



VPEMF – VEPURE

ELECTROMAGNETIC FLOW METER



FEATURES

- High accuracy: $\pm 0.5\%$ of reading and $\pm 0.1\%$ optional, velocity > 0.2 m/s.
- Medium temperature between $20 \sim 200$ Degree C
- Dual frequency excitation and stable zero point.
- Forward and Reverse direction flows.
- Integrated diagnostic function and empty pipe detection.
- Self-diagnosis alarm output.
- Build in reference electrodes, not require ground ring.
- Protection grade, IP68 for remote converter.
- Battery-powered converter, Build in GPRS/GSM wireless module.

WORKING PRINCIPLE

Electromagnetic flow meter works based on Faraday's law, uses the electromagnetic induction principle to measure the flow of conductive fluid according to the electromotive force induced by the conductive fluid through the applied magnetic field.

According to customers' requirements, we provide Sanitary flow meter , Battery-Powered flow meter , Threaded flow meter , Wafer flow meter and Insertion flow meter

APPLICATION

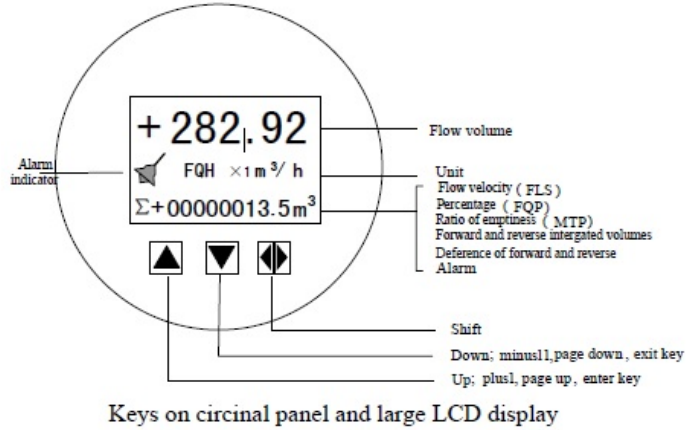
- Sewage Water
- Chemical
- Food and Beverage
- Water supply system
- NRW monitoring system
- Industry waste water



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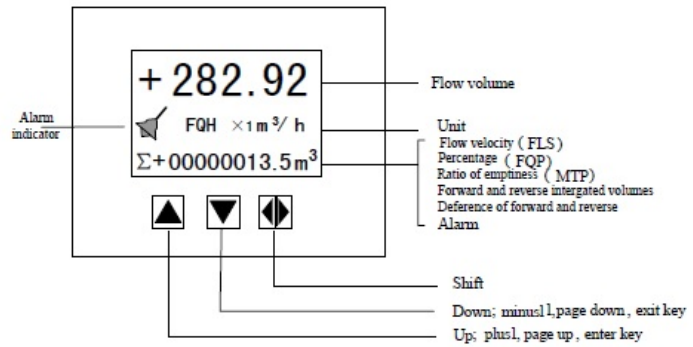
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COMPACT TRANSMITTER



Keys on circular panel and large LCD display

REMOTE TRANSMITTER



Keys on squared panel and large LCD display

BATTERY POWERED TRANSMITTER

Battery-powered Electromagnetic flow meter comes with Lithium-Ion (Li-Ion) Batteries, which is capable of working 3 to 6 years consecutively. The converter has the option of GPRS/GSM wireless data transmission function or RS485 Modbus protocol communication function. A Short-Range Device (SRD) mode allows wireless network communication system to realize data collection and management.

The converter is IP68 compliant, equipped with stainless steel housing and infrared remote control. This makes the converter suitable for application in underground and damp environment.



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SPECIFICATIONS

MODEL	DN6 ~ DN3000 MM		
Nominal Pressure	0.6~1.6MPa, 2.5Mpa, 4.0Mpa, 6.4Mpa...42Mpa		
Accuracy	±0.5%, ±0.3% or ±0.2%		
Liner material	PTFE, EEP, PFA, F46, Neoprene, Hard rubber		
Electrode Type	General type, scraper type and replaceable type		
Electrode material	Stainless steel SUS316, Hastelloy C, Titanium, Tantalum Platinum iridium, Stainless steel covered with tungsten carbide		
Medium temperature	Integrate type	-20°C~+60°C	
	Remote type	Neoprene & Polyurethane Liner	-10°C~+80°C
		PTFE Liner /PFA Liner /F46 Liner	-10°C~+160°C
Ambient Temperature	-25°C ~+ 60°C		
Ambient Humidity	5~100%RH (relative humidity)		
Medium conductivity	>5 μs/cm		
Measuring Range	1500:1, flow rate<15m/s		
Power Supply	85-250 VAC 50/60Hz, 20-36 VDC, 3.6V battery, 20-36 VDC (DN10-DN800)		
Output	4-20mA (HART), pulse, RS485 Modbus, GPRS/GSM		
Structure type	Integral type, remote type, submersible type, ex-proof type		
Protection Class	IP65, IP68(optional)		
Ex-proof Mark	Exmd II T6		
Product Standard	JB/T 9248-1999 Electromagnetic Flowmeter		

APPLICATION OF THE ELECTRODE MATERIAL

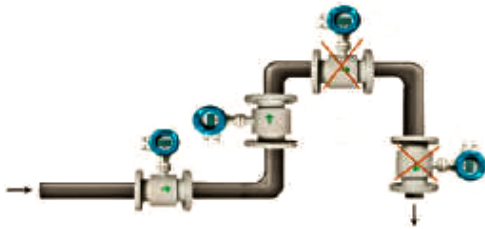
ELECTRODE MATERIAL	APPLICATIONS
stainless steel SUS316	Applied in drinking water, sewage water and non-corrosive mediums.
Stainless steel covered with tungsten carbide	Applied in mediums of non-corrosive and low abrasion.
Platinum-iridium	Applied in almost all chemical mediums except for ammonium and salt.
Hastelloy B(HB)	With the characteristic of strong resistance to hydrochloric acid of any consistence which is below boiling point. Also resistant against vitriol, phosphate, Hydrofluoric acid, organic acid, oxidable acid, alkali and non-oxidable salt.
Hastelloy C(HC)	Resistant to oxidable acid such as nitric acid, mixed acid. as well as, oxidable salt such as Fe ⁺⁺⁺ , Cu ⁺⁺ and sea water.
Titanium	Applied 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 corrosion, such as sulphuric acid, hydrochloric acid. However, acid that contains antioxidant will greatly reduce corrosion.
Tantalum	With the characteristic of strong resistance to corrosive mediums that is similar with glass. Applied in almost all chemical mediums except for hydrofluoric acid, oleum and alkali.



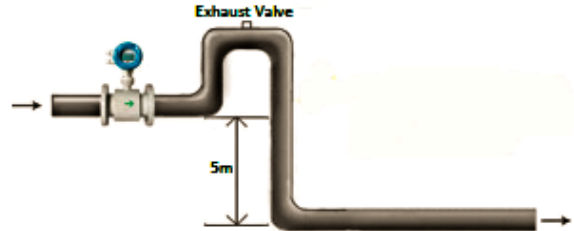
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ELECTROMAGNETIC FLOW METER

INSTALLATION NOTICE



Installed at the lowest point and vertical upward direction
Don't install at the highest point and vertical downward direction



Installed exhaust valve at the downstream of flow meter
When drop is more than 5m



Installed at the lowest when used in open drain pipe



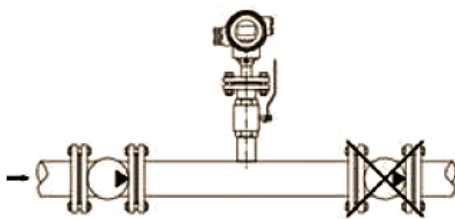
Need 10D of upstream and 5D of downstream



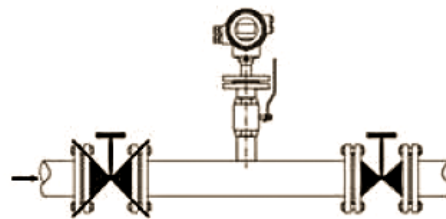
Don't install it at the entrance of pump, install it at the exit pump



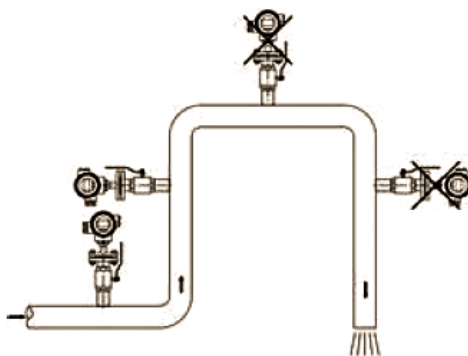
Installed at the rising direction



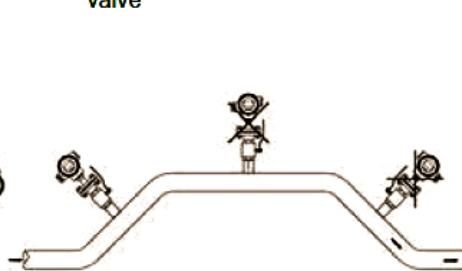
Installation after the pump



Installation before the control valve



Installation on curved pipes



Installation on curved pipes



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FLOW RATE TABLE

Rate-Flow comparison							
$\frac{m^3/h}{mm} \quad \frac{m/s}{mm}$	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	113097.3360	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