

ASEF Series

ELECTROMAGNETIC FLOW METER

ATEX TYPE



Your Engineering Partner...

WORKING PRINCIPLE

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 signal 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.



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 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

FEATURES

- High accuracy & wide flow range measurement
- 99.999% pure copper for oil
- No mechanically moving parts
- IP68 proof, maximum 3 meter immersion in water
- Drinking water approvals
- FDA approvals - Bi-directional measure
- Wide choice of materials for housing and flanges including SS304 and SS316
- Advanced wire-winding technology, no drift zero point
- Robust, fully welded and potted construction
- In house wet calibration for all diameters (up to DN3000)
- Three electrodes
- ≥ 3 mm thickness PTFE liner, durable service life

OTHER VARIANTS



A Type (Atex)



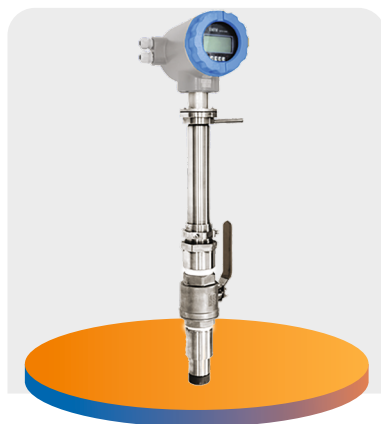
B Type



Remote Type (Y Type)



Sanitary Magnetic Flow Meter



Insertion Magnetic Flow Meter



Mini Magnetic Flow Meter

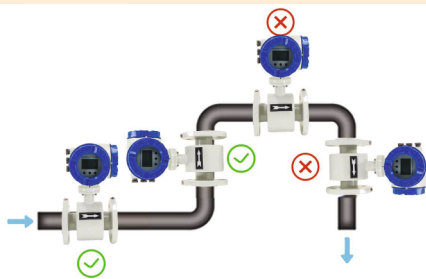
TECHNICAL DATA

Diameter	PTFE: DN2.5-DN1000
	Rubber: DN50-DN3000
Flow Direction	Forward; Reverse
Repeatability Error	±0.1%
Accuracy	±0.5% of rate; ±0.2% of rate
Medium Temperature	Rubber liner: -20...+60°C
	PTFE liner: -20...+120°C
	PFA: -20... +180°C
	Ceramic: -20...+ 180°C
Velocity	0.3-10m/s
Ambient Temperature	-20...+60°C
Relative Humidity	5%~95%
Power Consumption	<20W
Protection	IP 65; IP 68 (Remote Type)

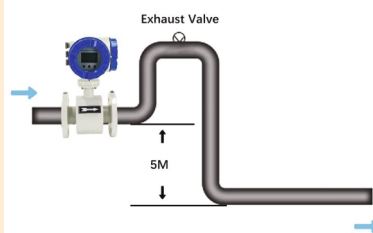
TECHNICAL DATA

Diameter		Flow Rate (m ³ /h)		
		V=0.3m/s	V=6m/s	V=10m/s
mm	Inch	Min	Calibrated	Max
2.5	1/10"	0.0053	0.106	0.177
4	1/8"	0.014	0.271	0.452
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

INSTALLATION



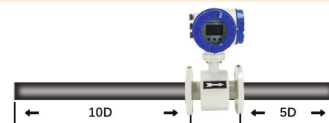
The flow meter should be installed at a lower level and vertically upwards of the horizontal pipe. Avoid installation at the highest and vertically downwards point of the pipe.



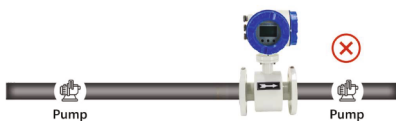
When drop is more than 5m, install exhaust valve at the downstream.



Install at the lowest point when used in open drain pipe



Need 10D of upstream and 5D of downstream



Don't install it at the entrance of pump, install it at the exit of pump.



Install at the rising direction

MODEL SELECTION

Model	Suffix Code													Description
ASEF	1	2	3	4	5	6	7	8	9	10	11	12	13	Electromagnetic Flow Meter
Type	B													B type (Compact structure)
	Y													Y type (Compact structure)
	W													W803 type (Battery supply)
	A													ATEX Type (Ex-proct)
	H													HY900(For sludge)
Diameter	XXX													Stand for diameter 00006 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 C
	P													Platinum-Iridium
	C													Ceramic
Signal Output	0													No Output
	1													4-20mA / Pulse
Liner Material	X													Rubber (DN40-DN2000)
	F													PTFE (DN2.5-DN2000)
	A													PFA (DN2.5-DN500)
	C													Ceramic (DN10-DN600)
	P													Polyurethane (DN15-DN500)
Power Supply	-0													110-240V AC
	-1													24V DC (20-36 V DC)
	-2													Battery Power Supply
Communication	0													No Communication
	1													Modbus RS485
	2													HART
	3													GPRS
	4													Others (Profibus DP, Profibus PA, BACnet / IP, etc)
Sensor Grounding	0													No Grounding
	1													Grounding Ring
	2													Grounding Electrode
Connection	DXX													D16: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
	CS													Stainless Steel 316
Cable	0													Default
	XX													Optional
Accuracy	5													± 0.5%
	2													± 0.2%

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