ABZAR TAMIN ARSHIA CO.

Electromagnetic Flow Meter

Electromagnetic Flow Meter



Measuring Medium

Water, acid, alkali, seawater and other strong corrosive or conductive liquids containing impurities.
Widely used in petrochemical, iron and steel metallurgy, water supply and drainage, irrigation, water treatment, environmental protection sewage measurement and control, paper making, medicine, food and other industrial and agricultural production process flow measurement and control.

Main Features

◆ Small pressure loss, high precision, good stability, two-way measurement, (electromagnetic calorimeter) cold and heat measurement function.

◆ Measurements are not affected by fluid density, viscosity, temperature, pressure and conductivit.

◆ Output communication: 4-20mA, pulse, RS485-MODBUS, Hart, GPRS, Profibus optional.

◆ The LCD backlight converter can be easily displayed and read in the sun or in a dark room.

◆ Bidirectional measurement system, built-in three totalizers: positive total flow, reverse total flow and total difference flow.

◆ The converter has self-diagnosis alarm output, no-load detection alarm output, flow upper and lower limit alarm, batch control (need to be customized) and other alarm output functions.

◆ Nominal pressure: 0.6MPa-42MPa.

◆ Protection class: IP65/IP68 submersible.

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Technical Data

Item	Parameters
Nominal diameter	DN6–3000mm
Power supply	24VDC, 220VAC, 3.6V battery powered
Electrode	SS316L, HB, HC, Ti, Ta, Pt, WC
Liner	CR (< 60℃), PU (< 80℃), PTFE (< 120℃), F46 (< 180℃), FPM (< 180℃)
Rated pressure	0.6–4.0MPa (high pressure customizable)
Connection type	thread connection (DN4–50mm) tri–clamp connection (DN4–100mm) Flange type (DN10–3000mm)
Structure	Integrated type, Remote type, Insertion type
Protection level	IP65/IP68
Remote type cable	10m (standard configuration)
Output communication	Pulse, 4–20mA, RS485 MODBUS (Standard configuration) Hart, GPRS, Profibus (Optional)
Explosion proof	Ex db ia[ia Ga] q IIC T6 Gb

Flow Range Sheet (0.5–5m/s flow rate)

Magnetic m^3/h					
DN6	0.05–0.5	DN100	14–140	DN600	510–5100
DN10	0.14–1.4	DN125	22–220	DN700	700–7000
DN15	0.3–3	DN150	32–320	DN800	900–9000
DN20	0.57–5.7	DN200	57–570	DN900	1140–11400
DN25	0.88–8.8	DN250	88–880	DN1000	1400–14000
DN32	1.4–14	DN300	130–1300	DN1200	2030–20300
DN40	2.2–22	DN350	170–1700	DN1400	2770–27700
DN50	3.5–35	DN400	226–2260	DN1600	3600–36000
DN65	6–60	DN450	286–2860	DN1800	4580–45800
DN80	9–90	DN500	350–3500	DN2000	5650–56500

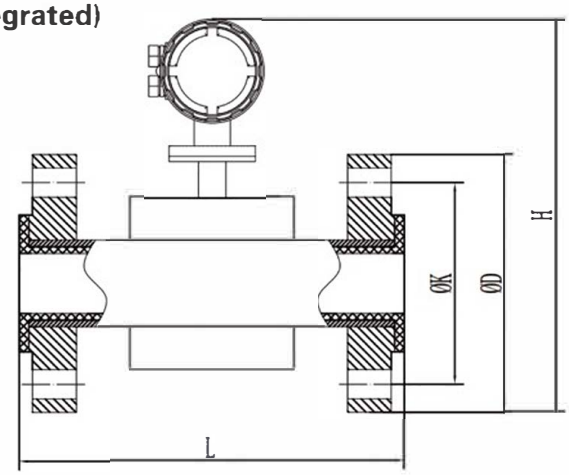
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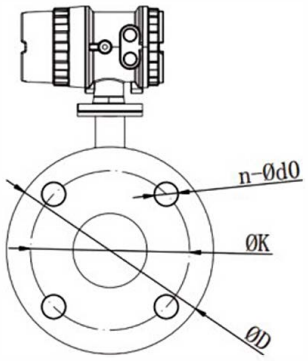
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Dimension (Integrated)





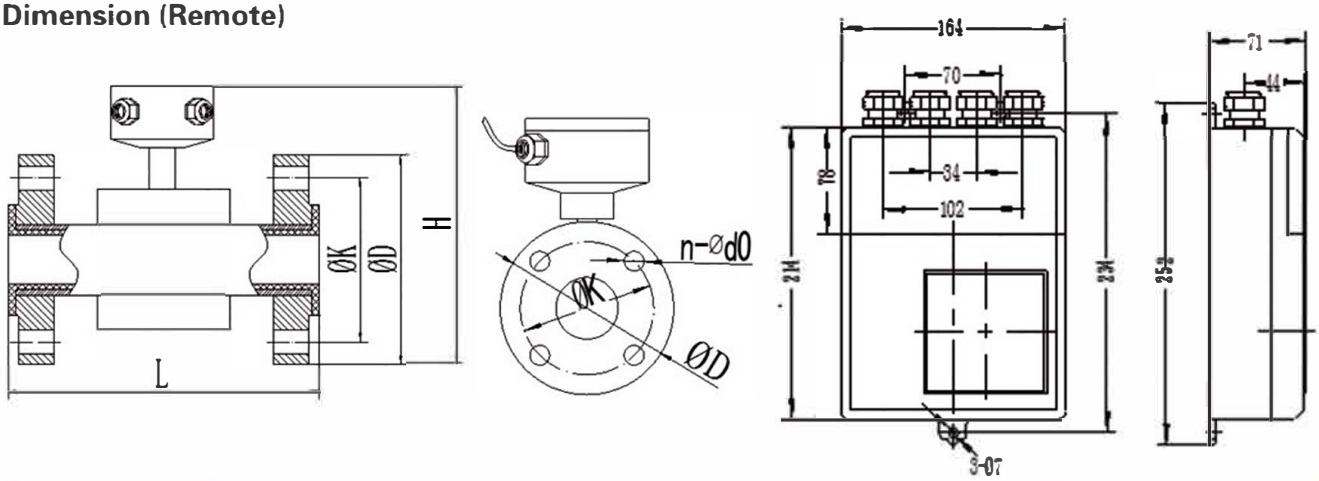
Inch	DN	Mpa	L	D	H	K	d0	n
3/8	10	1.6	200	90	306	60	14	4
1/2	15	1.6	200	95	307	65	14	4
3/4	20	1.6	200	105	310	75	14	4
1	25	1.6	200	115	315	85	14	4
1 1/4	32	1.6	200	135	325	100	18	4
1 1/2	40	1.6	200	145	340	110	18	4
2	50	1.6	200	160	347	125	18	4
2 1/2	65	1.6	250	180	370	145	18	4
3	80	1.6	250	195	383	160	18	8
4	100	1.6	250	215	408	180	18	8
5	125	1.6	250	245	437	210	18	8
6	150	1.6	300	280	480	240	23	8
8	200	1.6	350	335	522	295	23	12
10	250	1.6	450	405	588	355	26	12
12	300	1.6	500	460	642	410	26	12
14	350	1.6	500	520	710	470	26	16
16	400	1.6	500	580	763	525	30	16
18	450	1.6	550	640	821	585	30	20
20	500	1.6	550	705	879	650	34	20
24	600	1.6	600	840	996	770	41	20
28	700	1.6	700	910	1076	840	41	24
32	800	1.6	800	1020	1191	950	41	24
36	900	1.6	900	1120	1291	1050	41	28
40	1000	1.6	1000	1255	1408	1170	48	28
48	1200	1.6	1200	1485	1623	1390	54	32
56	1400	1.6	1400	1685	1823	1590	54	36
64	1600	1.6	1600	1930	2066	1820	58	40
72	1800	1.6	1800	2130	2266	2020	56	44
80	2000	1.6	2000	2345	2473	2230	62	48

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Dimension (Remote)



Inch	DN	MPa	L	D	H	K	d0	n
3/8	10	1.6	200	90	228	60	14	4
1/2	15	1.6	200	95	229	65	14	4
3/4	20	1.6	200	105	232	75	14	4
1	25	1.6	200	115	237	85	14	4
1 1/4	32	1.6	200	135	247	100	18	4
1 1/2	40	1.6	200	145	262	110	18	4
2	50	1.6	200	160	269	125	18	4
2 1/2	65	1.6	250	180	292	145	18	4
3	80	1.6	250	195	305	160	18	8
4	100	1.6	250	215	330	180	18	8
5	125	1.6	250	245	359	210	18	8
6	150	1.6	300	280	402	240	23	8
8	200	1.6	350	335	444	295	23	12
10	250	1.6	450	405	510	355	26	12
12	300	1.6	500	460	564	410	26	12
14	350	1.6	500	520	632	470	26	16
16	400	1.6	500	580	685	525	30	16
18	450	1.6	550	640	743	585	30	20
20	500	1.6	550	705	801	650	34	20
24	600	1.6	600	840	918	770	41	20
28	700	1.6	700	910	998	840	41	24
32	800	1.6	800	1020	1113	950	41	24
36	900	1.6	900	1120	1213	1050	41	28
40	1000	1.6	1000	1255	1330	1170	48	28
48	1200	1.6	1200	1485	1545	1390	54	32
56	1400	1.6	1400	1685	1745	1590	54	36
64	1600	1.6	1600	1930	1988	1820	58	40
72	1800	1.6	1800	2130	2188	2020	56	44
80	2000	1.6	2000	2345	2395	2230	62	48

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Main Performances Of Liner Materials

Liner Material	Main conditional	Scope of application
CR	1.Good abrasion resistance 2.Resistant to the corrosion of general low-concentrationacid alkali, and salt media.	1.≤60℃ 2.Water, sewage
PU	1.Excellent wear resistance 2.Poor acid and alkali resistance	1.≤80℃ 2.Slurry
PTFE	1.Hydrochloric acid, sulfuric acid, nitric acid. 2.Alkali and organic solvents	1.≤120℃ 2.Corrosive medium, concen-trated acid and base 3.Sanitary media
F46	1.Same abration resistance with PTFE 2. Having strong resistance to load pressure	1.≤180℃ 2.Corrosive acid, alkali and salt 3.Resistance to high pressureand negative pressure
FPM	1 Excellent elasticity, high breaking force, good abrasion-resistance 2.High-temperature non-corrosive medium	1.≤180℃ 2.hot water
PFA	1.Chemical equal to PTFE 2.Compressive tensile strength is good than F46	1.≤180℃ 2.Corrosive acid-base salt

Main Performances Of Electrode Materials

Electrode Material	Application
SUS316L	Industrial/municipal water, wastewater and low corrosive mediums.
Tungsten carbide	Non-corrosive, stong wear mediuns. Such as: mud, pulp and so on.
Hastelloy B	Strong resistance to hydrochloric acids below the boiling point. Resist against oxidable acids,alkali and non-oxidable salts. For instance, vitriol, phosphate, hydrofluoric acids, and organicacids.
Hastelloy C	Exceptional resistance to strong solutions of oxidizing salts and acids For example, Fe+++,Cu++, Nitric acids, mixed acids
Titanium	Titanium can withstand corrosive mediums such as seawater, chloride salt solutions, hypochlorite salts, oxidable acids(including fuming nitric acids), organic acids, and alkali.
Tantalum	Highly resistant to corrosive mediums.Applicable to all chemical mediums except Hydrofluoric Acids, Oleum and Alkali.
Platinum-iridium	Applicable to all chemical mediums except for Ammonium salts and Fortis.

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Selection Table

BTLD	XXX	X	X	X	X	X	X	X	X	X	X
Nominal diameter (mm)	Nominal DiameterCoding										
Design pressure	PN10 PN16 PN25 PN40	PN*									
	A15: ANSI 150# A30: ANSI 300# A60: ANSI 600#	A*									
	others(eg.J10: JIS 10K)	*									
Connection	flange		1								
	tri-clamp		2								
	thread		3								
	wafer		4								
	plug-in		5								
	others		6								
Liner material	CR			A							
	PTFE			B							
	PU			C							
	F46			D							
	FPM			E							
	PFA			F							
Electrode material	316L				1						
	hastelloyB (HB)				2						
	hastelloyC (HC)				3						
	titanium (Ti)				4						
	tantalum (Ta)				5						
	tungsten carbide (WC)				6						
	platinum-iridium alloy (Pt)				7						
	others				8						
Signal Output	4-20mA+Pluse+RS485					N					
	4-20mA+HART					A					
	4-20mA+Profibus PA/DP					B					
	GPRS					C					
Power supply	220VAC						1				
	24VDC						2				
	12VDC						3				
	3.6V						4				
	others						5				
Structure	Compact type							C			
	Remote type							R			
	Remote type (Soaking water)							X			
Material	carbon steel								1		
	SS304								2		
	SS316								3		
Converter	Round									H	
	Square									R	
Anti-explosion	Non-explosion proof										N
	Exd ia [ia Ga] q II CT6 Gb										H

Nominal Diameter Coding Table	
Nominal diameter	Coding
15	015
20	020
25	025
32	032
40	040
50	050
65	065
80	080
100	110
125	112
150	115
200	120
250	125
300	130
400	140
500	150
600	160
700	170
800	180
900	190
1000	210
1200	212
1400	214
1500	215
1600	216
1800	218
2000	220
2200	222
2400	224
2600	226
2800	228
3000	330

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