Sure

INSERTION TYPE ELECTROMAGNETIC FLOW METER

TO WORK WITH INNOVATIVE SPIRIT
TO DEVELOP HIGH QUALITY PRODUCTS
FOR THE MEASUREMENTS OF FLUIDS

INSERTION TYPE ELECTROMAGNETIC FLOW METER

01 INSERTION TYPE MAGNETIC FLOW METER WORKING PRINCIPLE

Insertion Type magnetic flow meters use the principle of Faraday's Law of Electromagnetic Induction to measure the flow rate of liquid in a pipe. In the magnetic flowmeter pipe parts, a magnetic field is generated, and channeled into the liquid flowing through the pipe.

Faraday's Law states that the voltage generated is proportional to the movement of the flowing liquid. A conductor moving through a magnetic field produces an electric signal within the conductor. And the singal is proportional to the velocity of the water moving through the field.

As fluid flows through the magnetic field, conductive particles in the fluid create changes. This variation is used to measure and calculate the velocity of water flow through the pipe. When the fluid moves faster, more voltage is generated. The electronic transmitter processes the voltage signal to determine liquid flow.

02 APPLICATIONS

- **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 waterabstraction, 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

03 FEATURES

- No moveable part
- Easy Maintenance
- No-stop installation
- 4-20 mA / Pulse output
- Rs485 / Hart / GPRS

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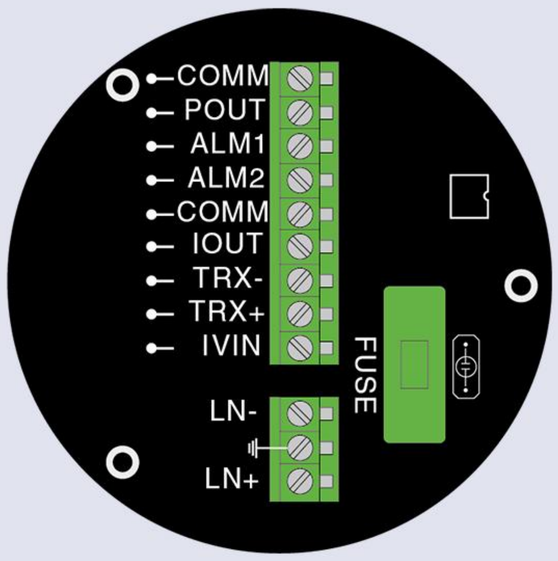
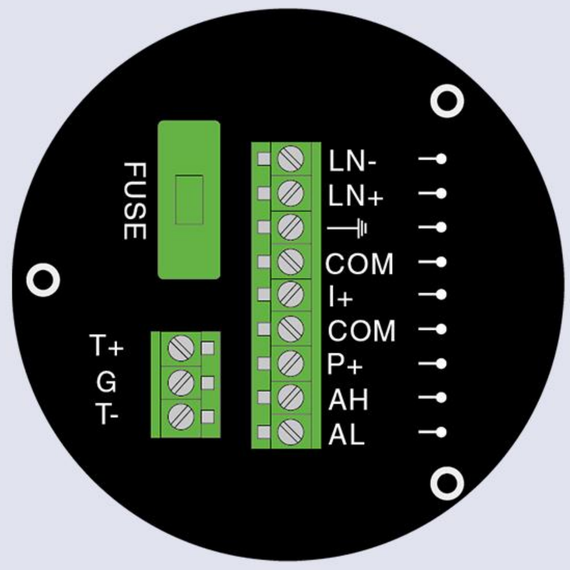
05 WIRING



Terminal Configuration

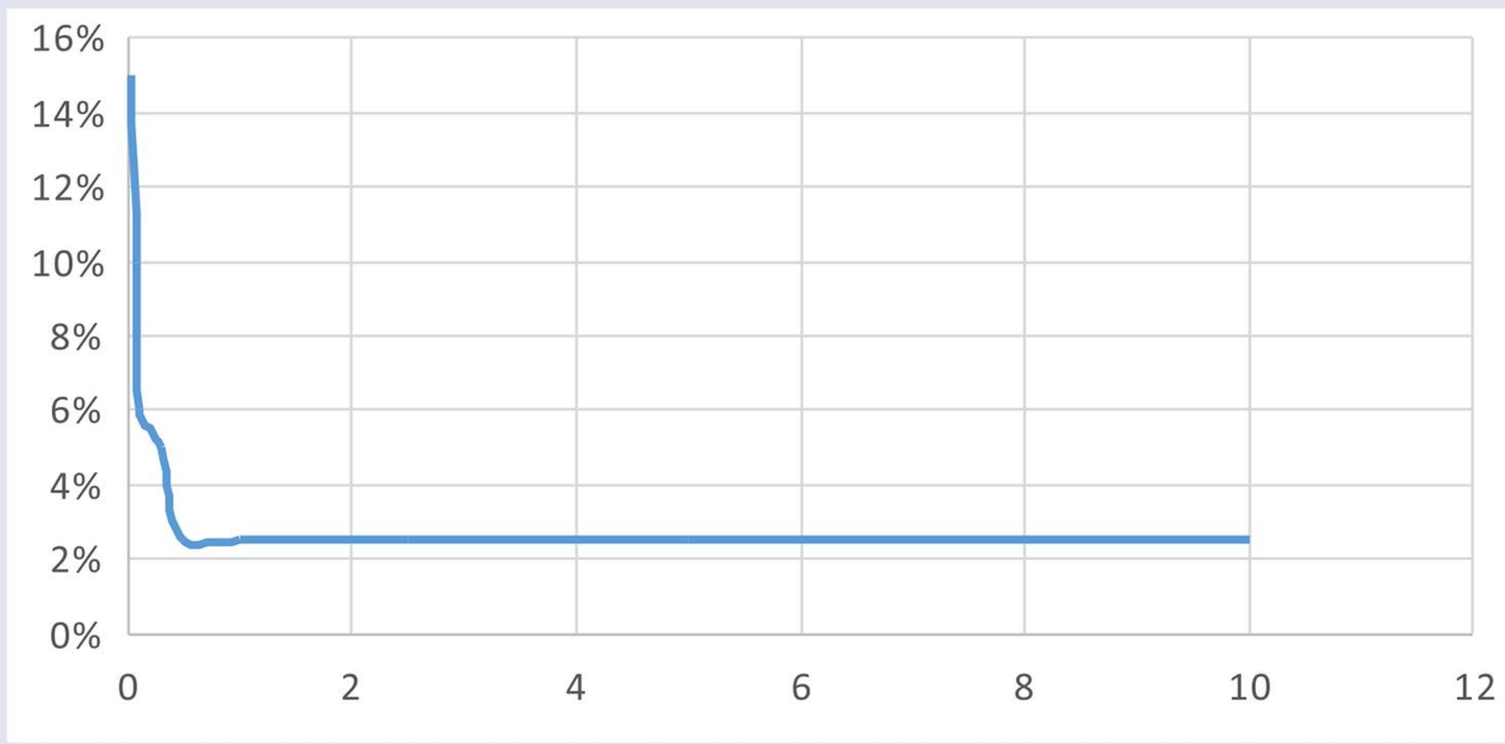


Terminal Configuration
Explosion-proof

I+	Frequency(Pulse) Output for Bi-directional Flow
COM	Alarm Output for Upper Limit
P+	Alarm Output for Low Limit
COM	Frequency, Pulse and Current Common (GND)
AL	Frequency, Pulse and Current Common (GND)
COM	Current Output of Flow Rate
FUSE	24V DC Power Supply for 2-wire 4-20mA Output
T+	+Communication RS485(+)
T-	-Communication RS485(-)
LN+	L: Live Wire of 110-240V AC; +: 24V DC +
LN-	N: Naught Wire of 110-240V AC; -: 24V DC -

POUT	Frequency(Pulse) Output for Bi-directional Flow
ALM1	Alarm Output for Upper Limit
ALM2	Alarm Output for Low Limit
COMM	Frequency, Pulse and Current Common (GND)
COMM	Frequency, Pulse and Current Common (GND)
IOUT	Current Output of Flow Rate
IVIN	24V DC Power Supply for 2-wire 4-20mA Output
TRX+	+Communication RS485(+)
TRX-	-Communication RS485(-)
LN+	L: Live Wire of 110-240V AC; +24V DC power supply
LN-	N: Naught Wire of 110-240V AC; -24V DC power supply

06 ERROR



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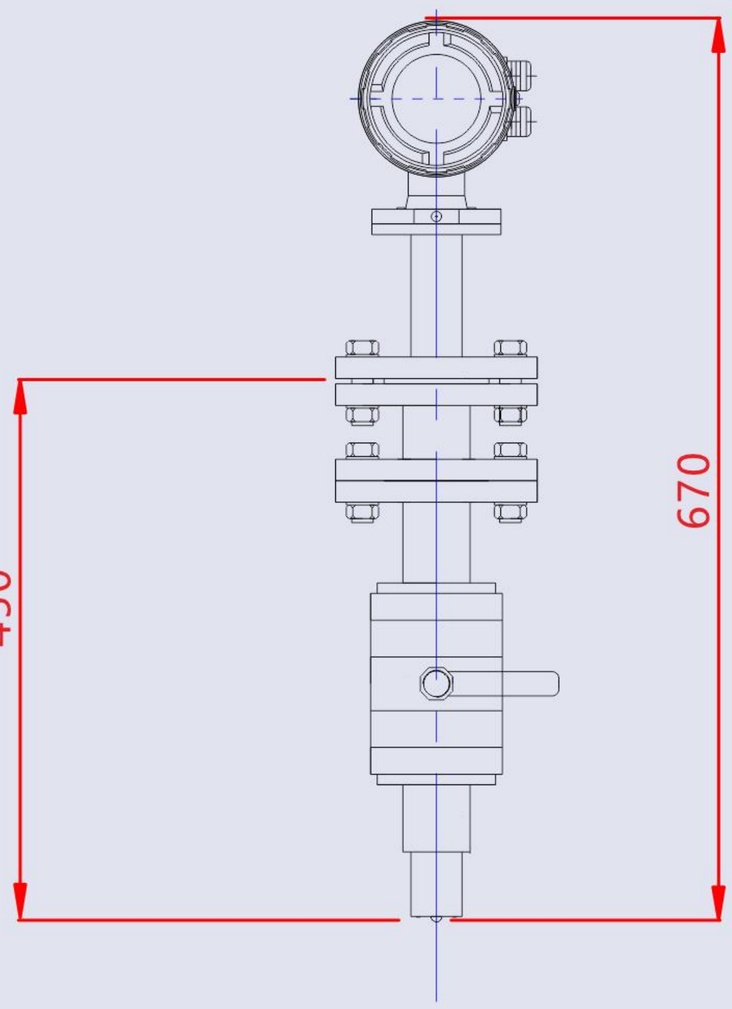
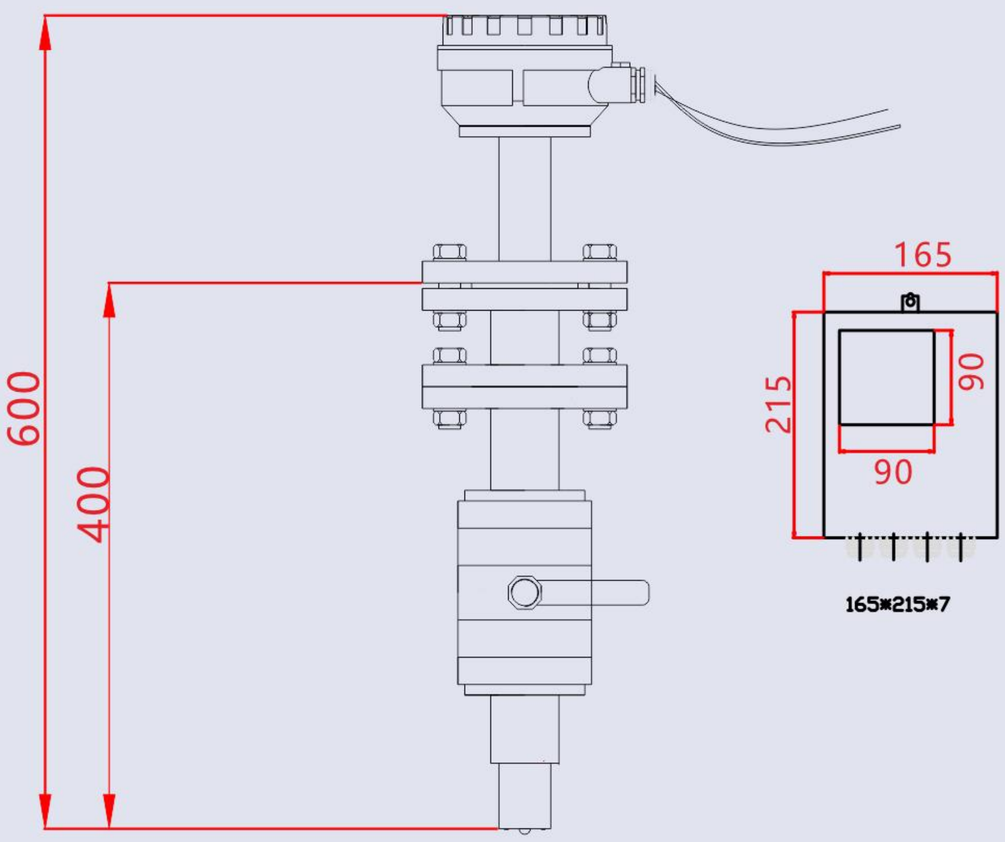
06 INSTALLATION DIMENSIONS



Compact Type



Remote Type

07 FEATURES

- Infrared Touch Screen
- 32G SD Card
- Bluedtooth
- Can display Temp. & Pressure

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08 TECHNICAL DATA

Diameter	200-2000mm
Velocity	0.5-10m/s
Accuracy	±2.0%
Liquid Conductivity	>20μS/cm
Liquid Temperature	-20…+120°C
Ambient Temperature	-20…+60°C
Pressure	1.6 Mpa
Protection	IP65 (Compact Type) ; IP68 (Remote Type)
Outoput	4-20 mA,Pulse
Communication	RS485; Hart; Modbus,GPRS
Power Supply	24 V DC; 110 - 240 Vac; Battery

09 MAIN PERFORMANCES OF THE ELECTRODE MATERIALS

Electrode Material	Application
SS316L	Applicable in water, sewage and low corrosive medium; Widely used in industries of petrol, chemistry, carbamide etc.
Hastelloy B	Having strong resistance to hydrochloric acid of any consistence which is below boiling point. Resistable against vitriol,phosphate, hydrofluoricacid, organic acid etc which are oxidable acid, alkali and non-oxidable salt.
Hastelloy C	Be resistant to oxidable acid such as nitric acid, mixed acid as well as oxidable salt such as Fe+++,Cu++ and sea water
Titanium	Applicable in seawater, and kinds of chloride, hypochlorite salt, oxidable acid (including fuming nitric acid), organic acid, alkali etc. Not resistant to a pure reducing acid (such as sulphuric acid, hydrochloric acid) corrosion. But if acid contains antioxidant (such as Fe+++,Cu++) is greatly reduce corrosion
Tantalum	Having strong resistance to corrosive mediums that is similar with glass. Almost applicable in all chemicals mediums except for hydrofluoric acid, oleum and alkali
Platinum-iridium	Almost be applicable in all chemical mediums except fortis, ammonium salt

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010 FLOW RANGE

Diameter (mm)	Flow rate (m^3/H)		
	V=0.5 m/s	V=6 m/s	V=10 m/s
200	57	679	1131
250	88	1060	1767
300	127	1526	2545
350	173	2077	3464
400	226	2713	4523
450	286	3434	5725
500	353	4239	7069
600	509	6104	10180
700	692	8308	13847
800	904	10852	18086
900	1145	13734	22891
1000	1413	16956	28260
1200	2035	24417	40694
1400	2769	33234	55390
1600	3617	43407	72346
1800	4578	54937	91562
2000	5652	67824	113040

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011 MODEL SELECTION

Model	Suffix Code							Description
LDGC-	❶	❷	❸	❹	-❺	❻	❼	Insertion Magnetic Flow Meter
Diameter	XXXX							Stand for diameter 0100: DN100 3000: DN3000
Structure		S						Compact type with local display
		L						Remote type (10m cable default)
Electrode Material			M					SS316L
			T					Titanium
			D					Tantalum
			H					Hastelloy 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
Connection							B	Ball Valve Type

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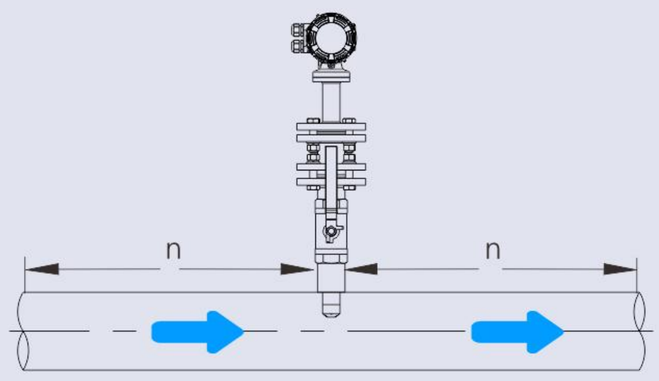
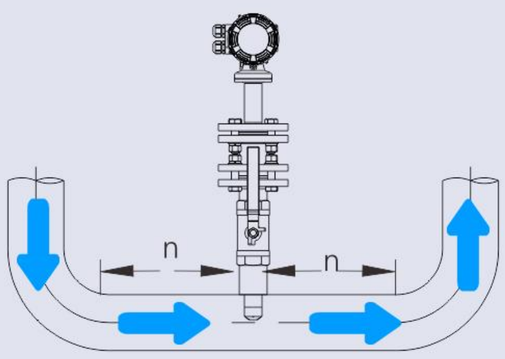
012 INSTALLATION

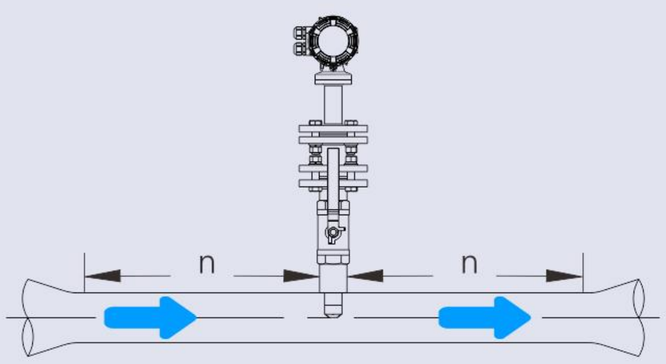
Pipeline type	Diagram No.	Front straight section	Back straight section
Horizontal Pipe	1	10D	5D
Bent Pipe	2	20D	5D
Expand Pipe	3	20D	10D
Valve Downstream	4	20D	5D
Shrink Tube	5	10D	10D
Pump Downstream	6	30D	10D
Mixed Liquid	7	30D	5D



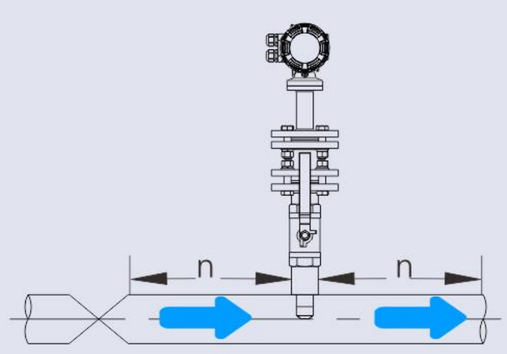
1. Horizontal pipe installation



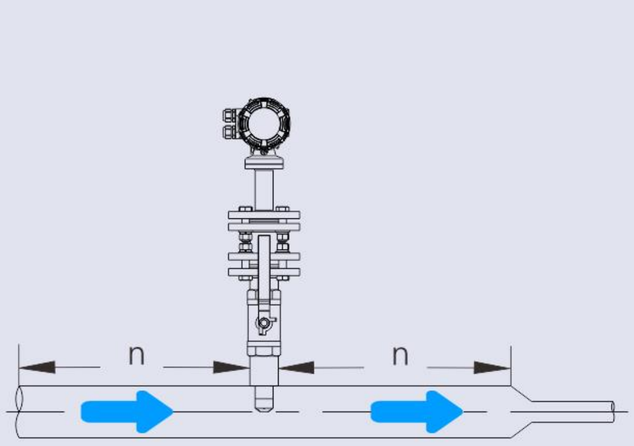
2. Bend pipe installation



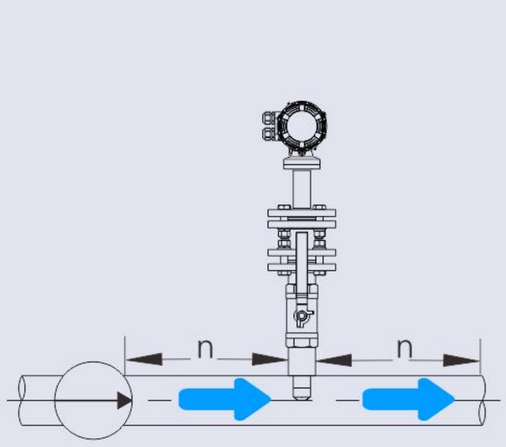
3. Expand pipe diameter installation



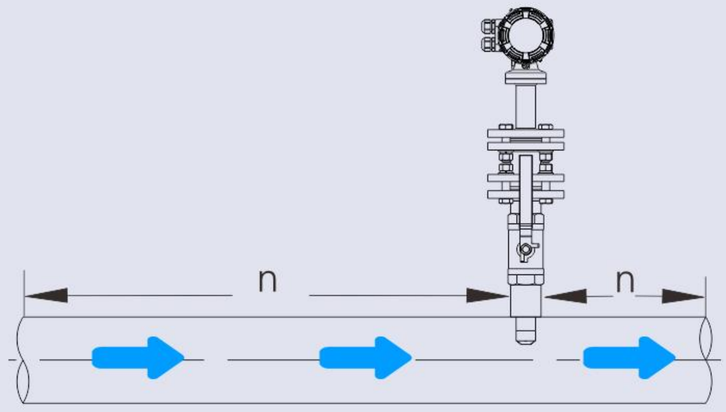
4. Valve doenstream installation



5. Shrink tube installation



6. Pump downstream installation



7. Mixed liquid installation