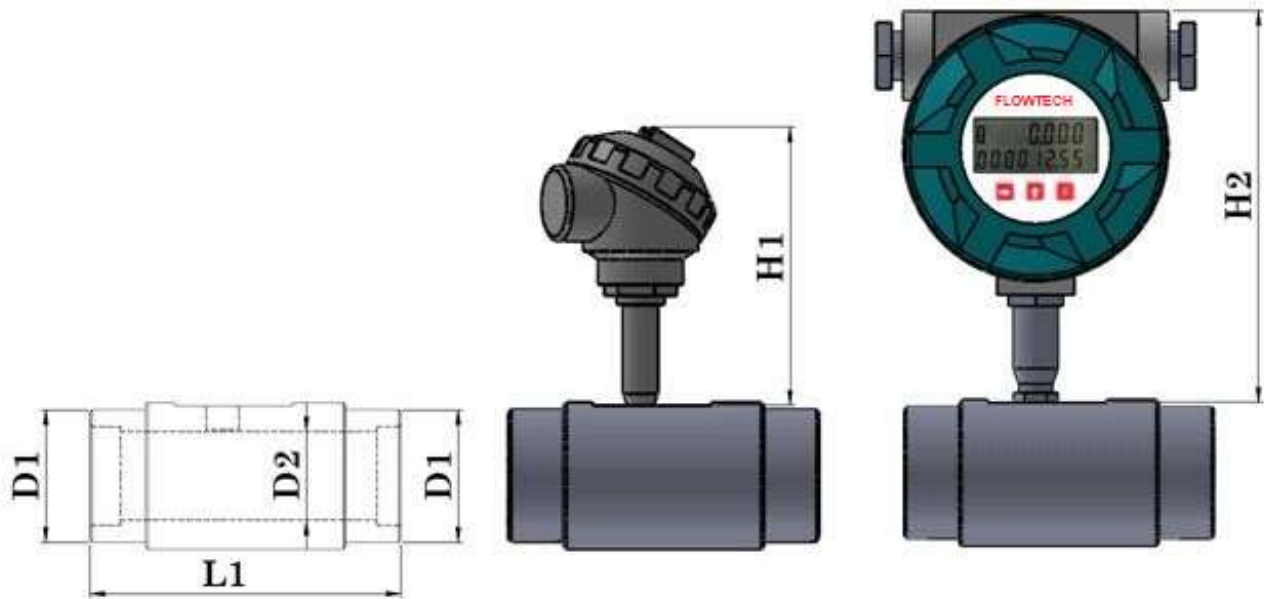
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5. Dimensional Drawing for Flange end



Size	L1	D1	D2	D3	H1	H2
006 (1/4")	50	1/2" (150 CLASS)	6	26	165	190
009	60	1/2"	10	26	165	190
012 (1/2")	75	1/2"	14	28	165	190
020 (3/4")	91	3/4"	20	38	165	190
025 (1")	106	1"	25	46	165	190
032 (1 1/4")	140	1 1/4"	32	60	165	190
040 (1 1/2")	140	1 1/2"	40	60	165	190
050 (2")	148	2"	50	75	165	190
080 (3")	200	3"	79	105	165	190
100 (4")	220	4"	100	135	165	190
150 (6")	250	6"	150	170	165	190
200 (8")	350	8"	200	225	165	190

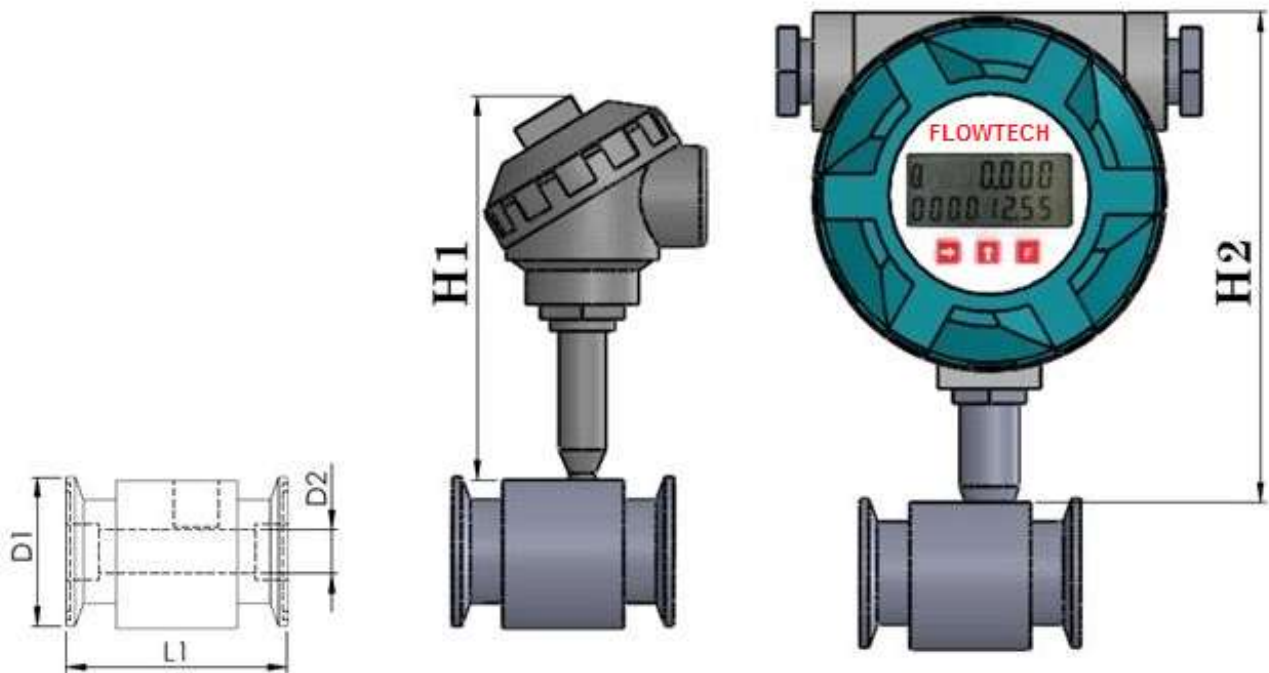
6. Dimensional Drawing for Threaded end



Size	L1	D1	D2	H1	H2
006 (1/4")	50	50.5	6	165	190
009 (1/2")	60	50.5	10	165	190
012 (1/2")	75	50.5	14	165	190
020 (3/4")	91	50.5	20	165	190
025 (1")	106	50.5	25	165	190
032 (1 1/4")	140	64.0	32	165	190
040 (1 1/2")	140	64.0	40	165	190
050 (2")	148	77.5	50	165	190
080 (3")	200	119	79	165	190
100 (4")	220	166.1	100	165	190
150 (6")	250	217.5	150	165	190
200 (8")	350	268.5	200	165	190

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7. Dimensional Drawing for T/C end



Size	L1	D1	D2	H1	H2
006 (1/4")	50	50.5	6	165	190
009 (1/2")	60	50.5	10	165	190
012 (1/2")	75	50.5	14	165	190
020 (3/4")	91	50.5	20	165	190
025 (1")	106	50.5	25	165	190
032 (1 1/4")	140	64.0	32	165	190
040 (1 1/2")	140	64.0	40	165	190
050 (2")	148	77.5	50	165	190
080 (3")	200	119	79	165	190
100 (4")	220	166.1	100	165	190
150 (6")	250	217.5	150	165	190
200 (8")	350	268.5	200	165	190

8. Model Decodification

