

HLWSY Liquid turbine flow meter

Outline

HLWSY series Turbine Flowmeter has simple structure, high accuracy, good repetitiveness, fast response and convenient maintenance. It is widely used for liquid without corrosion to stainless steel, Al₂O₃ or hard alloy, without fibre or particle and kinematic viscosity less than $50 \times 10^{-6} \text{m}^2/\text{s}$. User should select suitable model according to nominal diameter, working pressure, working temperature, flow range, fluid name and ambient conditions when placing the order.

Features

- ★ High accuracy: $\pm 1\%$, $\pm 0.5\%$
- ★ Good repetitiveness: 0.05% ~ 0.2%
- ★ Output of pulse frequency signal, suitable for totalizer
- ★ No zero shift and strong interference resist
- ★ High frequency signal (3~4 kHz), strong signal resolution power
- ★ Turndown: 1:20, 1:10
- ★ Compact structure & convenient maintenance



Technical Parameters

Instrument Diameter (mm) & Connection	4, 6, 10, 15, 20, 25, 32, 40 thread; 25, 32, 40, 50 tri-clamp; 15, 20, 25, 32, 40, 50, 65, 80, 100, 125, 150, 200 flange connections;
Accuracy	$\pm 1\%$, $\pm 0.5\%$
Turndown	1:10, 1:20
Instrument Material	SS304, SS316 (L)
Medium Temperature	-20 to +100°C
Ambient Conditions	Temperature -10 to 55°C, relative humidity 5% to 90%, atmospheric pressure 86 to 106 KPa
Output Signal Sensor	Pulse frequency signal, low electrical level $\leq 0.8\text{V}$, high level $\geq 8\text{V}$
Transmitter	two wire, 4-20 mA DC current signal
Power Supply	Transmitter: +24V DC Local indication type: built-in 3.6V lithium cell or +24VDC external; If battery power, only local indicator, battery model can't support signal output.
Signal Transmission Wire	STVPV3 \times 0.3 (3 wire), 2 \times 0.3 (2 wire)
Transmission Distance	No more than 1000 m
Signal Line Interface	Basic type: Hausman connector or 3-core wire Explosion-proof type: M20 \times 1.5 (F)
Explosion Proof Basic type	non-explosion proof; explosion proof type: ExdIIBT6
Enclosure Protection	IP65

Table 2

Instrument Diameter (mm)	Normal Flow Range (m ³ /h)	Extended Flow Range (m ³ /h)	Normal Connection & Pressure Rating
DN 4	0.04 ~ 0.25	0.04 ~ 0.4	Thread connection/6.3MPa/G ½
DN 6	0.1 ~ 0.6	0.06 ~ 0.6	Thread connection/6.3MPa/G ½
DN10	0.2 ~ 1.2	0.15 ~ 1.5	Thread connection/6.3MPa/G ½
DN15	0.6 ~ 6	0.4 ~ 8	Thread connection/6.3MPa/G 1
			Flange connection/2.5MPa
DN20	0.8 ~ 8	0.45 ~ 9	Thread connection/6.3MPa/G 1
			Flange connection/2.5MPa
DN25	1 ~ 10	0.5 ~ 10	Thread connection/6.3MPa/G5/4
			Flange connection/2.5MPa
			Tri-clamp/1.6MPa
DN32	1.5 ~ 15	0.8 ~ 15	Thread connection/6.3MPa/G2
			Flange connection/2.5MPa
			Tri-clamp/1.6MPa
DN40	2 ~ 20	1 ~ 20	Thread connection/6.3MPa/G2
			Flange connection/2.5MPa
			Tri-clamp/1.6MPa
DN50	4 ~ 40	2 ~ 40	Thread connection/G5/2
			Flange connection/2.5MPa
			Tri-clamp/1.6MPa
DN65	7 ~ 70	4 ~ 70	Flange connection/2.5MPa
DN80	10 ~ 100	5 ~ 100	Flange connection/2.5MPa
DN100	20 ~ 200	10 ~ 200	Flange connection/2.5MPa
DN125	25 ~ 250	13 ~ 250	Flange connection/1.6MPa
DN150	30 ~ 300	15 ~ 300	Flange connection/1.6MPa
DN200	80 ~ 800	40 ~ 800	Flange connection/1.6MPa

Table 3

DN (mm)	L (mm)	G	D (mm)	d (mm)	N (Hole)
4	295	G 1/2			
6	330	G 1/2			
10	450	G 1/2			
15	75	G 1	Ø65	Ø14	4
20	80	G 1	Ø75	Ø14	4
25	100	G5/4	Ø85	Ø14	4
32	140	G2	Ø100	Ø14	4
40	140	G2	Ø110	Ø18	4
50	150		Ø125	Ø18	4
65	170		Ø145	Ø18	4
80	200		Ø160	Ø18	8
100	220		Ø180	Ø18	8
125	250		Ø210	Ø18	8
150	300		Ø240	Ø22	8
200	360		Ø295	Ø22	12



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Instrument Diameter (mm)	Normal flow range (m ³ /h)	Extended flow Range (m ³ /h)	Instrument dia (mm)	Normal flow range(m ³ /h)	Extended flow range (m ³ /h)
DN4	0.04~0.25	0.04~0.4	DN50	4~40	2~40
DN6	0.1~0.6	0.06~0.6	DN65	7~70	4~70
DN10	0.2~1.2	0.15~1.5	DN80	10~100	5~100
DN15	0.6~6	0.4~8	DN100	20~200	10~200
DN20	0.8~8	0.45~9	DN125	25~250	13~250
DN25	1~10	0.5~10	DN150	30~300	15~300
DN32	1.5~15	0.8~15	DN200	80~800	40~800
DN40	2~20	1~20			

Model Selection

Table 4

Model		Description		
HLWSY		Flow meter		
4 6 10 15 20 25 32 40 50 65 80 100 125 150 200				4mm
				6mm
				10mm
				15mm
				20mm
				25mm
				32mm
				40mm
				50mm
				65mm
				80mm
				100mm
				125mm
				150mm
200mm				
Type	A B C C1			Local Display, 3.6V battery (no signal output)
				Local Display, 24VDC, 3 wire pulse signal
				Local Display, 24V DC, 2 wire 4-20mA output
				Local Display, 24V DC, RS485 communication
Accuracy	05 10			0.5
				1.0
Turbine type	W S			Extended Measuring Range
				Standard Measuring Range
Flow tube material	S L			304 SS
				316 (L) SS
Explosion Proof	N E			Non-Explosion proof
				Explosion proof, ExdIIBT6
Pressure rating	N H(X)			Normal (see table 2)
				High Pressure (see table 2)

Selection example: HLW-50-B-10-S-L-N-N -Flowmeter, tri-clamp, 50mm, Local display, 24VDC power supply, 3 wire pulse output, Accuracy 1.0%, 4 ~40m³/h, 316(L) SS, non-explosion proof model, 1.6 MPa