

TRANTECH LIQUID TURBINE FLOW METER

TTLTF - N1 series



TTLTF - Tri-clamp Sanitary connection



TTLTF - E series



Description

The TTLTF liquid turbine flow meter has been designed for liquid flow applications suitable for water, diesel, oils, gasoline and other fluids that require accurate flow measurement and control.

Operating Principle

Turbine flow measurement. Fluid passes through the turbine flow meter, the fluid flow velocity rotates the turbine which then generates a pulse output proportional to the liquid flow rate passing through the meter. The meters built in amplifier converts the pulses received from the turbine to an analogue or Modbus output.

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

Technical Data

- Output: Pulse / 4-20mA
- Accuracy: ± 1.0 of rate / $\pm 0.5\%$ of rate
- Operating Temp.: -20...+60°C
- Fluid Temp.: -20...+150°C
- Body Material: SS304 / SS316
- Roto Material: 2Cr13 / CD4MCu
- Bearing Material: Tungsten Carbide

Model Selection



Model	Suffix Code									Description
TTLTF	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
	M									22Vac; 4-20mA output; Ex; Digital display
	FE									FE: Fluidwell E series converter
	FF									FF: Fluidwell F series converter
	Notice									1) Modbus RS485 is optional for E2, E3, E4, E5, and M type 2) Dual Power (24VDC + Battery) is optional E2, E3, E4, E5, and M type
Accuracy		10								±1.0% of rate
		05								±0.5% of rate
		02								±0.2% of rate
Flow Range		S								Standard Range
		E								Extended Range
Body Material			S4							SS304
			S6							SS316
			PL							Plastic (DN15-DN50)
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...
							TRC			Tri-clamp sanitary connection
Temperature								T1		-20...+80°C
								T2		-20...+120°C
								T3		-20...+150°C

Example:

Model Code: TTLTF 1 050 2 E5 3 10 4 S 5 S4 6 Cr 7 BT 8 D16 9 T2

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 roto

7 BT: Exd II BT6

8 D16: Flange DIN PN16

9 T2: -20...120°C



(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"

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

(1) Flange Connection

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

Diameter		L	B Flange Diameter	PCD Bolt Circle Diameter	Bolt Hole Quantity
(Inch)	(mm)	(mm)	(mm)	(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: Dimentions above is for DIN PN16 Flange.