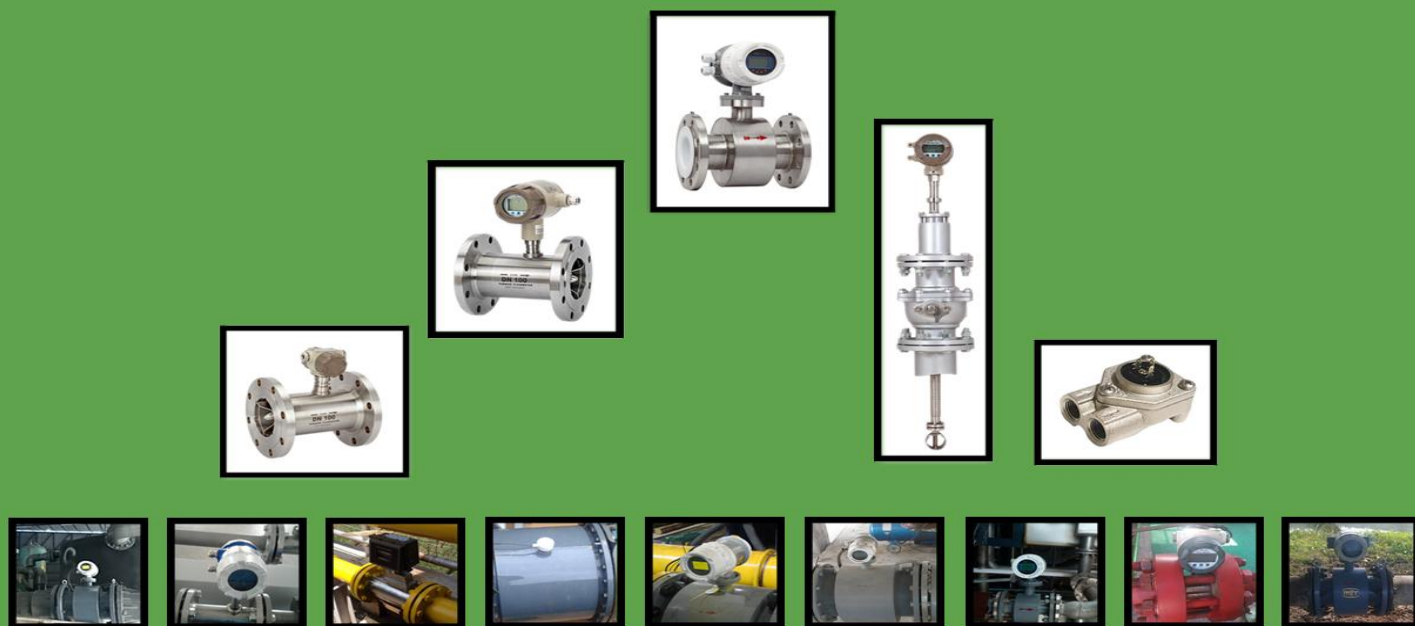


KTF Series Turbine Flow Meter



Description

KTF turbine flow meter is the use of advanced low-power single-chip microprocessor technology developed turbine flow sensor and display totalizer integration of new smart meter, with a compact structure, intuitive readings clear, high reliability, without outside power interference, anti-lightning, obvious low cost advantage, it is widely used to measure the closed pipe and stainless steel 1Cr18Ni9Ti, 2Cr13 and corundum Al_2O_3 , carbide not corrode, and no fibers, particles and other impurities, kinematic viscosity at operating temperature is less than $5 \times 10^{-6} m^2 / s$ of liquid, for kinematic viscosity more than $5 \times 10^{-6} m^2 / s$ of liquid, can be quantitative control, excessive alarm, etc., is an ideal flow metering and energy meter.

Measurement objects: oil, organic liquids, inorganic liquid, liquefied petroleum gas, natural gas, coal gas and cryogenic fluids.

Features

- ☆ High accuracy, generally up to $\pm 1\%R$, $\pm 0.5\%R$, high accuracy up to $0.2\%R$
- ☆ Good repeatability, short-term repeatability up to $0.05\% \sim 0.2\%$, in the trade settlement is the preferred choice of flow meter.
- ☆ Output pulse frequency signal, no zero drift and strong anti-interference ability.
- ☆ High frequency signal ($3 \sim 4KHz$) can be obtained, the signal resolution is strong.
- ☆ Wide range, medium and large diameter up to 1:20, small caliber 1:10.
- ☆ Can be customized, for example Low temperature type, Bi-Directional type, Mixed sand type and Underground type etc.
- ☆ Can be made into an insert type, suitable for large diameter measurement, the pressure loss is small, the price is low, take it out with not cut off the liquid.

Applications

- ☆ Liquefied petroleum gas, refined oil and light crude oil transport and gathering stations, the first and terminal station of large crude oil pipeline for trade settlement.
- ☆ Widely used in petroleum, chemical, metallurgy, paper and other industries to measure the volume of liquid flow and total volume.

Specifications

Parameter		Value	Unit
Diameter	Thread	4, 6, 10, 15, 20, 25, 32, 40, 50, 65, 80	mm
	Flange(Clamp)	15, 20, 25, 32, 40, 50, 65, 80, 100, 125, 150, 200	mm
	Insertion	150, 200, 250, 300, 350, 400, 500~1100	mm
Accuracy		±1, ±0.5, ±0.2(customized)	%R
Range ratio		1:10, 1:15, 1:20	
Sensor material		304, 316(L) stainless steel etc.	
Working environment	Medium temp.	-20~120	°C
	Ambient temp	-20~60	°C
	Relative humidity	5%~90%	
	Atmospheric pressure	86~106	KPa
Signal output		Pulse, 4~20mA	
Comm interface		RS485, HART etc.	
Power supply	External power	+24±15%, Ripple ≤±5%, Applying to 4~20mA, Pulse, RS485	VDC
	Internal power	1 group 3.0V10AH lithium battery, working voltage 2.0~3.0V	
Signal line interface	Basic type	Houseman connector or own three-core cable	
	Explosion proof type	Internal thread M20×1.5	
Explosive-proof grade		ExiaIICT4 or ExdIIBT6	
Protection level		IP65 or higher(customized)	

Diameter flow comparison table

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

Product

KTF-R remote type

The site itself does not have a display function, only the flow of remote signal output, signal flow can be divided into pulse signal and current signal, Especially suitable for the secondary display instruments, PLC, DCS and other control systems with the computer.



Parameter		Value
Power supply		24VDC±15% (Ripply≤5%, Power waste<0.5W)
Input signal frequency range		0~3000Hz
4-20mA output	Load capacity	≤600Ω
Pulse output	Load capacity	>1100Ω
	High/Low level amplitude	>22V / <0.8V
	Pulse width	1/2fin×1000(ms)

KTF-S smart integrated display type

The site itself with field display function, the flow signal can be remote output, two display units available, multiple electrical signal output mode optional.



Parameter		Value
Power supply	External power	24VDC±15% (Ripply≤5%, Power waste<0.5W)
	Internal Power	3VDC lithium battery (working voltage 2.0V~3.0V, Sustainable work for more than 12 months)
Input signal frequency range		0~3000Hz
Pulse output	Load capacity	>1100Ω
	High/Low level amplitude	>22V / <0.8V
	Pulse width	1/2fin×1000(ms)
Current output	Load capacity	≤900Ω
	Two-wire	4-20mA
	Three-wire	0-20mA
Communication interface		RS485, Using MODBUS

KTF-L low power type

Backlit dot matrix LCD display, full English display, power waste low, multiple display units are available and multiple electrical signal output mode optional.



Parameter		Value
Power supply	External power	24VDC±15% (Ripply≤5%, power waste<0.5W)
	Internal power	3.6VDC lithium battery (working voltage 2.3V~3.6V, Sustainable work for more than 12 months)
Input signal frequency range		0~3000Hz
Pulse output	Load capacity	>1100Ω
	High/Low level amplitude	>22V / <0.8V
	Pulse width	1/2fin×1000(ms)
Current output	Load capacity	≤880Ω
	Two-wire	4-20mA
	Three-wire	4-20mA
Communication interface		RS485, Using MODBUS

KTF-M Mini type

Repeatability ±0.25% has strong corrosion resistance, suitable for high temperature, high pressure and harsh environments.



Parameter	Value		
Range	Diameter(mm)	Measuring range(L/min)	Meter factor (cm ³ /imp)
	1.15	0.035~1.60	0.50
	1.30	0.010~1.86	0.60
	1.50	0.045~2.08	0.67
	2.00	0.085~2.32	1.02
	2.50	0.120~2.40	1.44
	3.70	0.150~3.00	2.28
Max pressure	20.0bar		
Pressure lose	2.0bar		
Temp. range	-10°C/+100°C		
Accuracy level	±1%		
Pipe connection	G1/4 Internal thread(Customizable)		
Installation mode	Horizontal installation		
Dimension(L×B×H)	55×40×47mm		
Weight	About 300g		
Certification	NSF, CE		

Dimension

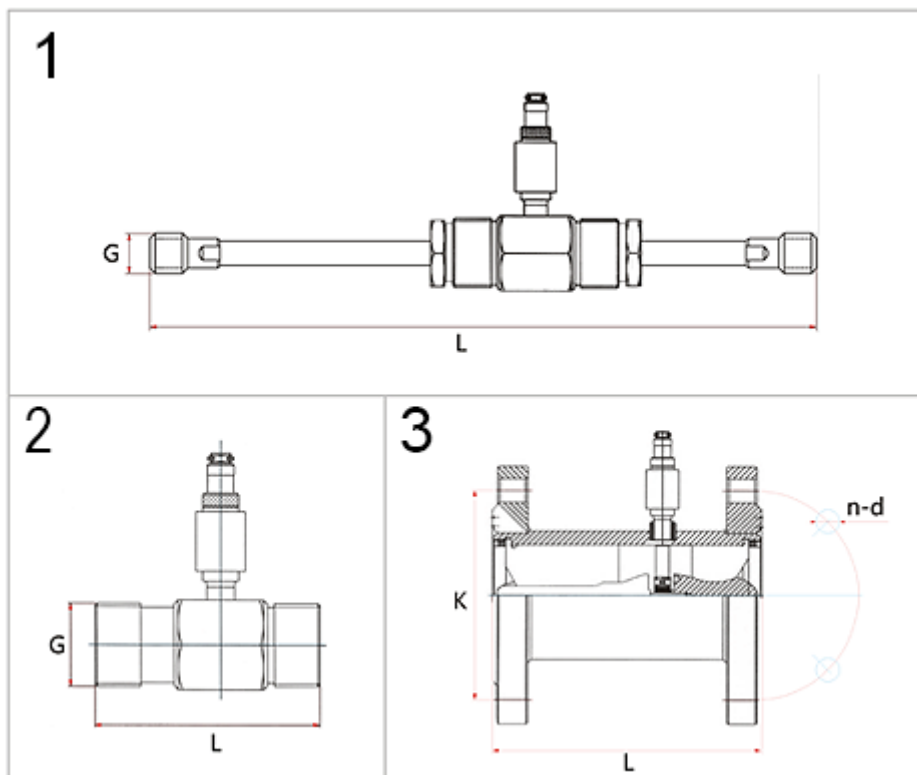


Diagram 1(DN4~DN10): Threaded connection type turbine flow sensor (including straight pipe section).

Diagram 2(DN15~DN40): Thread connected flow sensor size drawing.

Diagram 3(DN15~DN20): Flange connected turbine flow sensor drawing.

Sensor installation method according to different specifications, Adopt thread or flange connection, the installation method is shown in diagram 1, 2, 3.

Installation dimensions

Diameter(mm)	L(mm)	G	K(mm)	D(mm)	n(hole)
4	225	G1/2			
6	225	G1/2			
10	345	G1/2			
15	75	G1	Φ65	Φ14	4
20	80	G1	Φ75	Φ14	4
25	100	G5/4	Φ85	Φ14	4
32	140	G2	Φ100	Φ14	4
40	140	G2	Φ110	Φ18	4
50	150	G5/2	Φ125	Φ18	4
65	170		Φ145	Φ18	4
80	200		Φ160	Φ18	8
100	220		Φ180	Φ18	8
125	250		Φ210	Φ18	8
150	300		Φ240	Φ22	8
200	360		Φ295	Φ22	12

Model Selection

Model	Suffix Code									Description
KTF	1	2	3	4	5	6	7	8	9	Liquid Turbine Flow meter
Diameter	XX X									Stand for diameter 004: DN4; 006: DN6 100: DN100; 200: DN200
Converter Type		N1								24VDC; Pulse; No display
		N2								24VDC; Pulse; No display; EX
		A								24VDC; 4-20mA; No display; EX
		E1								Battery power supply; No output; EX; Digital display
		E2								24VDC; 2-wire 4-20mA; EX; Digital display
		E3								24VDC; Pulse; EX; Digital display
		E4								24VDC; 0-20mA; EX; Digital display
		E5								24VDC; 3-wire 4-20mA / Pulse output; EX; Digital display
		M								220VAC; 4-20mA; EX; Digital display
		FE								FE: Fluidwell E series converter
		FF								FF: Fluidwell F series converter
		Note								1) Modbus RS485 is optional for E2,E3,E4, E5 and M 2) Dual Power(24VDC+Battery) is optional for E2, E3, E4, E5, M
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			ExdII 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 PN 16 Flange; DN25: DIN PN25 Flange...
								AXX		A15: ANSI 150#Flange; A30: ANSI 300# Flange...
								JXX		J10: JIS 10K Flange; J20: JIS 20K Flange...
Temperature									T1	-20...+80℃
									T2	-20...+120℃
									T3	-20...+150℃



Example:

	1	2	3	4	5	6	7	8	9
KTF	050	E5	10	S	S4	Cr	BT	D16	T2

1. 050: DN50
2. E5: 3-wire 4-20mA/ Pulse output; 24VDC 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