



# INSTRUMENTS

Open Channel Flow Meter Calibrations, Process Automation, Data Logging,  
Industrial Instrument & Electrical Goods Supplier

## KJs Instruments Magnetic Flow Meter

LDG-B series



LDG-T series



### Description

The magnetic flow meter is one of the most flexible and universally applicable flow measurement systems available. It is a volumetric flow meter which does not have any moving parts and is ideal for waste water applications or any dirty liquid which is conductive or water based. Magnetic flow meter is also ideal for the applications where low pressure drop and low maintenance are required.

### Application

- Waster water industry: transport networks sewage treatment plants, sludges
- Chemical industry: acids alkalis, dosing applications, abrasive or corrosive mediums
- Metal & mining industry: mediums with a high solid content, like ore or excavator mud
- Water industry: Revenue metering, district metering water abstraction, leakage detection
- Pulp & paper industry: pulp, pastes, sludges & other caustic mediums, liquor, additives, bleaches, colourants
- Food & beverage industry: mixing, dosing and filling of drinks under hygienic conditions filling systems applications

### Operating Principle

Following Faraday's law of magnetic induction, a voltage is induced in a conductor moving through a magnetic field. In the electromagnetic measuring principle, the following medium is the moving conductor. The voltage induced is proportional to the flow velocity and is supplied to the amplifier by means of two measuring electrodes. The flow volume is calculated by means of the pipe cross section area.

### Technical Data

<b>Certificates</b>	ISO9001:2008; CE
<b>Diameter</b>	PTFE: DN6-DN600
	Hard rubber: DN50-DN2200
<b>Flow Direction</b>	Positive; Negative
<b>Repeatability Error</b>	±0.1%
<b>Accuracy</b>	±0.5% of rate ; ±0.2% of rate
	Hard rubber liner: -20...+60°C
	High-temp rubber liner: -20...+90°C
<b>Medium Temperature</b>	PTFE liner: -20...+120 °C
	High-temp PTFE liner: -20...+160°C
	PFA: -20...+180°C
<b>Nominal Working Pressure</b>	DN10-DN25≤4.0Mpa
	DN32-DN150≤1.6Mpa
	DN200-DN600≤1.0Mpa
	DN700-DN2200≤0.6Mpa
<b>Velocity</b>	0.3-10m/s
<b>Ambient Temperature</b>	-20...+60 °C
<b>Relative Humidity</b>	5%~95%
<b>Consumed Power</b>	<20W



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## Flow Range

Diameter		Flow Rate (m <sup>3</sup> /h)		
		V=0.3m/s	V=6m/s	V=10m/s
mm	Inch	Min	Calibrated	Max
6	1/4"	0.03	0.6	1
10	3/8"	0.1	1.7	3
15	1/2"	0.2	4	6
20	3/4"	0.3	7	11
25	1"	0.5	11	18
32	1-1/4"	0.9	17	29
40	1-1/2"	1	27	45
50	2"	2	42	71
65	2-1/2"	4	72	120
80	3"	5	109	181
100	4"	8	170	283
125	5"	13	265	442
150	6"	20	382	636
200	8"	34	679	1131
250	10"	53	1060	1767
300	12"	76	1527	2545
350	14"	104	2078	3465
400	16"	136	2714	4524
450	18"	171	3435	5726
500	20"	212	4241	7069
600	24"	305	6107	10179
700	28"	415	8310	13850
800	32"	542	10860	18100
900	36"	662	13740	22900
1000	40"	848	16962	28270

KJ's Instruments (Pty) Ltd | 22 Burns Road, Hayfields, Pietermaritzburg, 3201

[kjinvest.sales@gmail.com](mailto:kjinvest.sales@gmail.com) / [kyron@kjsinstruments.co.za](mailto:kyron@kjsinstruments.co.za) | +2782 902 5614 | [www.kjsinstruments.co.za](http://www.kjsinstruments.co.za)



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## Model Selection

Model	Suffix Code											Description
LDG-	1	2	3	4	5	6	7	8	9	10	11	<b>Electromagnetic Flowmeter</b>
Type	B											B type
	T											T type(DN15- DN100 only)
Diameter	XXXX											Stand for diameter 0006: DN6; 0015: DN15 0100: DN100; 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									Platinum-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							110-240V AC
					-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			D 16: DIN PN16 Flange ; D25: DIN PN25 Flange...
									AXX			A15: ANSI150# Flange; A30: ANSI 300# Flange...
									JXX			J10: JIS 10K Flange; J20: JIS 20K Flange...
									XXX			On request
Body Material											CS	Carbon Steel
											S4	Stainless Steel 304

## Example:

Model Code: LDG B 0150 S M 1 F -0 1 2 A15 CS

- 1 B: B Type
- 2 0150: DN150
- 3 S: Compact type with local display
- 4 M: SS316L electrode
- 5 1: 4-20mA / Pulse output
- 6 F: PTFE liner
- 7 0: 110-240V AC power supply
- 8 1: Modbus RS485 Communication
- 9 2: Grounding electrode
- 10 A15: Flange ANSI 150#
- 11 CS: Carbon steel body

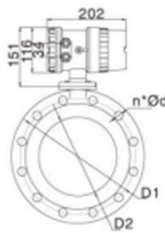
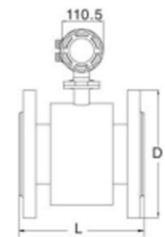


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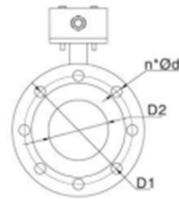
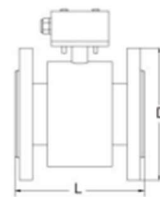
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## Dimensions:

Notice: The dimensions in table below are based on DIN PN16 Flange. Please consult the factory for other flanges: ANSI or JIS.



Compact Type



Remote Type

Flange DIN PN16

Diameter (mm)	B Type L (mm)	T Type L (mm)	D (mm)	D1 (mm)	D2 (mm)	n*Ød
10	160/120	120	90	60	41	4*14
15	160/200	200	95	65	45	4*14
20	165/200	200	105	75	58	4*14
25	200	200	115	85	68	4*14
32	200	200	140	100	78	4*18
40	200	200	150	110	88	4*18
50	200	200	165	125	102	4*18
65	250	200	185	145	122	4*18
80	250/200	200	200	160	138	8*18
100	250/200	250	220	180	158	8*18
125	250	NA	250	210	188	8*18
150	300	NA	285	240	212	8*22
200	350	NA	340	295	268	12*22
250	450	NA	405	355	320	12*22
300	500	NA	460	410	375	12*22

Notice: Two length are available for B type DN10, DN15, DN20, DN80, DN100



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## Sanitary Magnetic Flow Meter

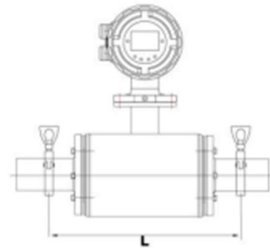
### Description

The sanitary magnetic 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.



### Length

DN10-DN25: L=200mm  
DN32-DN100: L=300mm



Model	Suffix Code										Description
<b>LDGS-</b>	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	<b>Sanitary Magnetic Flowmeter</b>
<b>Diameter</b>	XXXX										Stand for diameter 0010: DN10 0100: DN100
<b>Structure</b>	S										Compact Type with local display
	L										Remote Type;10 meters cable default
<b>Electrode Material</b>		M									SS316L
		T									Titanium
		D									Tantalum
		H									Hastelloy Alloy C
<b>Signal Output</b>					0						No Output
					1						4-20mA / Pulse
<b>Liner Material</b>					F						PTFE
					A						PFA
<b>Power Supply</b>						-0					110-240V AC
						-1					24V DC (20-36V DC)
						-2					Battery Power Supply
<b>Communication</b>							0				No Communication
							1				Modbus RS485
							2				HART
							3				GPRS
<b>Sensor Grounding</b>								0			No Grounding
								1			Grounding Ring
<b>Connection</b>										2	Grounding Electrode
									TRC		Tri- clamp for sanitary connection
<b>Body Material</b>										S4	Stainless Steel 304



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## Insertion Magnetic Flow Meter

Simple Type series



Ball Valve Type series



### Description

SURE Insertion Magnetic Flowmeter is designed for measurement of the velocity of liquid. It can be installed in any pipeline of internal diameter from 200mm (8in) to 3000mm (120in), through a small tapping. The complete lack of moving parts of this insertion flow sensor is the source of its reliability. There is no rotor to stop turning in dirty water and there are no bearings to wear out.

Reverse flow output are optional. A rapidly reversing magnetic field is produced in the lower housing. As the fluid moves through this field, a voltage is generated that is measured and translated into a frequency signal proportional to flow rate. This square wave signal can be sent directly to a PLC, control or converted to 4 to 20 mA.

### Flow Range

Diameter (mm)	Flow Rate(m <sup>3</sup> /h)			
	V=0.5m/s	V=1m/s	V=6m/s	V=10m/s
300	127	254	1526	2545
350	173	346	2077	3464
400	226	452	2713	4523
450	286	572	3434	5725
500	353	707	4239	7069
600	509	1017	6104	10180
700	692	1385	8308	13847
800	904	1809	10852	18086
900	1145	2289	13734	22891
1000	1413	2826	16956	28260
1200	2035	4069	24417	40694
1400	2769	5539	33234	55390
1600	3617	7235	43407	72346
1800	4578	9156	54937	91562
2000	5652	11304	67824	113040
2200	6839	13678	82067	136778
2400	8139	16278	97667	162778
2600	9552	19104	114623	191038
2800	11078	22156	132935	221558
3000	12717	25434	152604	254340

### Technical Data

Diameter	300-3000mm
Velocity	0.5-6m/s
Accuracy	±2.5% FS
Liquid Conductivity	> 5 µ S/cm
Straight Pipe	5D(D means diameter) for inlet; 3D for outlet
Liquid Temperature	-20... +150°C
Ambient Temperature	-20... +60°C
Pressure	1.6Mpa
Protection	IP65( compact type ) ; IP68( remote type )
Signal Output	4-20mA / Pulse
Communication	Rs485; Hart
Power Supply	V AC; Battery



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## Model Selection

Model	Suffix Code							Description
LDGC-	1	2	3	4	5	6	7	Insertion Magnetic Flowmeter
Diameter	XXXX							Stand for diameter 0200: DN200 3000: DN3000
Structure	S							Compact type with local display
	L							Remote type with 10 meters cable
Electrode Material		M						SS316L
		T						Titanium
		D						Tantalum
		H						Hastelloy Alloy C
		P						Platinum-Iridium
Signal output				0				No Output
				1				4-20mA / Pulse
Power Supply					-0			110-240V AC
					-1			24V DC (20-36V DC)
					-2			Battery Power Supply
Communication							0	No Communication
							1	Modbus RS485
							2	Hart
							3	GPRS
							4	Profibus DP
Connection							S	Simple Type
							B	Ball Valve Type



KJ's Instruments (Pty) Ltd | 22 Burns Road, Hayfields, Pietermaritzburg, 3201  
[kjinvest.sales@gmail.com](mailto:kjinvest.sales@gmail.com) / [kyron@kjsinstruments.co.za](mailto:kyron@kjsinstruments.co.za) | +2782 902 5614 | [www.kjsinstruments.co.za](http://www.kjsinstruments.co.za)