FICHA TECNICA

Brief Introduction

Smart electromagnetic flow meter is hallmarked by its high performance and reliability that are based on successful, field-proven technology.

Introduction and Application

Philemon smart electromagnetic flow meter is hallmarked by its high performance and reliability that are based on successful, field-proven technology. It's being widely used in industries such as petroleum, chemical engineering, iron and steel, food, electricpower, paper making, water treatment, petrochemical, medicine, etc.

Features

« Measurement is independent of fluid density, humidity, temperature, pressure and conductivity.

« There is no obstructive in the conduit and no pressure drop, and the straight pipe required is relatively short.

« The sensor is equipped with the advanced processing technology that provides excellent immunity to negative pressure.

« The LCD of the converter makes it easy to read during daylight and in darkness.

« Parameters can be set up using infrared touch nubs without having to open the cover of the converter.

« The converter has alarm function for selfdiagnosis, empty load test, high and low limit of flow, two-stage flow value, etc.

« It's applicable not only to general process, but also in tough applications such as mining, papermaking, pastry, etc.

« High-pressure sensor adopting PFA lining technology is resistant to high pressure and negative pressure, and is especially good in industries of oil, chemistry, etc.





① DC 4-20mA Pulse Alarm Modbus485 RTU



② Standard: GB ANSI DIN JIS



③ PTFE,PFA,FEP,F46, PU Ceramic



④Display flow rate, total flow,duplex flow



⑥ 316L HC HB Tan Ti Pt Stainless steel covered with tangsten carbide



⑥ 99.99% pure copper coil

Products Group



Compact



Union Connection



Seperated



Flange Carde



Battery-powered



Battery-powered with GPRS/GSM



Sanitary (tri-clamp)

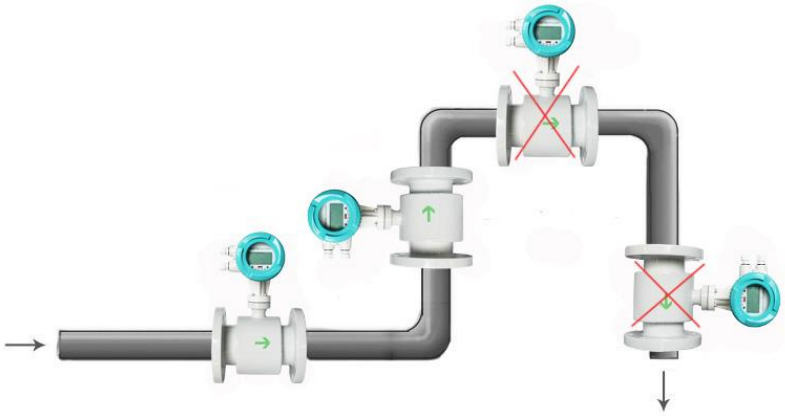


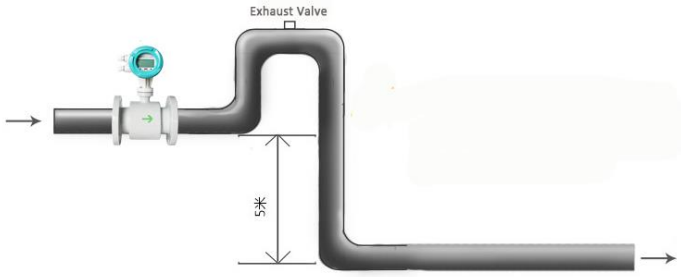
Wafer



Insertion

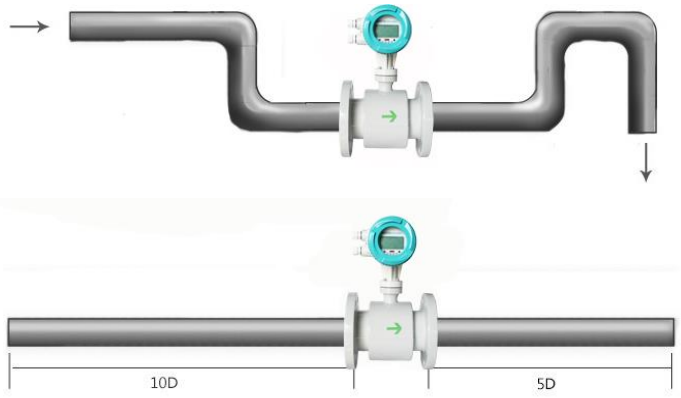
Installation Notice



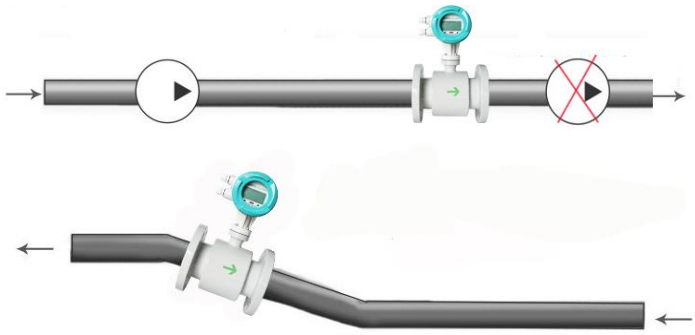


Installed at the lowest point and vertical upward direction Install exhaust valve at the downstreat of flow meter

Don’t install at the highest point and vertical downward diection when drop is more than 5m



Installed at the lowest point when used in open drain pipe Need 10D of upstreat and 5D of downstreat



Dont’ install it at the entrance of pump, install it at the exit of pump

Installed at the rising direction

Size	DN3-DN3000mm (1/8”~120”)
Accuracy	±0.5% of reading,velocity >0.3 m/s
Conductivity	Normal liquid >5 μS/cm,DI water >20 μS/cm
Velocity	0.1-15 m/s
Protection Grade	IP65 Compact, IP68 Seperated
Power Supply	AC85~250V, DC20V~36V
Electrode Type	Fixed, Scraper
Power Consumption	<20W
Signal Output	4~20 mA,pulse
Communication	RS485/Modbus,Hart over 4~20 mA, Hart,Profitbus
Language	English,Chinese (Other languages can be provided on request)

Display	LC Display,128X128mm, Three lines, 4 internal push buttons
Ambient Temperature	-25 ~ +60℃ /-77 ~ 140℉ Sensor -10~ +60℃ /-50~140℉ Convertor
Liquid Temperature	Integrated: 70℃/ 158℉ max Seperated: 200℃/ 392℉max
Relative Humidity	5%~90%
Exciting Current	125mA, 187mA, 250mA, 500mA
Exciting Frequency	25Hz, 3.125Hz, 2.5Hz, 2Hz
Measuring Tube	Stainless Steel 304
Flange	Carbon Steel (standard) Stainless Steel 304 Stainless Steel 316
Straight Pipe	Inlet Path ≥ 10D, Outlet Path ≥ 5D
Certificates	CE 6022120716, ISO9001:2008, CQC1500155689521
Frequency Output	1~5000 Hz
Electrode	SS316L (standard), Hastelloy C, Hastelloy B,Titanium Tantalum, Platinoiridium,Stainless Steel Covered Tungsten carbide
Liner Material	PTFE DN15-DN1600 -20℃ ~ +120 ℃ PFA DN3-DN800 -20℃ ~ +120 ℃

	F46 DN25-DN1800 -20℃ ~ +120 ℃ Neoprene DN40-DN3000 -10℃ ~ + 80℃ Polyurethane DN40-DN1600 -10℃ ~ + 60℃ FLS DN40-DN1800 -10℃ ~ + 200℃
Process Pressure	4.0 MPa (DN3-DN150) 1.6 MPa (DN200-DN600) 1.0 MPa (DN700-DN1000) 0.6 MPa (DN1200-DN3000)
Flange Standard	ANSI B16.5 150#, 300#, 600# EN1092-1 PN10,PN16,PN25,PN40 JIS B2220 10K, 20K, 40K

Model	QTLD Fmag S1-P1-L1-B1-K1-F1-D1-G1-C1-H1											
Structure	Integrated	S1										
	Seperated	S2										
Nominal Pressure	0.6MPa		P1									
	1.0MPa		P2									

	1.6MPa	P3									
	4.0MPa	P4									
Liner Material	PTFE DN15-DN1600 -20℃~ 120 ℃		L1								
	PFA DN3-DN800 -20℃~ 120 ℃		L2								
	F46 DN25-DN1800 -20℃~ 120 ℃		L3								
	Neoprene DN40-DN3000 -10℃~ 80℃		L4								
	Polyurethane DN40-DN1600 -10℃ ~ 60℃		L5								
	FLS DN40-DN1800 -10℃ ~ 200℃		L6								
Electrode Material	Stainless steel 316L			E1							
	Hastelloy B			E2							
	Hastelloy C			E3							

	Titanium	E 4						
	Platinum-iridium	E 5						
	Tantalum	E 6						
	Stainless steel covered with tungsten carbide	E 7						
Body Material	Carbon Steel		B 1					
	Stainless steel 304		B 2					
	Stainless steel 316L		B 3					
Flange Standard	ANSI 150#, 300#, 600#			F 1				
	JIS 10K, 20K, 40K			F 2				
	DIN PN10,PN16,PN25,PN40			F 3				
Power Supply	AC85~250V				D 1			
	DC20V~36V				D 2			
	4~20 mA					G 1		

Signal Output	Pulse		G2		
Communication	Modbus-RS485			C1	
	Hart			C2	
	Profitbus			C3	
Protection Grade	IP65 Integrated				H1
	IP68 Seperated				H2
Electrode Type	Fixed				D1
	Scraper				D2

Electrode Material	Applications
Stainless Steel 316L	Applicable in water,sewage and corrosive mediums.Widely used in industries of petrol,chemistry,carbamide,etc
Hastelloy B (HB)	Having strong resistance to hydrochloric acid of any consistance which is below bioling piont. Also resistable against vitriol,phosphate,hydrofluoricacid,organic acid etc which are oxidable acid,alkali and non-oxidable salt.

Hastelloy C (HC)	Be resistant to oxidable acid such as nitric acid,mixed acid,as well as oxidable salt such as Fe+++,Cu++aStnd sea water
Titanium	Applicable 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(such as sulphuric acid,hydrochloric acid corrosion. But if acid contains antioxidant is greatly reduce corrosion.
Tantalum	Having strong resistance to corrosive mediums that is similar with glass Almost is applicable to all chemical mediums. Except for hydrofluoric acid,oleum and alkali.
Platinum-iridium	Almost be applicable in all chemical mediums except for ammonium salt.
Stainless Steel Covered Tungsten Carbide	Applicable in mediums of no corrosive and low abrasion.





Advantages

I. Flange: integrally forged pieces, it will avoid break down into pieces.
II. Electrode: Adopt new patent technology, it will avoid medium(water) leakage while in application.
III. Flow converter: Distinctive modular design, amateurs can operate, disassemble and assemble easily, it will avoid accident risks.

IV. Painting: one base coat, one surface coat, the surface coat film around 1-2mm, it will not fade while encounter the high temperature, and it enjoys good anti-corrosive property.
V. Welding: adopt the advanced fish scale technology,which makes the welding seam looks nice and smooth.
VI. Coil: the heart of the flow meter, the material copper is 100% imported from Japan,the copper coil adopts the Siemens technology, which can guarantee the stable and homogenous magnetic field, the accuracy can also be improved.It also enjoy the excellent linearity,zero point driftless, and good anti-shock capability.
VII. Flow tube: we use SS304,and we adopt the seamless steel with 3-5mm,it will not rust while encounter water, but many suppliers use the 201 instead of 304, and their flow tube is welded tube, thickness is around 2mm.
VIII. We have gravmetric & volumetric method calibration system to make sure the accuracy can reach 0.2%.