



Special characteristics

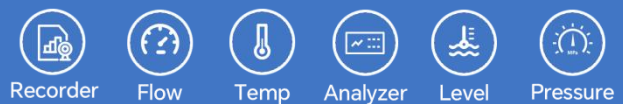
- Compact integrated design with transmitter and sensor in one housing
- Suitable for liquid, gas, and steam measurement with one meter
- Excellent long-term stability with no moving parts

Features

- High accuracy: $\pm 1.0\%$ for liquids, $\pm 1.0\text{--}\pm 1.5\%$ for gases and steam
- Wide nominal diameter range from DN15 to DN300
- Multiple output options: 4–20 mA, pulse, RS485 (Modbus RTU), HART (optional)
- Wide operating temperature range up to 400°C

Measuring principle

The vortex flow meter operates based on the Kármán vortex shedding principle, where the frequency of vortices generated by a bluff body is directly proportional to the flow velocity of the fluid.



The FK-LUGB-J Compact Vortex Flow Meter is a versatile and reliable flow measurement solution designed for liquids, gases, and steam. Featuring a compact integrated structure, high accuracy, and excellent long-term stability, it is ideal for industrial applications requiring low maintenance, low pressure loss, and consistent performance under harsh operating conditions.

Preferred areas of use are



Widely used for accurate flow measurement of liquids, gases, and steam in industrial process control, energy management, and utility applications.

Material and test

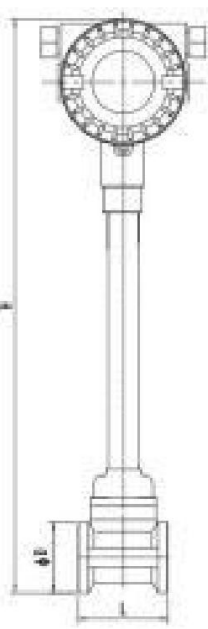


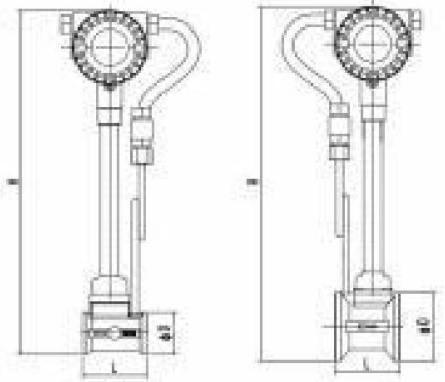
Parameters

Nominal Diameter	Flanged Type: DN15 – DN300; Wafer Type: DN200 – DN1000 and above; Threaded Type: DN15 – DN50	Flange Connection: DN15 – DN400; Simple Insertion Type: DN200 – DN1000 and above; Sanitary Type: DN15 – DN50
Nominal Pressure	Standard Wafer Type	(DN15–DN50): ≤ 4.0 MPa (customized for > 4.0 MPa) (DN65–DN100): 0 – 2.5 MPa (customized for > 2.5 MPa) (DN125–DN300): 0 – 1.6 MPa (customized for > 1.6 MPa)
	Standard Flanged Type	(DN15–DN50): 0 – 4.0 MPa (customized for > 2.5 MPa) (DN65–DN300): 0 – 1.6 MPa (customized for > 1.6 MPa)
Medium Temperature	Ambient Temperature: –40 ~ 100 °C Medium Temperature: –40 ~ 250 °C Low Temperature: –200 ~ 100 °C High Temperature: –40 ~ 330 °C Ultra-High Temperature: –40 ~ 400 °C Special Temperature Range: Customizable	
Operating Conditions	Ambient Temperature: –20 ~ 55 °C Relative Humidity: 5% ~ 90% Atmospheric Pressure: 86 ~ 106 kPa	
Materials	Body	304 stainless steel, 316 stainless steel, PTFE-lined
	Totalizer Housing	Die-cast aluminum
	Sensor	316L stainless steel
Allowable Vibration Acceleration	Piezoelectric type: 0.2 g	
Accuracy	Standard type	±1% of Reading, ±1.5% of Reading
	Insertion type	±2.5% of Reading
Turndown Ratio	1:10 to 1:25	
Power Supply	Flowmeter: DC 12–32 V 3.6 V lithium battery Dual power supply	

	supported
Output Signals	Pulse output 4-20 mA current loop output RS485(Modbus-RTU protocol) HART protocol GPRS remote transmission(IoT)
Pressure Loss Coefficient	$C_d \leq 2.4$
Ingress Protection	IP65
Electrical Connection	Standard: M20 × 1.5 internal thread or 1/2" NPT Special connections available upon request
Applicable Media	Gas, liquid, and steam Hydrogen Measurement Requirement: For hydrogen pipeline measurement, the pressure must be greater than 0.3 MPa. For pressures ≤ 0.3 MPa, special customization is required.
Transmission Distance	Three-wire pulse output type: ≤ 300 m Two-wire standard current output (4–20 mA): ≤ 1500 m, load resistance $\leq 500 \Omega$ RS485 / HART: ≤ 1200 m

■ Dimension

	Diameter (mm)	L	ΦD	H	
				Temp≤250℃ (Middle、Low)	Temp > 250℃ (High)
	DN15	70	55	393	453
	DN20	70	55	393	453
	DN25	70	55	393	453
	DN32	70	55	393	453
	DN40	85	80	405	465
	DN50	85	90	414	474
	DN65	85	105	429	489
	DN80	85	120	444	504
	DN100	85	140	464	524
	DN125	85	165	489	549
	DN150	100	194	516	576
	DN200	100	248	568	628
	DN250	115	300	619	679
	DN300	130	350	669	729
Flange-mounted vortex flow meter					

	Diameter (mm)	L	ΦD	H
	DN15	85	55	453
	DN20	85	55	453
	DN25	85	55	453
	DN32	85	55	453
	DN40	85	80	465
	DN50	85	90	474
	DN65	85	105	489
	DN80	85	120	504
	DN100	85	140	524
	DN125	85	165	549
	DN150	100	194	576
	DN200	100	248	628
	DN250	115	300	679
	DN300	130	350	729
Flange-mounted vortex flowmeter with temperature and pressure compensation				

■ Ordering Code

FK-LUGB-J-15-U1-A-M-0-K0-T1-WG-PC														Description
LUGB-J	-	-	-	-	-	-	-	-	-	-	-	-	-	Vortex flowmeter
Nominal diameter	15													DN15(1/2")
	20													DN20(3/4")
	25													DN25(1)
	32													DN32(1.25")
	40													DN40(1.5")
	50													DN50(2)
	65													DN65(2.5")
	80													DN80(3)
	1C													DN100(4)
	1E													DN125(5")
	1G													DN150(6)
	2C													DN200(8)
	2G													DN250(10)
	3C													DN300(12)
Process connection and body material	U1													Carbon steel clamp-on flange, 304SS
	U2													304SS clamp-on flange, 304SS
	HA													HG/T20592 flange connection, 304SS
	IA													ISO2852 clamps, 304SS
	XX													Others
Measured medium	A													Steam
	B													Gas
	C													Liquid
Accuracy				M										Level 1.5
Compensation types					0									Standard structure without compensation
					1									Temperature and pressure compensation
					2									Temperature compensation
					3									Pressure compensation
Output, display and power supply						K0								Pulse, no display, 24VDC
						K3								Pulse + 2-wire 4-20mA, display, 24VDC
						K4								Pulse + two-wire 4-20mA, display, 24VDC + battery dual power supply
						K5								Pulse + three-wire 4-20mA + RS485, display, 24VDC

	K6								Pulse + two-wire 4-20mA + Hart, display, 24VDC
	R1								RS485, display, 24VDC
	XX								Others
Heat resistance temperature	T1								-40 to 100℃
	TM								-40 to 250℃
	XX								Others
Electrical interfaces, housing material and protection level		WG							M20×1.5 cable gland, aluminum alloy, IP65
		WJ							NPT1/2 cable gland, aluminum alloy, IP65
Additional features (optional)									
Accessories				PC					304SS Flange