

LUGB Vortex Flowmeter

Introduction

The vortex flowmeter is produced according to the Karman vortex principle. It is mainly used for the flow measurement of industrial pipeline fluids, such as gases, liquids, vapors and other media. The vortex flowmeter products developed and produced by our company are carefully built on the basis of comprehensively absorbing domestic and foreign advanced technology and years of research and development and production experience. The product has the features of advanced functions, low power consumption, simple structure, low resistance loss, stable operation, sturdy and durable, wide application, long service life and easy installation and debugging. There are analog standard signals and digital pulse signal outputs, which are easy to connect with digital systems such as computers. It realizes intelligent, standardized, serialized and generalized products, ensuring the quality and aesthetics of products. It is a relatively advanced and ideal measuring instrument.

Features

- Advanced circuit design, the board has both a micro-power amplifier board and current output.
- Wild measuring range;
- Outputs 4mA to 20mA DC two-wire current signal corresponding to the flow signal.
- Simultaneous display the cumulative flow and instantaneous flow.
- It has five-segment nonlinear correction, small signal cut-off, and damp time self-setting function.
- All-universal design, small overall size and compact structure. Suitable for flow measurement of liquid and gas media of different calibers;
- Advanced and user-friendly design, easy to operate.

External View



Pic.1 flange mounting



Pic.2 Pressure & Temperature integrated flange clamping-on mounting



Pic.3 Pressure & Temperature integrated flange mounting



Pic.4 Insertion type



Pic.5 Ball valve insertion type

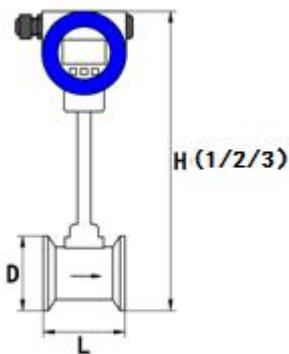


Pic.6 Thread mounting

Construction Outline

Flange clamped-on schematic diagram, see pic. 7, Specifications and dimension, see chart 1.

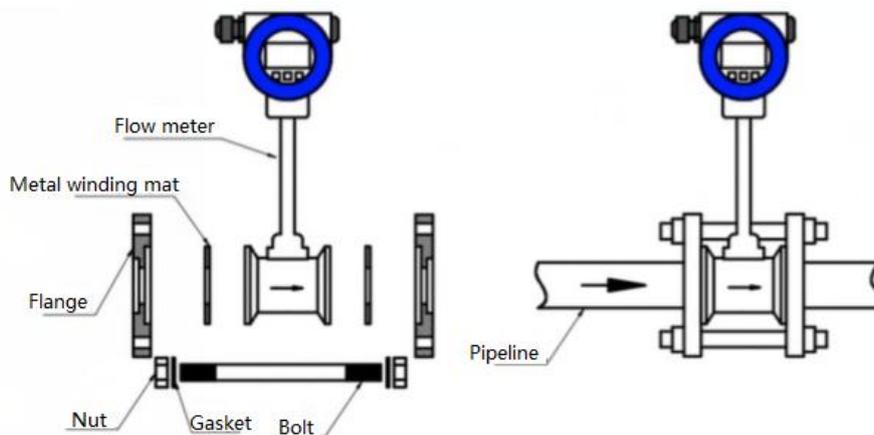
Chart 1 Flange clamped-on type specification and dimension



Pic.7 Flange clamped type
Note: error ≤ 5mm

Nominal Diameter(mm)	L	External diameter	H1	H2	H3
15~25	70/90	54	325	385	445
32	85	69	325	385	445
40	85	79	325	385	445
50	85	89	330	390	450
65	85	104	340	400	470
80	90	119	360	420	480
100	90	139	380	440	500
125	95	168	405	465	530
150	100	194	430	490	560
200	102	248	485	545	610
250	115	300	540	600	660
300	130	350	590	650	710

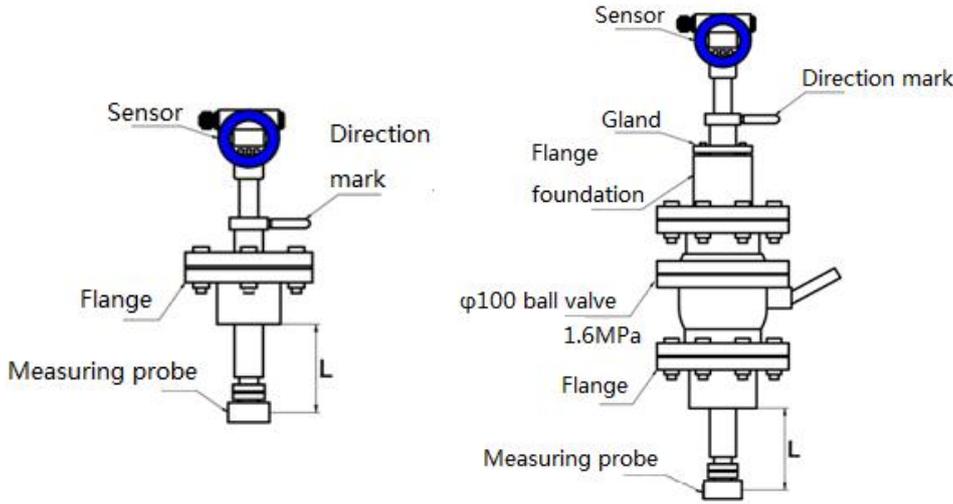
Flange clamped-on installation diagram, see pic. 8.



pic. 8

The outline of the insertion vortex flowmeter, see pic.9, specification and dimension see Chart 2.

Chart 2 Simple and Ball insertion specification and dimension



Diameter(mm)	Length(mm)
DN250	125
DN300	150
DN400	200
DN500	250
DN600	300
DN800	400

Pic.9 Simple insertion and Ball-valve insertion installation diagram

Parameters

Measuring medium	Liquid, gas, steam
Medium temperature	-40℃~80℃, highest to 280℃
Pressure range	0MPa~10MPa
Basic error	Full pipe: ±1.0%; Insertion type: ±1.5%
Theoretical range ratio	1:10, 1:20(liquid)
Flow speed range	Liquid(water): 0.7m/s~7m/s; gas: 5m/s~70m/s; steam: 4m/s~70m/s
DN (mm)	Full pipe: 15, 25, (32), 45, 50, (65), 80, 100, (125), 150, 200, 250, 300 Insertion type: 300~2000(recommended)
Reynolds number	Re>4000
Resistance coefficient	Full pipe: Cd≤2.4, resistance loss of insertion type could be negligible
Explosive-proof grade	Intrinsically safe: Exia II T ₂ -T ₅ , Exd: Exd II BT ₄
Environment temperature	Non-anti-explosion places: -40℃~55℃, anti-explosion places: -20℃~55℃
Direct power supply	+24VDC local digital output; Battery supply+3.6V, last 2~3 years
Output signal	Frequency pulse signal 1Hz~2600Hz, low level≤1V, high level≥5V, transmitter: two wire4mA~20mA DC
Material	1Cr18Ni9Ti

Order Guide

LUGB	Vortex Flowmeter		
Nominal diameter	-XXX	050 represents DN50; 100 represents DN100	
Measuring medium	O	Liquid	
	G	Gas	
	S	Steam	
Structure Type	L	Thread mounting	
	F	Flange mounting	
	Fk	Flange clamped-on type	
	Sp	Simple insertion type	
	Bp	Ball valve insertion type	
Output signal	E	4mA~20mA DC	
	M	pulse	
	H	HART	
	R8	RS485, standard Modbus communication protocol	
Compensation	N	Non-compensation	
	Ct	Temperature compensation only	
	Cp	Pressure compensation only	
	Ctp	Temperature and pressure compensation	
Converter Type	Id	Integrated with indication	
	Ib	Integrated without indication	
	S	Separated	
Temperature	Tc	Room temperature	
	Th	High temperature	
Pressure	Pc	Normal pressure	
	Ph	High pressure	
Working environment	N	General environment	
	d	Anti-explosion environment	
Power supply	V0	Battery power	
	V1	DC24V(Integrated)	
	V2	AC220V (Separated, with flow totalizer)	
	V3	AC220V(Separated, with heat totalizer)	
Complete part number	Example:LUGB-100-SFkE-Ctp-Id-TcPc-NV1		

Order note

1. Measuring medium_____.
2. Working pressure_____MPa, Temperature_____°C and power supply:_____V.
3. Flow range: Min. flow_____common flow_____Max flow_____Nominal diameter_____(mm).
4. Working environment: environment temperature_____°C, Explosion _____.
5. With/Without temperature, pressure compensation _____.