

## DXL Series Magnetic-Vortex Flowmeter

### General

DXL Series Magnetic-Vortex Flowmeter is a new kind of flowmeter developed by our company with advanced electromagnetic vortex detection technology, microprocessor and detecting element imported from America, original quick-discharge structure. It has features of compact structure, intuitive display, less power, wide turndown ratio, anti-corrosive, impurity-proof, etc. and can be used for flow measurement of conductive liquid in the pipeline of industries such as oil, petrochemical, metallurgy, machinery, brewage, printing, pharmacy, food, environmental protection, and so on.

There is no lining material and moving parting, which overcome the defects of block. Meanwhile, the structure of insert type core makes it easy to disassemble or calibrate and the same size and pressure core can be exchanged in different bodies. Besides, lithium battery and advanced electron technology make the flowmeter less power, high stability and anti-interference ability.

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### Principle

DXL Series Magnetic-Vortex Flowmeter is designed combining the electromagnetic induction law and Karman Street principle. When passing the bluff body (vortex generator), the conductive liquid will form regular and interlaced vortex. Incising the magnetic lines of force will cause the induced electromotive force whose frequency is same with the vortex. Within certain range the frequency is proportional to the flowrate and will be detected by the electrode and processed to display the flow value.

### Working Condition

- 1.Ambient temperature:-30℃~+50℃
- 2.Relative humidity:≤85%
- 3.Atmospheric pressure: 86KPa~106KPa;
- 4.Allowable liquids include water, wastewater, acid, lye, or other single-phase conductive liquid.

### Main Technical Datum

Body Material: Cast Steel (Table 1)

Nominal Diameter(mm)	20	25	40	50	65
Flow Range(m <sup>3</sup> /h)	0.3~6	0.5~10	1~20	1.5~30	3~60
Nominal Pressure(MPa)	1.6,2.5,4.0,6.3,16,25,32,42				
Fluid Temperature(℃)	-20~+80,-20~+120				
Pressure Loss(MPa)	<0.2				
Explosion-proof	Exd I BT4				

Body Material: Stainless Steel (Table 2)

Nominal Diameter(mm)	20	25	40	50	65	80	100
Flow Range(m <sup>3</sup> /h)	0.3~6	0.5~10	1~20	1.5~30	3~60	6~120	9~180
Nominal Pressure(MPa)	1.6,2.5,4.0,6.3,16,25,32,42						
Fluid Temperature(℃)	-20~+80,-20~+120						
Pressure Loss(MPa)	<0.2						
Explosion-proof	Exd I BT4						

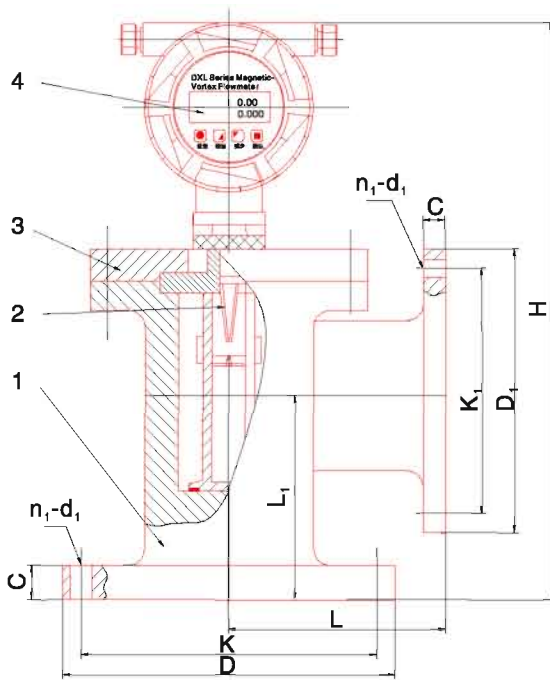


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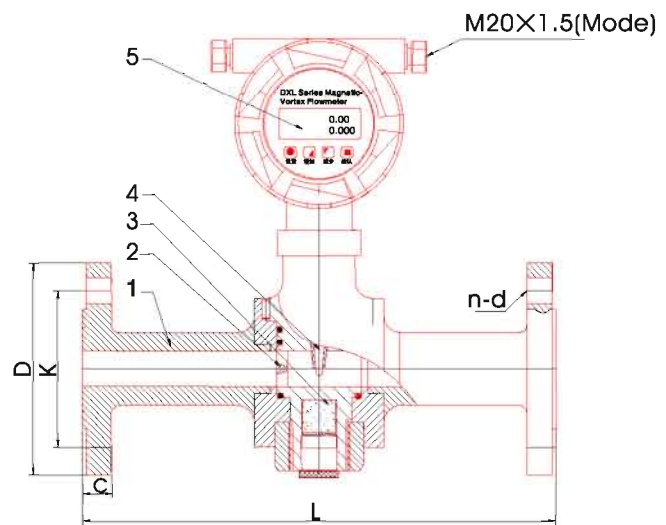
## Installation Instruction

## DXL - Magnetic-Vortex Flowmeter

1. The flowmeter should be mounted in the pipeline without influence of inflation, contraction, distortion and vibration of pipeline and magnetic interference in order to install, disassemble and operate easily in the future.
2. The flowmeter should be mounted horizontally or vertically among the pipeline and straight tube not less than 10 times Nominal Diameter should be ensured upstream and downstream.
3. The flow direction of medium in the pipeline should be same with the arrow direction shown on the body of flowmeter.
4. Disassemble the alnico of flowmeter before putting into operation in the new pipeline, clean the impurities in the medium and then assemble the alnico so that the flowmeter can work under good condition. If there is many impurities in the medium, the filter is recommended to be installed upstream.



Drawing 1 Corner Type



Drawing 2 Straight Type

## Outline Dimension for Corner Type (Drawing1 and Table3)

Table3

DN (mm)	PH (MPa)	In let				Out let								
		D	K	C	L	n	d	D <sub>1</sub>	K <sub>1</sub>	C <sub>1</sub>	L <sub>1</sub>	n <sub>1</sub>	d <sub>1</sub>	H
25	1.6-4	115	85	16	110	4	14	115	85	16	140	4	14	460
	6.3	140	100	24			18	140	100	24			18	460
	16-25	150	101.5	29	135		26	150	101.5	29			26	460
	32	160	115	32			22	160	115	32			22	460
	42	160	108	35			26	160	108	35			26	460
50	1.6-4	165	125	20	150	8	18	165	125	20	176	6	18	460
	16-25	215	165	36			23	170	130	28			23	460
	32	210	160	40	170		26	190	145	40			26	460
	42	235	171.5	51	185		29.5	210	158	45			190	29.5
80	25	225	200	45	200	8	30	240	188	45	210		30	
	32	275	220	50			275	220	50	230	8	30		



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Outline Dimension for Straight Type (Drawing 2 and Table 4)

Table4

DN (mm)	Normal Pressure (MPa)	D	K	C	L	n	d		
20	1.6~4.0	105	75	16	225	4	14		
	6.3	130	90	20			18		
	16~25		89	25.5			22		
	42	140	95	32			22		
25	1.6~4.0	115	85	16	270		4	14	
	6.3	140	100	24				18	
	16~25	140	100	28				18	
	32	160	115	32				300	22
	42		108	35				350	26
40	1.6~4.0	150	110	18	300			4	18
	6.3				170				125
	16	175	125	32	300				27
		25	180	124	32	250			27
	42	205	146	44.5	350	30			
					250	30			
50	1.6~4	165	125	20	378	8			18
	6.3				180		135		26
	16	215	165	36	320		25		
		25	215	165	38.5		250		25
	32	210	160	40	320		26		
		42	235	171.5	51		250		26
65	1.6~2.5	185	145	22	300		8	18	
	4.0							185	145
	6.3	205	160	26				22	
	16	245	190.5	41.5				29.5	
		25	245	190.5				41.5	29.5
	32	265	197	57.5				32.5	
	42	265	197	57.5		32.5			
80	1.6~2.5	200	160	20	350	8		18	
	4.0							215	170
	6.3	220	170	30				23	
	16	230	180	46				26	
		25	265	203				48	32.5
	32	275	220	50			30		
42	305	228.5	67	35.5					
100	1.6	220	180	20	350		8	18	
	2.5	230	190	24				23	
	4.0	235	190	26	300			22	
	6.3	250	200	30				26	
	16	265	210	52				30	
25	310	240	54	35.54					

### Type Description

Type	1	2	3	4	5	6	7	8	Note
	DN	Body Material	Structure	Nominal Pressure	Working Temp.	Electric Enclosure	Accuracy	Signal output	
DXL	—								DXL Series Magnetic-Vortex Flowmeter
	020								DN20mm
	025								DN25mm
	040								DN40mm
	050								DN50mm
	065								DN65mm
	080								DN80mm
	100								DN100mm
		G							Cast Steel
		S304							304 Stainless Steel
		S316							316 Stainless Steel
			Z						Straight Type
			J						Corner Type
				1.6					PN: 1.6MPa
				2.5					PN: 2.5MPa
				4.0					PN: 4.0MPa
				6.3					PN: 6.3MPa
				10					PN: 10MPa
				16					PN: 16MPa
				25					PN: 25MPa
				32					PN: 32MPa
				42					PN: 42MPa
						C			-20~+80°C
						H			-20~+120°C
							A		General Type
							B		Explosionproof Exd II BT4
								1.0	1.0%
								1.5	1.5%
								R	RS485 Communication
								F	Pulse Output
								I	4~20mA