



## Turbine flowmeter

# Datasheet

SUP-LWGY

SUP-LWGY series turbine flow meters have the features: high accuracy, good repeatability, convenient installation/maintenance, simple structure etc.

Liquid flows through the turbine housing causing an internal rotor to spin. As the rotor spins, an electrical signal is generated in the pickup coil. This signal is converted into engineering units (liters, cubic meters, gallons etc.) on the local display where is applicable. Optional accessory modules can be used to export the signal to other equipment.

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## **Technical Specification**

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### **Performance**

- Repeatability:  $\pm 0.2\%$
- Accuracy: Standard:  $\pm 1\%$  of reading;  
Optional:  $\pm 0.5\%$  of reading

### **Wetted Components**

- Housing: Standard - 304 Stainless Steel Optional - 316 Stainless Steel
- Bearings and Shaft: Tungsten Carbide
- Rotor: Standard - 2Cr13 Stainless Steel (Optional Alloy CD4Mcu)
- Retaining Rings: 316 Stainless Steel

### **Output Signal: (Where applicable)**

- Sensor: Pulse signal (Low Level:  $\leq 0.8V$ ; High Level:  $\geq 8V$ )
- Transmitter: 4 to 20 mA DC current signal
  
- Signal Transmission Distance:  $\leq 1,000$  m

### **Electrical Connections:**

- Basic Type: Hausman Connector or three-core cable: ISO M20 $\times$ 1.5 Female

### **Protection Level:**

- IP65

### **Flange Connections**

- For standard product, the flange follows GB/T 9119-2000 (ISO 7005-1) RF (Raised Face).

## Operating Conditions

### Ambient:

- Temperature: -10°C to +55°C
- Pressure: 86 to 106 KPa
- Relative Humidity: 5% to 90%

### Power Supply:

- Sensor: +12V DC (Optional: +24V DC)
- Transmitter: +24V DC
- Field Display Type B: Integral 3.2V Lithium Battery  
(Others available on request)
- Field Display Type C: +24V DC

### Fluid Temperature and Pressure:

- Temperature: -20°C to +110°C
- Pressure: Fluid pressure should be limited according to rating.

### Measurable Flow Rate Range and Pressure Level:(Seetable1)

Table 1. Measurable Flow Range and Pressure Rating

Nominal Diameter		Standard Flow Range (SFR)	Extended Flow Range (EFR)	Standard Pressure Rating	Customized Pressure Rating
(mm)	(in.)	(m <sup>3</sup> /h)	(m <sup>3</sup> /h)	(MPa)	(MPa) - Flange Fitting
4	0.15	0.04 to 0.25	0.04 to 0.4	Thread: 6.3	12, 16, 25
6	0.25	0.1 to 0.6	0.06 to 0.6	Thread: 6.3	12, 16, 25
10	0.4	0.2 to 1.2	0.15 to 1.5	Thread: 6.3	12, 16, 25
15	0.5	0.6 to 6	0.4 to 8	Thread: 6.3; Flange: 2.5	4.0, 6.3, 12, 16, 25
20	0.75	0.8 to 8	0.45 to 9	Thread: 6.3; Flange: 2.5	4.0, 6.3, 12, 16, 25
25	1	1 to 10	0.5 to 10	Thread: 6.3; Flange: 2.5	4.0, 6.3, 12, 16, 25
32	1.25	1.5 to 15	0.8 to 15	Thread: 6.3; Flange: 2.5	4.0, 6.3, 12, 16, 25
40	1.5	2 to 20	1 to 30	Thread: 6.3; Flange: 2.5	4.0, 6.3, 12, 16, 25
50	2	4 to 40	2 to 40	Flange: 2.5	4.0, 6.3, 12, 16, 25
65	2.5	7 to 70	4 to 70	Flange: 2.5	4.0, 6.3, 12, 16, 25
80	3	10 to 100	5 to 100	Flange: 2.5	4.0, 6.3, 12, 16, 25
100	4	20 to 200	10 to 200	Flange: 1.6	4.0, 6.3, 12, 16, 25
125	5	25 to 250	13 to 250	Flange: 1.6	2.5, 4.0, 6.3, 12, 16
150	6	30 to 300	15 to 300	Flange: 1.6	2.5, 4.0, 6.3, 12, 16
200	8	80 to 800	40 to 800	Flange: 1.6	2.5, 4.0, 6.3, 12, 16

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## Cautions For Installation

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### Mounting Positions

• Turbine flow meters should be installed at a place in compliance with the requirements below:

- ◇ Easy maintenance
- ◇ No electromagnetic interface
- ◇ No vibration
- ◇ Away from heat source

### Mounting Orientation

• All turbine flow meters are designed to measure flow in only one direction. The direction is indicated by the arrow on the body.

### Required Lengths of Straight Runs

• Flow altering device such as elbows, valves and reducers can affect accuracy. See diagram 1 for typical flow meter system installation.

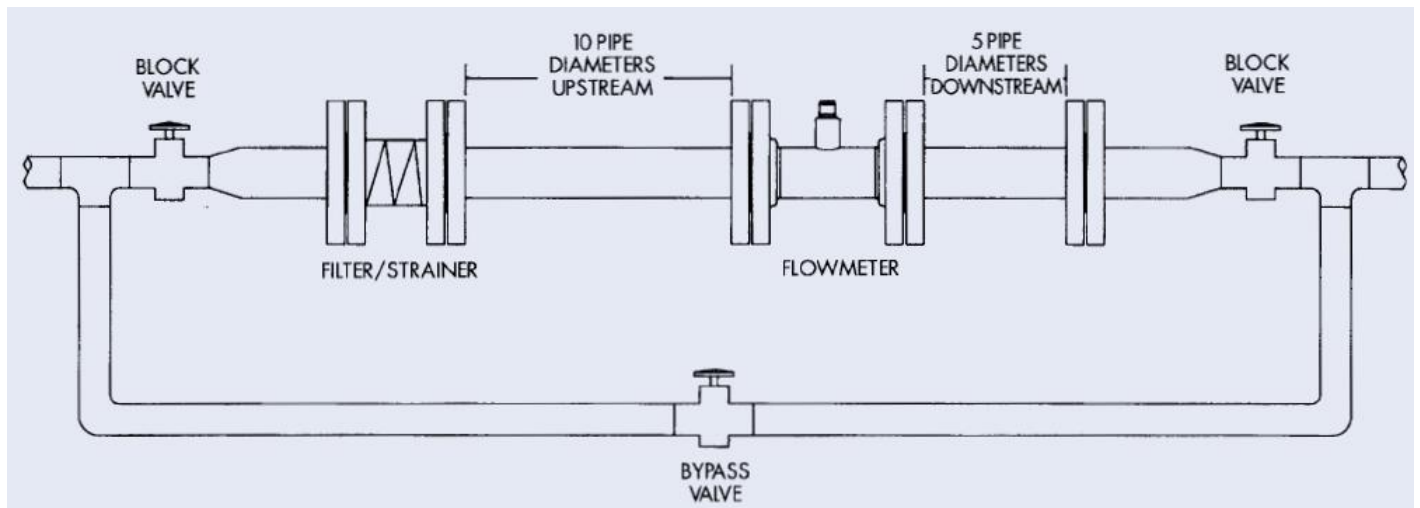
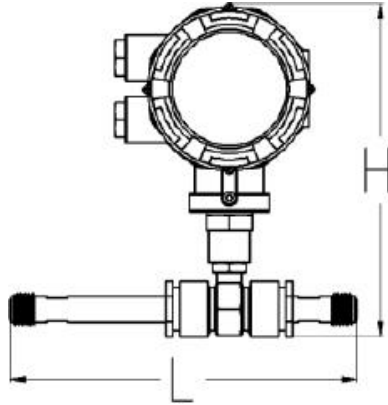


Diagram 1. Typical Flow Meter System Installation

## Installation Dimensions

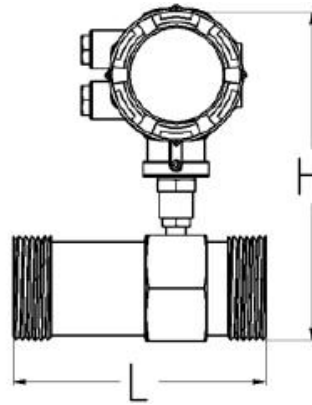
Thread or flange connection is used according to different flow models.

### Thread connection dimensions

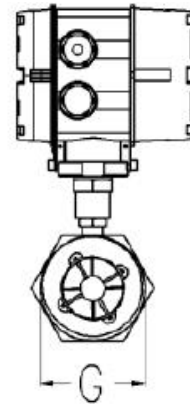


DN4-DN10

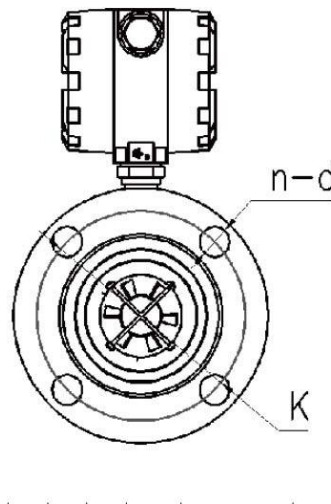
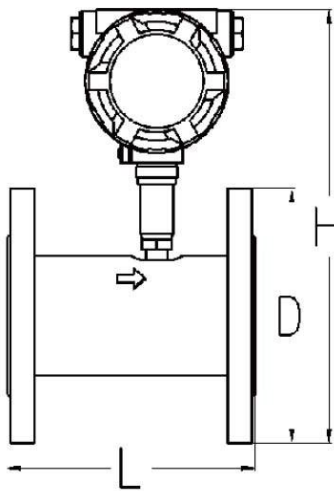
( straight section is included)



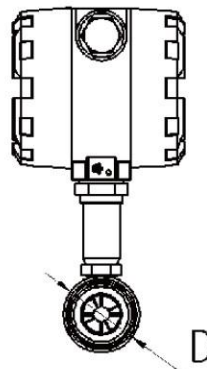
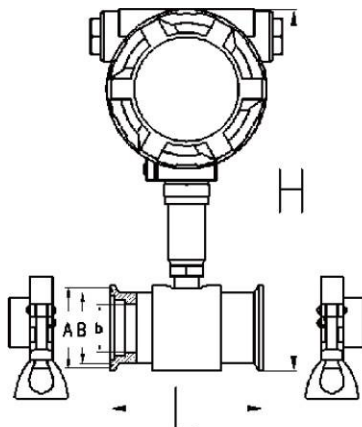
DN15-DN50



### Flange connection



### Sanitary Connection



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**Ordering code**


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SUP-LWGY	Code	Instructions
Diameter	Axxx	Stand for diameter A004:DN4;A032:DN32; (range:004~300)
Converter type	B1	24VDC;Pulse output; No display
	B2	24VDC;4-20mA output; No display
	B3	Battery power supply;Pulse output; No display
	B4	24VDC; 2-wire 4-20mA output; Digital display
	B5	24VDC; Pulse output; Digital display
	B6	24VDC; 0-20mA output; Digital display
	B7	24VDC; 3-wire 4-20mA/Pulse output; Digital display
	B8	220VAC; 4-20mA output; Digital display
	Notice	1) Modbus RS485 is optical for B4, B5, B6, B7, B8 type 2)Dual power(24VDC+battery) is optional for B4, B5, B6, B7, B8 type
Accuracy	C1	±1.0% of rate
	C2	±0.5% of rate
Flow Range	D1	Standard Range
	D2	Extended Range
Body Material	E1	SS304
	E2	SS316
Rotor Material	F1	2Cr13
	F2	CD4MCu
Commercion	G1	Male thread; Available from DN4...DN50
	G2	Female thread; Available from DN4...DN50
	G3	Wafer connection
	G4	DIN Flange
	G5	ANSI Flange
	G6	JIS Flange
Temperature Rating	H1	-20...+80°C
	H2	-20...+120°C
	H3	-20...+150°C



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