

Turbine Flowmeter

Pulse output, high linear characteristic accuracy, sensitive response, wide flow range Signal output: pulse output (+12 ~+24VDC power supply, three wire system) Pulse output (+24VDC power supply, two-wire system) 4~20mADC analog current explosion proof category of quantity signal output: Exdib mb IIBT6Gb, simple structure, installation easy to use and maintain, complete set of filter, degasser and straightening (flow) can be supplied a pair of companion auxiliary flanges for installation can be provided (2 pieces)



Introduce

LWG turbine flow sensor and display instrument receiving electric pulse signal form turbine flowmeter, which is used to measure low viscosity fluid (liquid or gas) in closed pipeline It is widely used in petroleum, chemical industry, metallurgy, aviation, scientific research and other departments. The sensor consists of a turbine sensing assembly and an amplifier the structure assembled together is integrated: the structure that can measure the positive and negative flow is bidirectional; The structure with insertion rod that can be installed in large-diameter pipeline to measure fluid flow is plug in type. The operation of the sensor is based on the principle of torque balance. When the fluid flows through the sensor, the impeller is driven to rotate. When the flow rate is constant, the dynamic torque and resistance torque are balanced when the wheel speed is kept constant, the uniformly distributed blades on the magnetized impeller rotate with the impeller, thus periodically changing the magnetoresistance of the detector (coil) magnetic field, and the detector generatesThe generating pulse signal is amplified by an amplifier and then output. The output electric pulse frequency is proportional to the impeller speed and the impeller speed is proportional to the flow, so the output electric pulse frequency it is proportional to the flow through the sensor, and the converted 4~20mA analog signal is also proportional to the flow.

Main Technical Data of Sensor

Dia DN	Flow Range(m ³ /h)	Fluid temperature(℃)		Mix Fluid Density (kg/m ³)	Pressure (MPa)	Accuracy
		Integrated	Ex-Proof			
15	4~16	-20~+55 -20~+120	-20~+70	0.6	1.6	±1.5%
25	8~20				2.5	
40	20~100				6.3	
50	30~200					

Main Technical Data Of Sensor (Measuring Liquid)

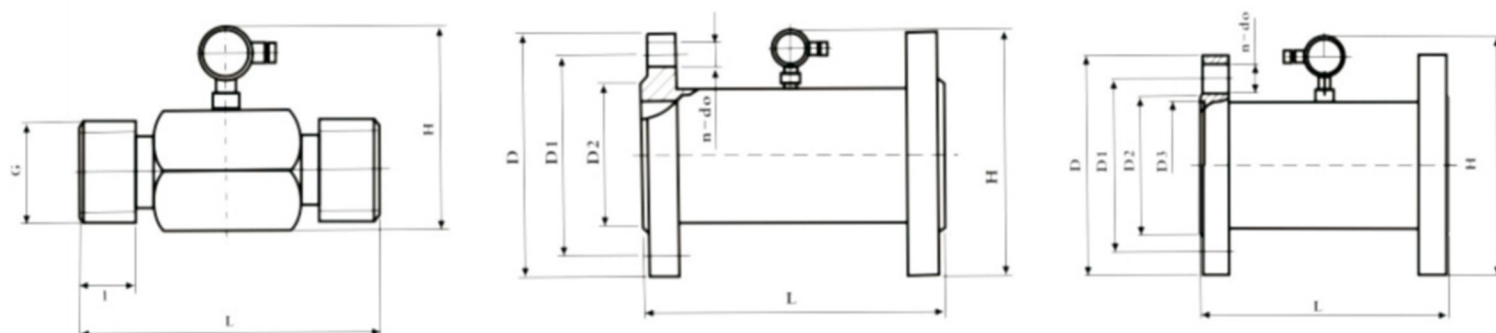
Dia DN	Flow Range (m ³ /h)			Liquid Temperature (°C)		Pressure (MPa)
	0.2 Class	0.5 Class	1 Class	Integrated	Ex-Proof	
10		0.4~1.2	0.2~1.2	-20~+50 -20~+120	-20~70	6.3
15	1.2~4	0.6~6	0.4~6			2.5
25	3~10	1.2~12	1.2~12			6.3
40	8~25	3~30	3~30			16
50	12~40	5~50	5~50			2.5 6.3
80	20~100	16~100	12~120			
100	50~160	25~160	20~200			
150	100~300	50~300	40~400			
200	200~600	100~600	80~800			2.5
250	300~1000	160~1000	120~1200			
300		250~1600				
400		400~2500				
500		600~4000				

Main Technical Data Of Sensor (Sand Mixing)

Dia DN	Flow Range (m ³ /h)	Liquid Temperature (°C)	Pressure	Accuracy
100	20~200	-20~+55	1.0	±1.5%
150	40~400			
200	80~800			

Main Technical Data Of Plug-In Gas Turbine Flow Sensor

Dia DN	Flow Range(m ³ /h)	Flow Rate Range (m3/h)	Liquid Temperature (°C)		Pressure	Insertion Depth	Accuracy
			Integrated	Ex-Proof			
150	200~1000	3~15	-20~+55	-20~+70	1.6	0.5D Middle of pipe 0.125 Average flow velocity	±2.5%
	320~1600	5~25					
200	320~1600	3~15					
	600~3000	5~25					
250	600~3000	3~15					
	1000~5000	5~25					
300	800~3600	3~15					
	1300~6500	5~25					
400	1600~6500	3~15					
	2500~12500	5~25					
500	2500~12500	3~15					
	4000~20000	5~25					



Overall dimensions

Overall Dimensions Of The Sensor

Dia DN	Sensor Dimension		Flange Dimension				Thread Dimension		Flange Standard
	L	H	D	D1	D2	n-Ø	L	G	
10	345	170						1/2	JB79-59
15	75	190	95	65	45	4~14	23	1	
25	100	230	115	85	65	4~14	30	2 3/4	
40	140	260	150/145	110	85	4~18	35	2	
50	150	270	165	125	100	4~18			JB81-59 JB82-59
			160						
80	200	300	200	160	135	8~18			
			195						
100	220	330	220	180	155	8~18			
			215						
150	300	390	285	240	210	8~23			
			280						
200	360	455	340	295	265	12~23			
			335						
250	400	510	405	355	320	12~25/26			
300	420	565	460	415	375	12~25/26			
400	560	680	580	525	485	16~30			
500	600	790	715/705	650	608	20~34			

If the fluid temperature is - 20 °C~+120 °C, H shall be added with the length of extension rod (L=230mm)

Overall Dimensions Of The Sensor

Dia	L	A	B	C	D	E	H
100	220	112	168	16	10	16	273
150	305	168	164	16	10	16	330
200	360	219	215	18	10	18	375

Installation Method

The sensor is installed horizontally, and the sensor with a nominal diameter of 10~40mm is connected with the pipeline by thread; Between sensor with nominal diameter of 50~500mm and pipeline Flange connection is adopted. See Table 5 and Figure 1 for specific dimensions. The upstream side of the sensor must ensure a straight pipe section no less than 20 times the length of the pipe diameter, and the downstream side no less than 5 times the length of the pipe straight pipe section with diameter length. When the fluid is not clean, a filter shall be installed on the upstream side of the sensor; When the liquid fluid is mixed with gas, the upstream side of the sensor shall be installed when the length of the straight pipe section on the upstream side cannot be guaranteed, the straightener (flow) shall be installed. During installation, a bypass pipe shall be set to facilitate cleaning and replacement, as shown in Figure 3

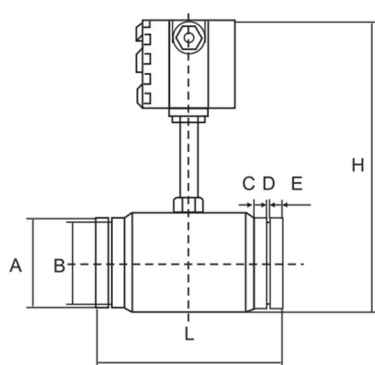


Figure 2 Appearance of Turbine Flow Sensor of Sand Mixing Truck

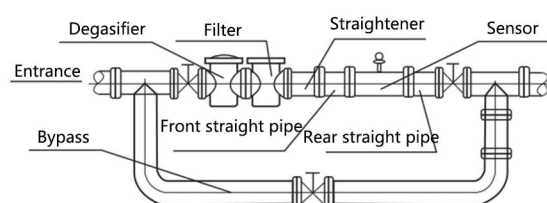


Figure. 3 Installation of mixed turbine flowmeter

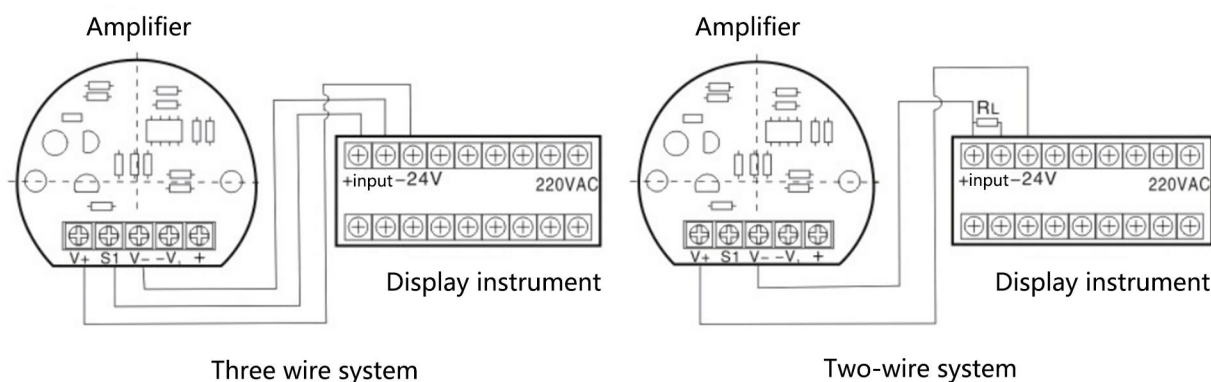


Figure 4 Wiring Diagram

Please Specify Requirements When Ordering

Please read this sample and understand the sensor model and coding regulations before ordering, and propose the corresponding product model and coding according to your needs. If necessary, Please also indicate

Fluid name, flow range, working pressure and temperature, viscosity, corrosivity

Environmental conditions for product use (temperature, humidity, power fluctuation, electromagnetic interference, etc.)

Please consult with our company for special requirements;

Complete set selection: filter, degasser and rectifier.