

Patton



Electromagnetic flowmeter

Datasheet

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LDG series of electromagnetic flowmeter was developed on long-cultivated technology for flow measure. LDG family has extended its application range with such model as integrated and remote. Through constant development and improvements, LDG series electromagnetic flow meter has become more accurate and reliable and widely used in the industrial instrumental field. We provides wide range of electromagnetic flow meters, all fulfilling the highest demands in terms of accuracy and reliability in industries such as water and waste water, food and beverage, mining, pulp and paper.

Please note: Electromagnetic flow meter is only applicable to measure the flow of conductive liquid. The fresh supply of equipment is in factory setting condition, and only when manufacturers set the appropriate parameters, can it work well.

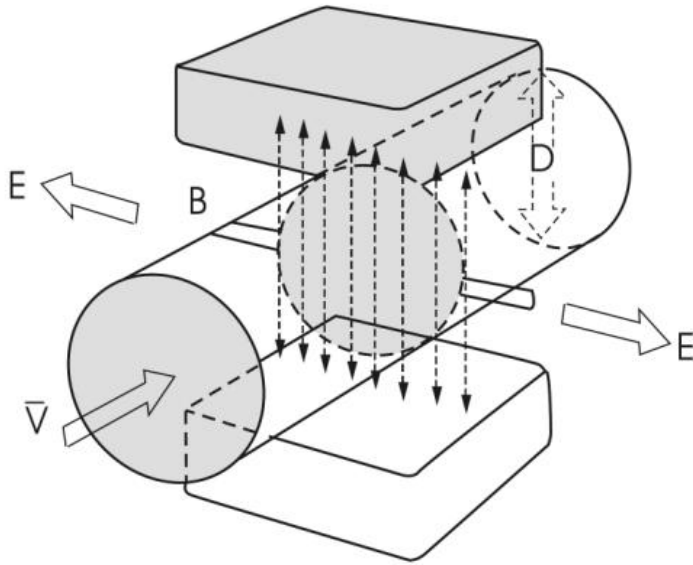
Features

- High degree of accuracy
- Extremely simple operation
- Self diagnosis for empty pipe Detection
- Nominal pressure: PN 10, 16, 40
- Process connection: Flange/clamp etc
- Lining: Rubber, PTFE,etc
- Pulse,4-20mA, RS485 or HART

Principle

The measurement principle of magnetic flowmeters can be described as follows: when the liquid goes through the pipe at the flow rate of v with a diameter D , within which a magnetic flux density of B is created by an exciting coil, the following electromotive E is generated in proportion to flow speed v :

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$$E=KBVD$$

E— Induced voltage;

K— Constant;

B— Magnetic induction (magnetic field);

V— Volume flow;

D— Pipe Size

Technical Specification

Model Number	LDG
Flow direction	Right Left
Accuracy	0.5%
Reliability	0.2%
Nominal width range	DN 10 to 1200 (3/8 to 48")
Housing material	Carbon steel
Process connection	Flange
Nominal pressure	DN6-DN50,PN<4.0MPA DN65-DN150,PN<1.6MPA DN200-DN600,PN<1.0MPA DN700-DN2000,PN<0.6MPA
Response time	0.02s
Lining Material	Rubber, F46,PTFE,PU,PFA

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Electrodes	316L,HastelloyC,platinum,tantalum, titanium,tungsten carbide
Process connection material	stainless steel
Protection type	IP65(compact version), IP68(remote version)
Display	Graphical display
Unit	L、m ³ 、Kg、t/s、min、h
Medium temperature	Rubber (80℃) F46 (150℃) PTFE (120℃) PU (60℃) PFA (180℃)
Cable gland	10meters(standard)
Power supply	100-240VAC 24VDC
Transmitter	4-20mA, pulse, RS485, Hart protocol
Conductivity	> 5 μS/cm, (20 μS/cm for demineralized water)
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Flow rate

Diameter (mm)	Flow range (m3/h)		
10	0.02827-0.25	0.3-1.6	2.0-3.3924
15	0.0636-0.6	0.8-3.0	4.0-7.632
20	0.131-1.0	1.2-5.0	6.0-13.6
25	0.176-1.6	2.0-8.0	10-21
32	0.2895-2.5	3.0-12	16-35
40	0.4524-4.0	5.0-20	25-45
50	0.707-6.0	8.0-40	50-85
65	1.195-10	12-60	80-143
80	1.81-16	20-120	160-217
100	2.83-25	30-160	200-339
125	4.42-40	50-250	300-530
150	6.36-60	80-400	500-763
200	11.3-100	120-600	800-1357
250	17.7-160	200-800	1000-2120
300	25.45-250	300-1200	1600-3054
350	34.6-300	400-1600	2000-4157
400	45.2-400	500-2000	2500-5429
450	57.3-500	600-2500	3000-6871
500	70.7-600	800-3000	4000-8482
600	102-800	1000-4000	5000-12216
700	139-1200	1600-5000	6000-16620
800	181-1600	2000-6000	8000-21720

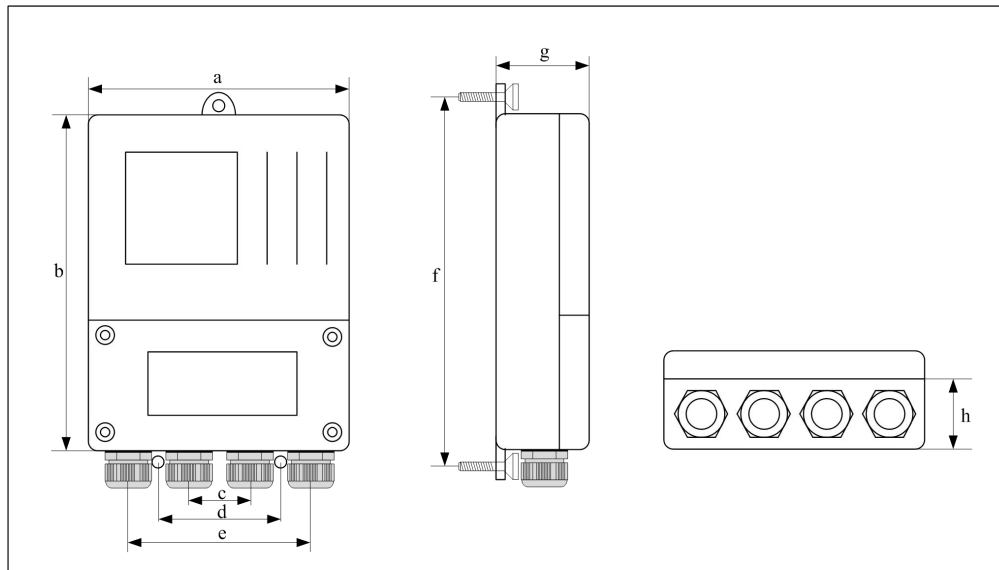
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900	229-1600	2000-8000	10000-27480
1000	283-2000	2500-10000	12000-33924
1200	407-2500	3000-12000	16000-48833
1400	554-3000	4000-16000	20000-66468
1600	723-4000	5000-20000	27000-86815

Note: The overall range is the optional range, and the blue zone data is preferable.

Dimensional Drawings

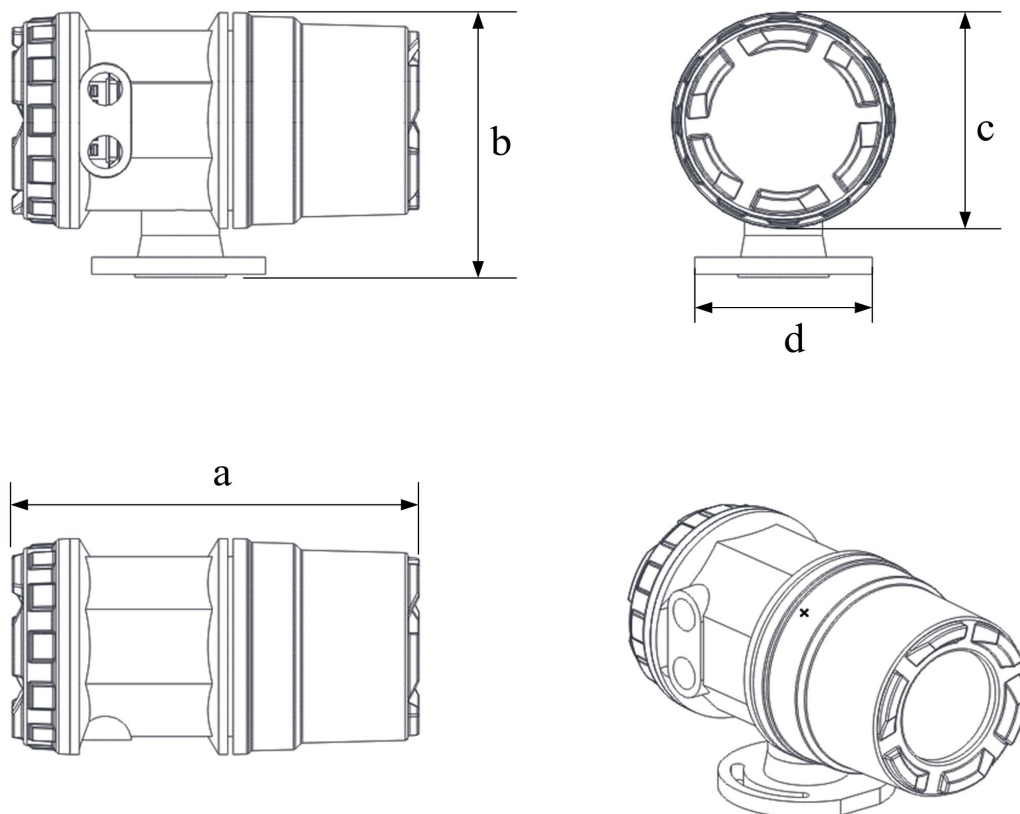
Remote type



[mm]								[Kg]
a	b	c	d	e	f	g	h	
164	214.5	34	70	102	233.5	69.7	45.7	0.6


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Compact type



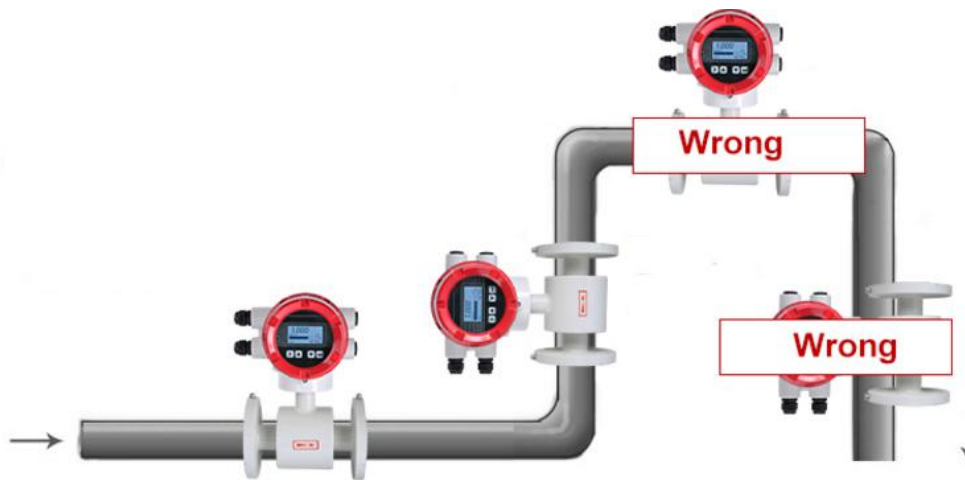
[mm]				[Kg]
a	b	c	d	
219	147	120	90	0.6

Installation

- The measuring pipe must always be full.
- The flow direction must match the identification marking 
- Install the devices without any mechanical tension (torsion, bending).
- Use a flange seal made from a material that is compatible with the medium and the medium temperature.

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- Seals should not extend into the flow area, since any turbulence affects the device accuracy.
- The pipeline must not exert any inadmissible forces or torque on the device.
- Install remote mount transmitters at a location that is largely free of vibration.
- Do not expose the transmitter to direct sunlight; provide sun protection if necessary.



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Ordering Code

Model NO	LDG-DN	
Basic type	A1	Compact type
	A2	Remote type
Nominal width	B10	DN10
	B15	DN15
	B25	DN25
	B32	DN32
	B40	DN40
	B50	DN50
	BX	DNX
Lining material	C1	Rubber (80℃)
	C2	F46 (150℃)
	C3	PTFE (120℃)
	C4	PU (60℃)
	C5	PFA (180℃)
Electrode material	D1	316L(standard)
	D2	HastelloyC
	D3	Platinum,tantalum
	D4	Titanium
	D5	Tungsten carbide
Pressure Rating	E1	4.0MPa(DN10-150)
	E2	1.6MPa(DN10-150)
	E3	1.0MPa(DN200-600)

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	E4	0.6MPa(DN700-2000)
Power supply	F1	100-240VAC
	F2	24VDC
	F3	Battery powered
Signal output	G1	4-20mA and RS485 (standard)
	G2	Hart
	H1	Normal water
	H2	Waste water
	H3	Mud
	H4	Other
	I1	NO
	I2	YES
Installation	J1	Flange (DIN,ANSI,JIS)
	J2	Clamp
	J3	Thread

Order code:

Example: LDG A1 B1 C1 D1 E1 F1 G1 H1 I1 J1