

Liquid Turbine Flow Meter

LT-N1 series



LT-N2 & A series



LT-E series



Operating Principle

Fluid entering the meter first passes through an inlet flow straightener that reduces its turbulent flow pattern. Fluid then passes through the turbine, causing the turbine to rotate at a speed proportional to fluid velocity. As each turbine blade passes through the magnetic field generated by the meter's magnetic pickup, an AC voltage pulse is generated. These pulses provide an output frequency that is proportional to volumetric flow.

Technical Data

- Output: Pulse ; 4-20mA
- Accuracy: ±1.0 of Rate ; ±0.5% of Rate
- Operating Temp.: -20...+60°C
- Fluid Temp.: -20...+150°C
- Body Material: SS304 ; SS316
- Rotor Material: 2Cr13 ; CD4MCu
- Bearing Material: Tungsten Carbide

Flow Range

Diameter (mm)	Standard Range (m ³ /h)	Extended Range (m ³ /h)
4	0.04-0.25	0.04-0.4
6	0.1-0.6	0.06-0.6
10	0.2-1.2	0.15-1.5
15	0.6-6	0.4-8
20	0.8-8	0.45-9
25	1-10	0.5-10
32	1.5-15	0.8-15
40	2-20	1-20
50	4-40	2-40
65	7-70	4-70
80	10-100	5-100
100	20-200	10-200
125	25-250	13-250
150	30-300	15-300
200	80-800	40-800



Description

The liquid turbine flow meter in the series LT are specially designed for usage in water, diesel, gasoline and other fluid measurement and control systems. They operate according to the turbine principle, i.e. the speed of an impeller turning in the fluid flow is measured and converted into pulse or 4-20mA signals

Model Selection

Model	Suffix Code									Description
LT-	①	②	③	④	⑤	⑥	⑦	⑧	⑨	Liquid Turbine Flowmeter
Diameter	XXX									Stand for diameter 004: DN4; 006: DN6 100: DN100; 200: DN200
Converter Type	N1									24V DC; Pulse output; No display
	N2									24V DC; Pulse output; No display; Ex
	A									24V DC; 4-20mA output; No display; Ex
	E1									Battery power supply; No output; Ex ; Digital display
	E2									24V DC; 2-wire 4-20mA output; Ex ; Digital display
	E3									24V DC; Pulse output; Ex; Digital display
	E4									24V DC; 0-20mA output; Ex; Digital display
	E5									24V DC; 3-wire 4-20mA / Pulse output; EX; Digital display
	G									220V AC; 4-20mA output; Ex; Digital display
	FE									FE: Fluidwell E series converter(Refer to page 23)
FF									FF: Fluidwell F series converter(Refer to page 24)	
Notice:	1) Modbus RS485 is optional for E2, E3, E4, E5 and "E" type 2) Dual Power(24VDC+ Battery) is optional for E2, E3, E4, E5, G									
Accuracy			10							±1.0% of rate
			05							±0.5% of rate
Flow Range				S						Standard Range
				E						Extended Range
Body Material					S4					SS304
					S6					SS316
Rotor Material						Cr				2Cr13
						CD				CD4MCu
Explosion Proof							BT			Exd II BT6
							NA			No explosion proof
Connection							THM			Male thread; Available from DN4...DN50
							THF			Female thread; Available from DN4...DN50
							WAF			Wafer connection
							DXX			D16: DIN PN16 Flange; D25: DIN PN25 Flange...
							AXX			A15: ANSI 150# Flange; A30: ANSI 300# Flange...
						JXX				J10: JIS 10K Flange; J20: JIS 20K Flange...
Temperature Rating							T1			-20...+80°C
							T2			-20...+120°C
							T3			-20...+150°C

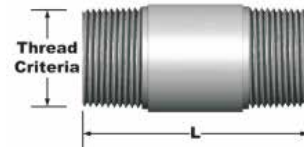
Example:

- ① 050: DN50
 ② E5: 3-wire 4-20mA / Pulse output; 24V DC power supply
 ③ 10: 1.0% of rate accuracy
 ④ S: 0.2-1.2m³/h
 ⑤ S4: SS304 body material
 ⑥ Cr: 2Cr13 rotor
 ⑦ BT: Exd II BT6
 ⑧ D16: Flange DIN PN16
 ⑨ T2: -20...120°C

Dimensions

(1) Thread Connection

Diameter (mm)	L (mm)	Thread Criteria
4	270	G ½"
6	270	G ½"
10	390	G ½"
15	75	G 1"
20	80	G 1"
25	100	G 1-¼"
32	140	G 2"
40	140	G 2"
50	150	G 2-1/2"

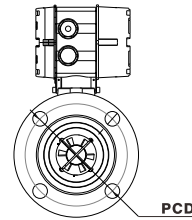
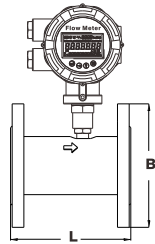


Male Thread Connection

Notice: Other thread criteria is available on request. (Female / Male thread is optional for G, NPT, BSP)

(2) Flange Connection

Notice: The standard flange is DIN PN16; but ANSI and JIS Flange are available on request.



Diameter		L	B	PCD	Bolt Hole Quantity
(Inch)	(mm)	(mm)	Flange Diameter (mm)	Bolt Circle Diameter (mm)	
1/2"	15	75	95	60	4
3/4"	20	80	105	70	4
1"	25	100	115	79	4
1-1/4"	32	140	140	89	4
1-1/2"	40	140	150	99	4
2"	50	150	165	121	4
2-1/2"	65	170	185	140	4
3"	80	200	200	152	4
4"	100	220	220	191	8
5"	125	250	250	216	8
6"	150	300	285	241	8
8"	200	360	340	298	8

Notice: Dimensions above is for DIN PN16 Flange.