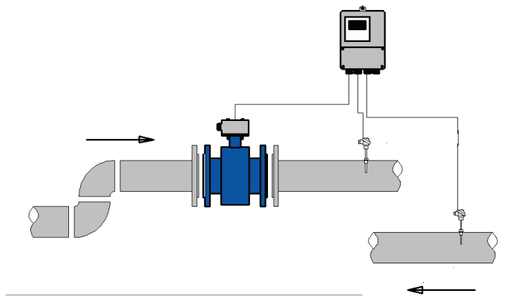
Electromagnetic Heat Meter

Description

Electromagnetic heat meter is a thermal conversion system contains the heat released by the hot fluid measurement instruments measure. It uses a high precision, high reliability magnetic flow meter with platinum RTD for temperature so that the heat meter has very excellent measurement performance. It can be widely used in metering residential quarters office building s and enterprises, centra heating, heating, air conditioning heat.



Model	Suffix Code											Description
LDGH-	❶	❷	❸	❹	❺	❻	-❼	❽	❾	❿	⓫	Magnetic Heat Meter
Type	Pt100											Pt100 temperature sensors
	Pt1000											Pt1000 temperature sensors
Diameter		XXXX										Stand for diameter 0006: DN6 2200: DN2200
Structure			S									Compact Type with local display
			L									Remote Type; 10 meters cable default
Electrode Material				M								SS316L
				T								Titanium
				D								Tantalum
				H								Hastelloy Alloy C
				P								Platin-Iridium
Signal Output					0							No Output
					1							4-20mA / Pulse
Liner Material						X						Hard Rubber
						P						Propylene Oxide
						F						PTFE
						A						PFA
Power Supply							-0					110-240Vac
							-1					24V DC (20-36V DC)
							-2					Battery Power Supply
Communication								0				No Communication
								1				Modbus RS485
								2				HART
								3				GPRS
								4				Profibus DP
Sensor Grounding									0			No Grounding
									1			Grounding Ring
									2			Grounding Electrode
Connection										DXX		D16: DIN PN16 Flange; D25: DIN PN25 Flange …
										AXX		A15: ANSI 150# Flange; A30: ANSI 300# …
										JXX		J10: JIS 10K Flange; J20: JIS 20K Flange…
										XXX		On request
Body Material											CS	Carbon Steel
											S4	Stainless Steel 304
											S6	Stainless Steel 316

Liquid Turbine Flow Meter

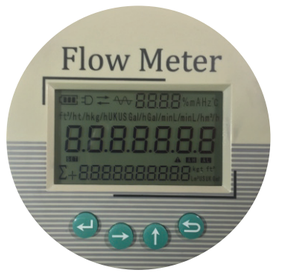
LWGY-N1 series

LWGY-N2 & A series

LWGY-E series

Operating Principle

Fluid entering the meter first passes through an inlet flow straightener that reduces its turbulent flow pattern. Fluid then passes through the turbine, causing the turbine to rotate at a speed proportional to fluid velocity. As each turbine blade passes through the magnetic field generated by the meter's magnetic pickup, an AC voltage pulse is generated. These pulses provide an output frequency that is proportional to volumetric flow.



Description

The liquid turbine flow meter in the series LWGY are specially designed for usage in water, diesel, gasoline and other fluid measurement and control systems. They operate according to the turbine principle, i.e. the speed of an impeller turning in the fluid flow is measured and converted into pulse or 4-20mA signals

Technical Data

- Output: Pulse / 4-20mA
- Accuracy:±1.0 of Rate / ±0.5% of Rate
- Operating Temp.: -20...+60°C
- Fluid Temp.: -20...+150°C
- Body Material: SS304 / SS316
- Rotor Material: 2Cr13 / CD4MCu
- Bearing Material: Tungsten Carbide

Flow Range

Diameter (mm)	Standard Range (m^3/h)	Extended Range (m^3/h)
4	0.04-0.25	0.04-0.4
6	0.1-0.6	0.06-0.6
10	0.2-1.2	0.15-1.5
15	0.6-6	0.4-8
20	0.8-8	0.45-9
25	1-10	0.5-10
32	1.5-15	0.8-15
40	2-20	1-20
50	4-40	2-40
65	7-70	4-70
80	10-100	5-100
100	20-200	10-200
125	25-250	13-250
150	30-300	15-300
200	80-800	40-800

Model Selection

Model	Suffix Code									Description
LWGY-	❶	❷	❸	❹	❺	❻	❼	❽	❾	Liquid Turbine Flowmeter
Diameter	XXX									Stand for diameter 004: DN4; 006: DN6 100: DN100; 200: DN200
Converter Type		N1								24V DC; Pulse output; No display
		N2								24V DC; Pulse output; No display; Ex
		A								24V DC; 4-20mA output; No display; Ex
		E1								Battery power supply; No output; Ex ; Digital display
		E2								24V DC; 2- wire 4-20mA output; Ex ; Digital display
		E3								24V DC; Pulse output; Ex; Digital display
		E4								24V DC; 0-20mA output; Ex; Digital display
		E5								24V DC; 3-wire 4-20mA / Pulse output; EX; Digital display
		M								220Vac; 4-20mA output; Ex; Digital display
		FE								FE: Fluidwell E series converter(Refer to page 22)
		FF								FF: Fluidwell F series converter(Refer to page 23)
		Notice:								*1) Modbus RS485 is optional for E2, E3, E4, E5 and M type*
										2) Dual Power(24VDC+ Battery) is optional for E2, E3, E4, E5, M
Accuracy			10							±1.0% of rate
			05							±0.5% of rate
			02							±0.2% of rate
Flow Range				S						Standard Range
				E						Extended Range
Body Material					S4					SS304
					S6					SS316
					PL					Plastic(DN15-DN50)
Rotor Material						Cr				2Cr13
						CD				CD4MCu
Explosion Proof							BT			Exd II BT6
							NA			No explosion proof
Connection								THM		Male thread; Available from DN4…DN50
								THF		Female thread; Available from DN4…DN50
								WAF		Wafer connection
								DXX		D16: DIN PN16 Flange; D25: DIN PN25 Flange…
								AXX		A15: ANSI 150# Flange; A30: ANSI 300# Flange…
								JXX		J10: JIS 10K Flange; J20: JIS 20K Flange…
Temperature									T1	-20…+80°C
									T2	-20…+120°C
									T3	-20…+150°C

Example:

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾

LWGY 050 E5 10 S S4 Cr BT D16 T2

❶ 050: DN50

❷ E5: 3- wire 4-20mA / Pulse output; 24V DC power supply

❸ 10: 1.0% of rate accuracy

❹ S: 0.2-1.2m³/h

❺ S4: SS304 body material

❻ Cr: 2Cr13 rotor

❼ BT: Exd II BT6

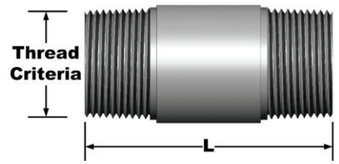
❽ D16: Flange DIN PN16

❾ T2: -20…120°C

Dimensions

(1) Thread Connection

Diameter (mm)	L (mm)	Thread Criteria
4	270	G ½"
6	270	G ½"
10	390	G ½"
15	75	G 1"
20	80	G 1"
25	100	G 1-¼"
32	140	G 2"
40	140	G 2"
50	150	G 2-1/2"

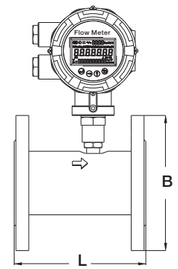


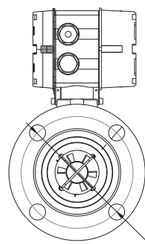
Male Thread Connection

Notice: Other thread criteria is available on request. (Female / Male thread is optional for G, NPT, BSP)

(2) Flange Connection

Notice: The standard flange is DIN PN16; but ANSI and JIS Flange are available on request.





Diameter		L	B Flange Diameter	PCD Bolt Circle Diameter	Bolt Hole Quantity
(Inch)	(mm)	(mm)	(mm)	(mm)	
1/2"	15	75	95	60	4
3/4"	20	80	105	70	4
1"	25	100	115	79	4
1-1/4"	32	140	140	89	4
1-1/2"	40	140	150	99	4
2"	50	150	165	121	4
2-1/2"	65	170	185	140	4
3"	80	200	200	152	4
4"	100	220	220	191	8
5"	125	250	250	216	8
6"	150	300	285	241	8
8"	200	360	340	298	8

Notice: Dimensions above is for DIN PN16 Flange.

Sanitary Liquid Turbine Flow Meter

Description

The sanitary liquid turbine flow meter is specifically designed for measurement of food liquids like milk, cream, juice of various fruits, pharma liquids etc. It is available with compact or remote version of transmitter can be installed either horizontally or vertically with a variety of optional end-fittings to meet your requirements.

-DN4-DN100

-Viscosity from 1 to 10 cst

-Pressure resistant to 10 bar

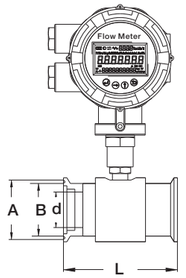
-Communication: Modbus RS485/ HART

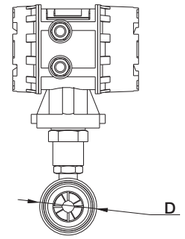
Model Selection

Model	Suffix Code									Description
LWS-	❶	❷	❸	❹	❺	❻	❼	❽	❾	Sanitary Liquid Turbine Flowmeter
Diameter	XXX									Stand for diameter 004: DN4; 100: DN100
Converter Type		N1								24V DC; Pulse output; No display
		N2								24V DC; Pulse output; No display; Ex
		A								24V DC; 4-20mA output; No display; Ex
		E1								Battery power supply; No output; Ex; Digital display
		E2								24V DC; 2- wire 4-20mA output; Ex; Digital display
		E3								24V DC; Pulse output; Ex; Digital display
		E4								24V DC; 0-20mA output; Ex; Digital display
		E5								24V DC; 3-wire 4-20mA / Pulse output; EX; Digital display
		M								110-240V ac; 4-20mA output; Ex; Digital display
		FE								Fluidwell E series converter (Refer to page 22)
		FF								Fluidwell F series converter (Refer to page 23)
		Notice:								*1) Modbus RS485 is optional for E2, E3, E4, E5 and M type*
										2) Dual Power(24V DC+ Battery) is optional for E2, E3, E4, E5 and M
Accuracy			10							±1.0% of rate
			05							±0.5% of rate
			02							±0.2% of rate
Flow Range				S						Standard Range
				E						Extended Range
Body Material					S4					SS304
					S6					SS316
Rotor Material						Cr				2Cr13
						CD				CD4MCu
Explosion Proof							BT			Exd II BT6
							NA			None
Connection								TRC		Tri-clamp for sanitary connection
Temperature									T1	-20…+80°C
									T2	-20…+120°C
									T3	-20…+150°C

ure Instrument

Dimensions





Diameter	L	A	B	d	D
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
4	50	Φ46	Φ40.5	4	Φ50
6	50	Φ46	Φ40.5	6	Φ50
10	50	Φ46	Φ40.5	10	Φ50
15	100	Φ46	Φ40.5	15	Φ50
20	100	Φ46	Φ40.5	20	Φ50
25	100	Φ46	Φ40.5	25	Φ50
32	120	Φ46	Φ40.5	32	Φ50
40	140	Φ59	Φ53.5	40	Φ64
50	150	Φ73.5	Φ68	50	Φ78
65	170	Φ86	Φ80.5	65	Φ91
80	200	Φ100.5	Φ94	80	Φ106
100	220	Φ113	Φ106	100	Φ119