Mag1100/ Electromagnetic Flow Meter

DN3-DN3000mm / Flange Connection / Integrated Type

Benefit

- Medium temperature :-20℃~60℃
- Diagnostic function and empty pipe detection.
- Measure forward and reverse direction flows.
- Built-in reference electrodes,no need to connect ground ring.
- Dual frequency excitation and stable zero point.
- Precision coil winding technology,makes magnetic field more uniform.
- High protection grade,IP65.
- No moving parts,no pressure loss.
- High accuracy: ±0.5% of reading,±0.3% and ±0.2% optional,velocity >0.3 m/s.

Standard Specification

- Size : DN3-DN3000mm (1/8”~120”)
- Accuracy :±0.5% of reading,±0.3% and ±0.2% optional,velocity >0.3 m/s
- Velocity : Normal liquid >20 μS/cm,
- Protection Grade : IP65
- Electrode : SS316L, Hastelloy C, Hastelloy B, Titanium Tantalum, Platinum-iridium, Tungsten carbide
- Power Supply : AC85~250V, DC20V~36V
- Power Consumption : <20W
- Communication : RS485/MODBUS,Hart,PROFIBU DP
- Language : English,Spanish,Portuguese Russian,Italian,French,etc
- Display : LC Display,128X128mm Three lines 4 internal push buttons
- Ambient Temperature : -20℃~60℃
- Relative Humidity : 5%~95%
- Liner Material : Neoprene(Rubber) PTFE PFA F46 Polyurethane

- Flow Range : 0.1 m/s ~ 15 m/s
- Working Pressure : 4.0 MPa (DN3-DN150)
  1.6 MPa (DN200-DN600)
  1.0 MPa (DN700-DN1000)
  0.6 MPa (DN1200-DN3000)
- Flange Standard : ANSI 150#, 300#, 600#
  JIS 10K, 20K, 40K
  DIN PN10,PN16,PN25,PN40
- Exciting Current : 125mA, 187mA, 250mA
- Exciting Frequency : 3.12Hz, 4.16Hz, 6.25Hz
  12.5Hz, 25Hz, 30Hz
- Material
  Measuring Tube : Stainless Steel 304
  Flange : Carbon Steel (standard)
  : Stainless Steel 304 (optional)
  : Stainless Steel 316 (optional)
- Straight Pipe : Inlet Path ≥ 10D
  Outlet Path ≥ 5D
- Certificates : CE, CQC, ISO9001
- Frequency Output : 1~5000 Hz
- Flow Unit : L/h, L/m, L/s, m^3/H, m^3/m, m^3/s
- Electrode No. : 3
  2 measuring electrode
  1 grounding electrode
- Signal Output : 4~20 mA,pulse

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Dimension of Sensor and Converter

Nominal Diameter	External Dimension (mm)		Weight
mm	L	D	Kg
3	200	90	4
6	200	90	5
10	200	90	6
15	200	95	8
20	200	105	10
25	200	115	12
32	200	140	13
40	200	150	14
50	200	165	15

65	200	185	18
80	200	200	20
100	250	235	25
125	250	270	28
150	300	300	30
200	350	340	50
250	450	405	70
300	500	460	95
350	550	520	120
400	600	580	140
450	600	640	160
500	600	715	200
600	600	840	280
700	700	895	350
800	800	1015	400
900	900	1115	480
1000	1000	1230	550
1200	1200	1405	660
1400	1400	1630	750
1600	1600	1830	850
1800	1800	2045	980
2000	2000	2265	1200
2200	2200	2475	1600
2400	2400	2685	2000
2600	2600	2905	2400
2800	2800	2905	2700
3000	3000	3315	2900

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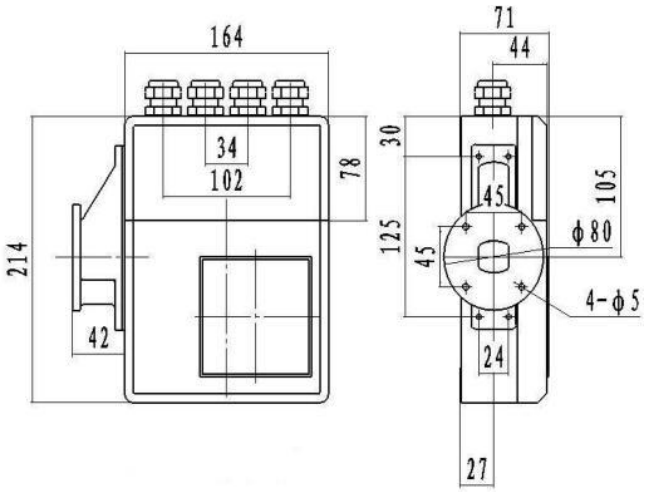

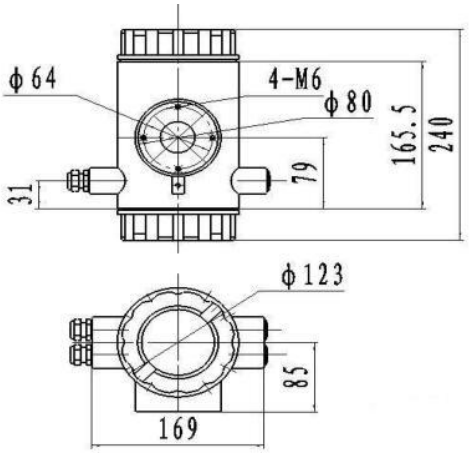

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Selection Table electromagnetic flow meter

Coil

Main Board

Electrode

Liner

Selection

QTLD	XXX	X	X	X	X	X	X	X	X
Caliber	DN10~DN3000 3-digital code seeing caliber code table 13								
Nominal pressure	0.6MPa	1							
	1.0MPa	2							
	1.6MPa	3							
	4.0MPa	4							
	Other	5							
Connection mode	Flange connection		1						
	Clamp connection		2						
	Sanitary connection		3						
Liner material	PTFE			1					
	PFA			2					
	Neoprene			3					
	Polyurethane			4					
	Ceramic			5					
Electrode material	316L				1				
	Hastelloy B				2				
	Hastelloy C				3				
	Titanium				4				
	Platinum-iridium				5				
	Tantalum				6				
	Stainless steel covered with tungsten carbide				7				
Structure type	Integral type					1			
	Remote type					2			
	Remote type immerse					3			
	Integral type Ex-proof					4			
	Remote type Ex-proof					5			
Power	220VAC 50Hz						E		
	24VDC						G		
Output/ communication	Flow volume4 ~ 20mADC/pulse							A	
	Flow volume4 ~ 20mADC/RS232C communication							B	
	Flow volume4 ~ 20mADC/RS485 communication							C	
	Flow volume HART output/with communication							D	
Converter figure	Square								A
	Circular								B

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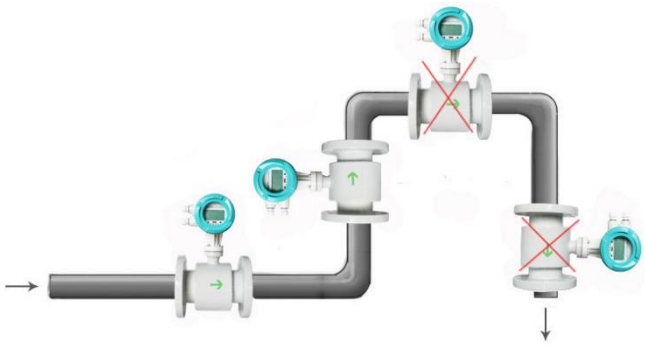
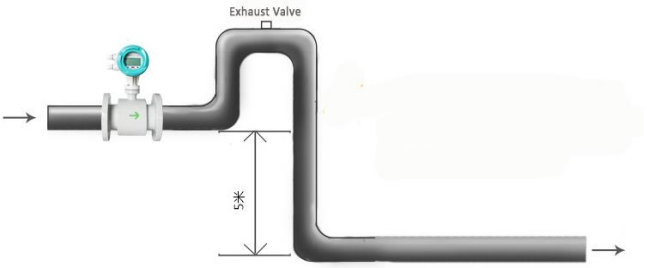
Installation Notice



Installed at the lowest point and vertical upward direction

Don’t install at the highest point and vertical downward direction



Install exhaust valve at the downstream of flow meter when drop is more than 5m

Installed 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

Installed at the rising direction

Electrode Property

SS316L	Applicable in water,sewage and corrosive mediums. Widely used in industries of petrol,chemistry,urea,etc
Stainless Steel Covered with tungsten carbide	Applicable in mediums of no corrosive and low abrasion.
Hastelloy B	Having strong resistance to HydrochloriC acid of any concentration which is below boiling point. Also resistant against vitriol,phosphate,Hydrofluoric acid,organic acid etc,which are Oxidizing acid,alkali and non oxidizing salt.
Hastelloy C	Be resistant to oxidizing acid such as Nitric acid,mixed acid as well as oxidizing salt such as Fe+++,Cu++ and sea water
Titanium	Applicable in seawater,and kinds of chloride,Hypochlorite salt,oxidizing acid(including Fuming Nitric acid),organic acid,alkali etc.Not resistant to a pure reducing acid(such as Sulfuric acid,Hydrochloric acid)corrosion.Acid contains antioxidant(such as Fe+++,Cu++)will greatly reduce corrosion.
Tantalum	Having strong resistance to corrosive mediums that is similar with glass. Almost applicable in all chemical mediums.Except for Hydrofluoric acid,Oleum and Alkali.
Platinum-iridium	Almost be applicable in all chemical mediums except for aqua fortis,ammonium salt.

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Electromagnetic Flowmeter Flow-rate Flow Range Comparison

Electromagnetic Flowmeter Flow Rate-Flow Range Comparison																	
Size (mm)	Rate (m/s)	Range (m3/h)	Rate (m/s)	Range (m3/h)	Rate (m/s)	Range (m3/h)	Rate (m/s)	Range (m3/h)	Rate (m/s)	Range (m3/h)	Rate (m/s)	Range (m3/h)	Rate (m/s)	Range (m3/h)	Rate (m/s)	Range (m3/h)	Rate (m/s)	Range (m3/h)
3	0.1	0.003	0.2	0.005	0.5	0.013	1	0.025	4	0.102	10	0.254	12	0.305	15	0.382		
6	0.1	0.01	0.2	0.020	0.5	0.051	1	0.102	4	0.407	10	1.017	12	1.221	15	1.526		
10	0.1	0.028	0.2	0.057	0.5	0.141	1	0.283	4	1.130	10	2.826	12	3.391	15	4.239		
15	0.1	0.064	0.2	0.127	0.5	0.318	1	0.636	4	2.543	10	6.359	12	7.630	15	9.538		
20	0.1	0.113	0.2	0.226	0.5	0.565	1	1.130	4	4.522	10	11.304	12	13.56	15	16.956		
25	0.1	0.177	0.2	0.353	0.5	0.883	1	1.766	4	7.065	10	17.663	12	21.2	15	26.494		
32	0.1	0.289	0.2	0.579	0.5	1.447	1	2.894	4	11.575	10	28.938	12	34.73	15	43.407		
40	0.1	0.452	0.2	0.904	0.5	2.261	1	4.522	4	18.086	10	45.216	12	54.26	15	67.824		
50	0.1	0.707	0.2	1.413	0.5	3.533	1	7.065	4	28.260	10	70.650	12	84.78	15	105.98		
65	0.1	1.19	0.2	2.39	0.5	5.97	1	11.94	4	47.76	10	119.40	12	143.3	15	179.10		
80	0.1	1.81	0.2	3.62	0.5	9.04	1	18.09	4	72.35	10	180.86	12	217.0	15	271.30		
100	0.1	2.83	0.2	5.65	0.5	14.13	1	28.26	4	113.04	10	282.60	12	339.1	15	423.90		
125	0.1	4.42	0.2	8.83	0.5	22.08	1	44.16	4	176.63	10	441.56	12	529.9	15	662.34		
150	0.1	6.36	0.2	12.72	0.5	31.79	1	63.59	4	254.34	10	635.85	12	763.0	15	953.78		
200	0.1	11.3	0.2	22.61	0.5	56.52	1	113.04	4	452.16	10	1130.40	12	1356	15	1696		
250	0.1	17.66	0.2	35.33	0.5	88.31	1	176.53	4	706.50	10	1766.25	12	2120	15	2649		
300	0.1	25.43	0.2	50.87	0.5	127.2	1	254.34	4	1017	10	2543.40	12	3052	15	3815		
350	0.1	34.62	0.2	69.24	0.5	173.1	1	346.19	4	1385	10	3461.85	12	4154	15	5193		
400	0.1	45	0.2	90	0.5	226.1	1	452	4	1809	10	4522	12	5426	15	6782		
450	0.1	57	0.2	114	0.5	286.1	1	572	4	2289	10	5723	12	6867	15	8584		
500	0.1	71	0.2	141	0.5	353.3	1	707	4	2826	10	7065	12	8478	15	10598		
600	0.1	102	0.2	203	0.5	508.7	1	1017	4	4069	10	10174	12	12208	15	15260		
700	0.1	138	0.2	277	0.5	692.4	1	1385	4	5539	10	13847	12	16617	15	20771		
800	0.1	181	0.2	362	0.5	904.3	1	1809	4	7235	10	18086	12	21704	15	27130		
900	0.1	229	0.2	458	0.5	1145	1	2289	4	9156	10	22891	12	27469	15	34336		
1000	0.1	283	0.2	565	0.5	1413	1	2826	4	11304	10	28260	12	33912	15	42390		
1200	0.1	407	0.2	814	0.5	2035	1	4069	4	16278	10	40694	12	48833	15	61042		
1400	0.1	554	0.2	1108	0.5	2769	1	5539	4	22156	10	55390	12	66468	15	83084		
1600	0.1	723	0.2	1447	0.5	3617	1	7235	4	28938	10	72346	12	86815	15	108518		
1800	0.1	916	0.2	1831	0.5	4578	1	9156	4	36625	10	91562	12	109875	15	137344		
2000	0.1	1130	0.2	2261	0.5	5652	1	11304	4	45216	10	113040	12	135648	15	169560		
2200	0.1	1368	0.2	2736	0.5	6839	1	13678	4	54711	10	136778	12	164134	15	205168		
2400	0.1	1628	0.2	3256	0.5	8139	1	16278	4	65111	10	162778	12	195333	15	244166		
2600	0.1	1910	0.2	3821	0.5	9552	1	19104	4	76415	10	191038	12	229245	15	286556		
2800	0.1	2216	0.2	4431	0.5	11078	1	22156	4	88623	10	221558	12	265870	15	332338		
3000	0.1	2543	0.2	5087	0.5	12717	1	25434	4	101736	10	254340	12	305208	15	381510		