

Benefit

- ◆ Ambient 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") | • Flow Range | : 0.1 m/s ~ 15 m/s |
| • Accuracy | : ±0.5% of reading, ±0.3% and
±0.2% optional, velocity >0.3 m/s | • Working Pressure | : 4.0 MPa (DN3-DN150)
1.6 MPa (DN200-DN600)
1.0 MPa (DN700-DN1000)
0.6 MPa (DN1200-DN3000) |
| • Velocity | : Normal liquid >20 μS/cm, | • Flange Standard | : ANSI 150#, 300#, 600#
JIS 10K, 20K, 40K
DIN PN10, PN16, PN25, PN40 |
| • Protection Grade | : IP65 | • Exciting Current | : 125mA, 187mA, 250mA |
| • Electrode | : SS316L, Hastelloy C, Hastelloy B,
Titanium Tantalum, Platinum-iridium,
Tungsten carbide | • Exciting Frequency | : 3.12Hz, 4.16Hz, 6.25Hz
12.5Hz, 25Hz, 30Hz |
| • Power Supply | : AC85~250V, DC20V~36V | • Material | Measuring Tube : Stainless Steel 304
Flange : Carbon Steel (standard)
: Stainless Steel 304 (optional)
: Stainless Steel 316 (optional) |
| • Power Consumption | : <20W | • Straight Pipe | : Inlet Path ≥ 10D
Outlet Path ≥ 5D |
| • Communication | : RS485/MODBUS, Hart, PROFIBUS DP | • Certificates | : CE, CQC, ISO9001 |
| • Language | : English, Spanish, Portuguese
Russian, Italian, French, etc | • Frequency Output | : 1~5000 Hz |
| • Display | : LC Display, 128X128mm
Three lines
4 internal push buttons | • Flow Unit | : L/h, L/m, L/s, m ³ /H, m ³ /m, m ³ /s |
| • Ambient Temperature | : -20℃~60℃ | • Electrode No. | : 3
2 measuring electrode
1 grounding electrode |
| • Relative Humidity | : 5%~95% | • Signal Output | : 4~20 mA, pulse, RS485, HART |
| • Liner Material | : Neoprene
Polyurethane
PTFE
PFA
F46 | | |

(-10℃ - +80℃)

Integral type -10℃ - +80℃

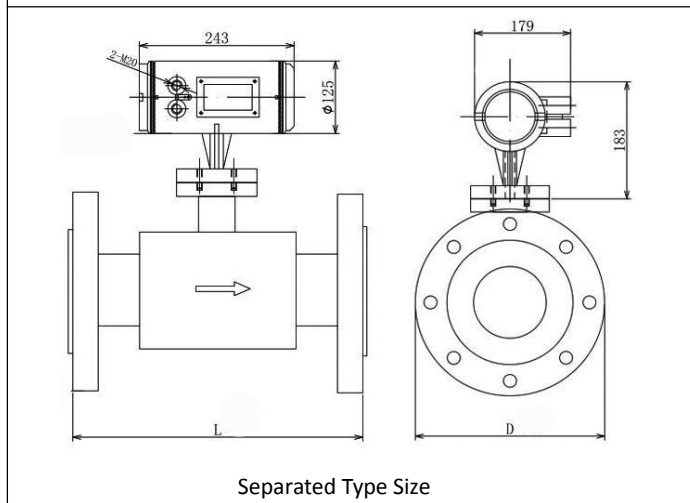
Remote type -10℃ - +120℃

Dimension of Sensor and Converter

Nominal Diameter	External Dimension (mm)		Weight Kg
	L	D	
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



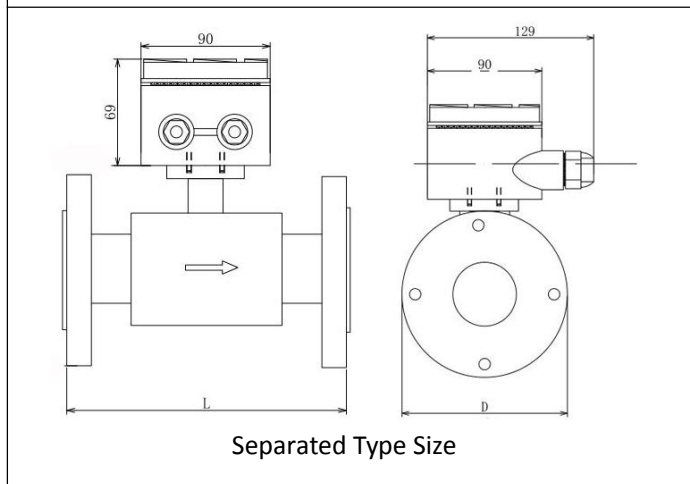
Integrated Type



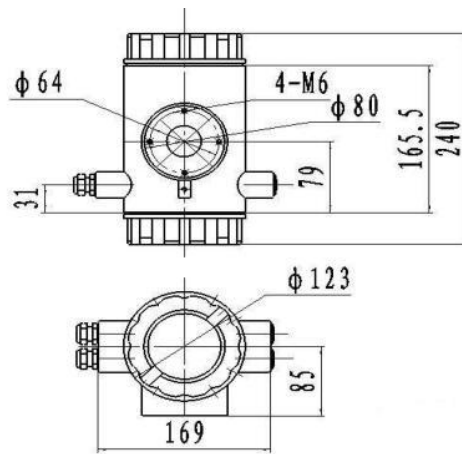
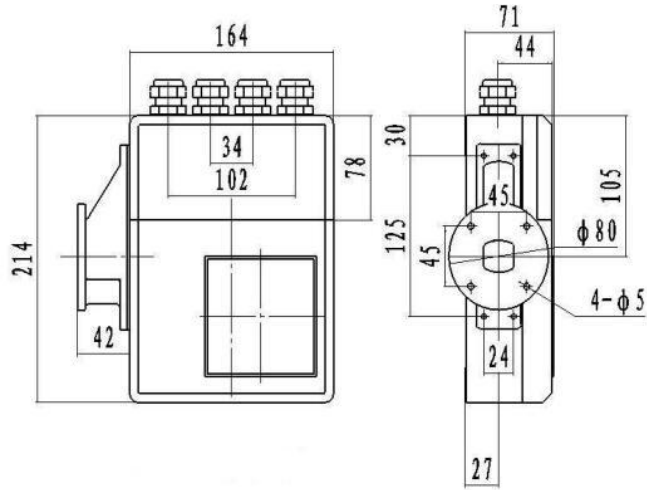
Separated Type Size



Separated Type



Separated Type Size



Selection Table electromagnetic flow meter

		Selection									
QTLD		XXX	X	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

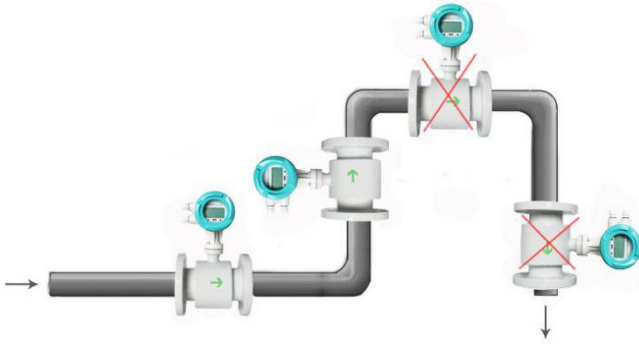
Optional selection

X	
1	Grounding electrode
2	Coupled flange
3	Entrance protection flange
4	Scraper type electrode
5	Other

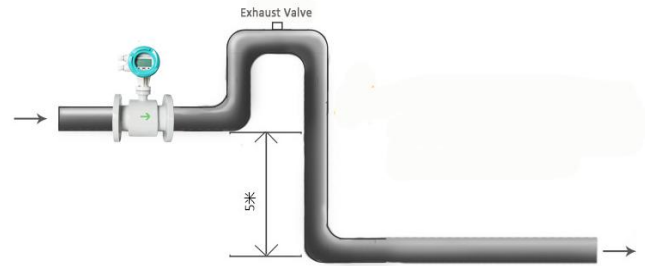
Caliber code table

Caliber	code
10	100
15	150
20	200
25	250
32	320
40	400
50	500
65	650
80	800
100	101
125	125
150	151
200	201
250	251
300	301
350	351
400	401
450	451
500	501
600	601
700	701
800	801
900	901
1000	102
1100	112
1200	122
1400	142
1500	152
1600	162
1800	182
2000	202
2200	222
2400	242
2600	262
2800	282
3000	302

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.

Rate-Flow comparison							
$\frac{m^3}{h} \quad m/s$ mm	0.5	1	2	3	4	5	15 (max)
10	0.1414	0.2827	0.5654	0.8482	1.1309	1.4137	4.2411
15	0.3481	0.6362	1.2723	1.9085	2.5447	3.1809	9.5426
20	0.5655	1.1310	2.2619	3.3929	4.5239	5.6549	16.9646
25	0.8836	1.7671	3.5343	5.3014	7.0686	8.8357	26.5072
32	1.4476	2.8953	5.7906	8.6859	11.5812	14.4765	43.4294
40	2.2619	4.5239	9.0478	13.5717	18.0956	22.6195	67.8584
50	3.5343	7.0686	14.1372	21.2058	28.2743	35.3429	106.0288
65	5.9730	11.9459	23.8918	35.8377	47.7836	59.7295	179.1886
80	9.0478	18.0956	36.1911	54.2867	72.3823	92.4779	271.4336
100	14.1372	28.2743	56.5487	84.8230	113.0973	141.3717	424.1150
125	22.0893	44.1786	88.3573	132.5359	176.7146	220.8932	662.6797
150	31.8086	63.6173	127.2345	190.8518	254.4690	318.0863	954.2588
200	56.5787	113.0973	226.1947	339.2920	452.3893	565.4867	1696.4600
250	88.3573	176.7146	353.4292	530.1438	706.8583	833.5729	2650.7188
300	127.2345	254.4690	508.9380	763.4070	1017.8760	1272.3450	3817.0351
350	173.1803	346.3606	692.7212	1039.0818	1385.4424	1731.8030	5195.4089
400	226.1947	452.3893	904.7787	1357.1680	1809.5574	2261.9467	6785.8401
450	286.2776	572.5553	1145.1105	1717.6658	2290.2210	2862.7763	8588.3289
500	353.4292	706.8583	1413.7167	2120.5750	2827.4334	3534.2917	10608.7520
600	508.9380	1017.8760	2035.7520	3053.6281	4071.5041	5089.3801	15268.1403
700	692.7212	1385.4424	2770.8847	4156.3271	5541.7694	6927.2118	20781.6354
800	904.7787	1809.5574	3619.1147	5428.6721	7238.2295	9047.7868	27143.3605
900	1145.1105	2290.2210	4580.4421	6870.6631	9047.7868	11451.1052	34353.3157
1000	1413.7167	2827.4334	5654.8668	8482.3002	11309.7336	14137.1669	42411.5008
1200	2035.7520	4071.5041	8143.0082	12214.5122	16286.0163	20357.5204	61072.5612
1400	2770.8847	5541.7694	11083.5389	16625.3083	22167.0778	27708.8472	83126.5416
1600	3619.1147	7238.2295	14476.4589	21714.6884	28952.9179	36191.1474	108573.4421
1800	4580.4420	9160.8842	18321.7684	27482.6526	36643.5367	45804.4209	137413.2627
2000	5654.8667	11309.7336	22619.4671	33929.2007	45238.9342	56548.6678	169646.0033
2200	6842.3887	13684.7776	27369.5552	41054.3328	54739.1104	68423.8880	205217.6640
2400	8143.0080	16286.0163	32572.0326	48858.0490	65144.0653	81430.0816	244290.2448
2600	9556.7247	19113.4268	38226.8536	57340.2804	76453.7072	95567.1340	286701.4020
2800	11083.5387	22167.0774	44334.1548	66501.2322	88668.3095	110835.3869	332506.1608
3000	12723.4500	25446.9001	50893.8001	76340.7002	101787.6002	127234.5003	381703.5009
3	0.013	0.025			0.102		0.382
6	0.051	0.102			0.407		1.526